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Functional Finance and the Sustainability of Universal Basic Income

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“Functional finance” is a “heterodox” or “nonmainstream” economic theory within the Post Keynesian school of thought. The term, “functional finance,” was coined by the early Post Keynesian economist, Abba Lerner, in the 1940s. Functional finance is best known today in one specific form called Modern Monetary Theory (MMT).²

In this form, functional finance has recently begun to have two big but opposite effects on the debate over Universal Basic Income (UBI). Some people state MMT in an exaggerated way that implies the government can spend all it wants on UBI or anything else without ever raising taxes or borrowing money as if government spending had few, if any, limits of any kind. Other people refer to MMT while arguing that any effort to maintain a livable level of UBI is unsustainable.

MMT is closely associated with the proposal of a federal job guarantee (FJG)—in which the government promises to hire anyone who shows up at the local FJG office willing to work. Like an income guarantee, a job guarantee would greatly expand government support for low-income people. But because the two proposals expand support in very different ways, FJG and UBI supporters often find themselves arguing against each other rather than against people who oppose expansion of government support for low-income people.

This oppositional standing is somewhat surprising because Lerner, the founder of functional finance, not only supported Basic Income (under the name “social dividend”) but also recommended that the government use it as a central stabilization mechanism.³ In fact, John Maynard Keynes, the grandfather of all Post Keynesian theory, was enthusiastic about George Wansbrough’s proposal that each British family receive “a basic income according to its makeup, calculated to cover its basic various needs.”⁴ Keynes described Wansbrough’s idea as “an important and excellent one. For a long time I have had something of the sort in mind and have indeed lectured on it; and, at the right moment, I do not see why it need be politically impossible.”⁵ Hyman Minsky wrote that the benefits of a closely related policy, called the Negative Income Tax, would be smaller than might be initially apparent, but he wrote nothing to suggest it was unsustainable.⁶

MMT got its name from L. Randall Wray’s 1998 book, *Understanding Modern Money*. Although heavily influenced by Lerner, Wray dropped the social dividend as a stabilization mechanism, focusing on the job guaranteed as the central automatic stabilization mechanism.⁷

Since then, skepticism about UBI has come from several MMT economists, including Pavlina Tcherneva, Stephanie Kelton, and others.⁸

However, work using functional finance and/or MMT to support Basic Income has come out recently, notably from Geoff Crocker, from Scott Santens, and from David Graeber.⁹

This article explains the functional finance implications for the cost and sustainability of UBI. It argues that functional finance doesn't give us a free pass to spend all we want on UBI without worrying about its cost, but neither does it give us convincing reason to believe UBI is unsustainable.

1. Functional Finance and the Need to Consider the Cost of UBI

The most central idea of functional finance is that all things that are physically possible are financially possible. It stresses the obvious fact that taxes don't actually "finance" federal government spending. The central bank and treasury have the power to create money out of thin air and do not need to get the money by taxing or borrowing money from private individuals to spend on UBI or anything else. Money is regularly created and destroyed by the Central Bank, the treasury, and the private banking system. In that sense, governments that have full sovereignty over their currency (such as the U.S. Federal government) are never short of the cash they need to buy things.

For example, the question of how many warships the United States government can afford to build this year depends on how much steel we produce, how many shipyards we have, how much appropriately skilled labor is available, and how those resources are currently employed. It has nothing to do with how much money the government has in its budget. If resources exist within the country's boundaries to build X number of—say—warships, there is some combination of tax, spending, and borrowing policy that can make it happen without increasing inflation.

Although MMT implies we don't need to "get the money" to "finance" spending, MMT economists are well aware that we need to make resources available to produce the things we want to buy with government spending. In MMT language, even if the government doesn't need to "finance" spending, it needs to "resource" spending. Financial mechanisms—such as taxation and borrowing—are the government's primary tools to resource spending. Non-financial tools such as regulation are also useful to make resources available.

People who ignore the "resourcing" aspect of MMT and focus only on the financial language can get the wrong idea of what it implies. Because in MMT language, government spending is "free" and never needs to be "financed" by taxes or borrowing, one might suppose that there are no limits to what the government can buy. If so, one might suppose we could get rid of all taxes, print up all the money we need to pay off outstanding government bonds, and increase government spending as high as we want on whatever we want, including any size UBI. Unfortunately, this combination of policies is not physically possible: People would find themselves with a *lot* more money to spend. They would spend it on consumption and investment goods, driving up prices and inflation unless and until the government counteracted the pressure on prices with a sufficient (and well-targeted) increase in taxation, borrowing, and/or regulation.

Paying down government debt, increasing government spending (including transfers like UBI), and decreasing taxes all create "expansionary pressure." That is, they allow people to buy more goods, which is likely to encourage firms to produce more goods, to raise the price of the goods, or a little bit of both. Expansionary pressure can be a good thing: the private economy usually generates contractionary pressure on its own, causing it to underutilize resources including

labor—hence the persistent existence of unemployment. Some amount of government stimulus is necessary to keep the economy working at full capacity and maintain full employment.

But government stimulus is not always a good thing: too much or the wrong kind of expansionary pressure causes inflation, and too much inflation is counterproductive. Although taxes are not necessary to “finance” spending in the sense MMT economists use that word, they are a useful tool to counteract any excessive inflationary pressure that a policy might cause and to make resources available for government spending by discouraging private spending.

Although functional finance is considered a nonmainstream school of thought, most of what I’ve said so far is uncontroversial and rather obvious to anyone who has studied macroeconomics.

Mainstream and MMT economists differ in more than just terminology. The substantive differences between the functional finance and mainstream approaches are in how we should use the tools available to the government. I doubt any mainstream economist would object to the statement that everything that is physically possible is financially possible. The difference is that mainstream economists tend to believe that financial measures of costs do a good job of tracking physical costs so that “financing” spending is synonymous with “resourcing” spending. Functional finance and MMT economists believe that financial measures of costs do a poor job of tracking physical costs so that “financing” and “resourcing” spending are very different.

Mainstream economists are well aware that it is possible to “finance” government spending by money creation without either raising taxes or borrowing money, but they tend to believe that virtually any government money creation increases inflation rather than production. While functional finance economists tend to believe the amount of taxes or borrowing necessary to free up the resources available to make government spending possible without causing inflation is highly variable (and often zero) depending on economic circumstances and the type of spending involved, mainstream economists tend to believe that \$1 of spending almost always requires \$1 of taxes or borrowing to free up the resources necessary to make that spending possible without causing inflation. Even when the economy needs a stimulus to counteract a significant recession, mainstream economists usually recommend government issue bonds equal to the amount of money they create when running a deficit because they believe that injecting money into the economy by deficit spending is always inflationary unless counteracted by taking money out of the economy by taxation or borrowing.

Functional finance economists stress that “fiscal space” usually exists. That is, unused resources are available in the economy—unemployed workers, empty storefronts, unused factories, and so on. If so, a government stimulus can increase production without increasing prices, and no new taxes or borrowing are necessary to counteract that expansionary pressure. If policymakers follow mainstream recommendations and introduce new taxes and borrowing when they aren’t needed reduce the expansionary effects of spending, they will prevent the economy from reaching full employment.

Mainstream economists tend not to think of available fiscal space at all, or they tend to think that it is small or nonexistent except during deep recessions, or they tend to think it is structural in nature so that expansionary policies will cause inflation even if unused resources are available.

Virtually all functional finance economists believe that most governments have erred on the side of creating or tolerating too much contractionary pressure—accepting higher than necessary unemployment and unnecessarily low public spending.

Another important insight of functional finance is the recognition that not all government spending is equally expansionary and not all taxes are equally contractionary—as mainstream economists who focus on the size of the debt and the deficit tend to imply. For example, a tax cut or a transfer payment given to a wealthy person who is likely to save most of it can be less expansionary than a transfer payment or a tax cut given to a low-income person who is likely to spend all or most of it.

Different spending programs demand different resources, which might be in greater or lesser supply at different times. Not all types of taxes and borrowing are equally effective in making the right resources available. Given this recognition, the size of the government debt and deficit are not what's important.

“Functional finance” gets its name because macroeconomists of this school recommend that fiscal and monetary policy target full employment and price stability instead of the size of the deficit, the debt, or the money supply, which mainstream macroeconomists tend to focus on even if their ultimate goal is also to maintain price stability and high employment. Since the late 1900s, some mainstream economists have gone so far as to argue that a significant amount of unemployment has to be tolerated to maintain price stability.

Functional finance economists believe the size of the deficit, debt, and money supply (if there is a thing we can call “the money supply”) would be whatever numbers worked out to reach full employment and stable prices—given the other goals of government spending—and that genuinely full employment is consistent with price stability with an FJG.

Comparisons of actual and potential Gross Domestic Product (GDP) show that fiscal space does tend to be available. If so, we could introduce some level of UBI without increasing taxes.¹⁰

But the functional finance approach does not reduce the need to consider the cost of UBI or significantly change the calculation of UBI's cost. It does suggest different ways to think about how best to use financial and nonfinancial tools to ensure UBI is consistent with stable prices. Consider six reasons we still need to be aware of the cost of UBI.

First, the available fiscal space is highly variable depending on the state of our complex macroeconomy. If the goal of UBI is to ensure everyone has enough to live on, we wouldn't always want it to vary in size with the availability of fiscal space. UBI has some automatic variability as people move from being net contributors to net recipients during recessions, and Lerner, himself, suggested using UBI (under the name “social dividend”) to stabilize production.¹¹

However, automatic stabilization of production is an area where FJG can do better. UBI affects production indirectly, through the spending of net beneficiaries, and as Lerner suggested, it would be most effective as a stabilization tool if it was subject to manual, countercyclical adjustments.¹² FJG directly stabilizes production by employing the most important underused resource in the economy: (otherwise) unemployed labor. And FJG does so automatically as newly unemployed workers show up at the local FJG office—no manual adjustment needed. If an FJG were in place, it would take up all or most of the available fiscal space, so that tax policies would be necessary to make resources available for other ambitious projects, such as UBI.

Second, if we introduce a livable UBI with no new taxes whatsoever, its gross cost and net cost would be the same. We would be pumping \$2 – \$6 trillion worth of expansionary pressure into a \$20 trillion economy every year, far outstripping any reasonable estimate of the available fiscal space during any non-recession year. A one-time stimulus of this size might have been possible during the severe downturns of 2009 or 2020, but it was definitely impossible to do every year in between without some contractionary policy to “finance” or “resource” UBI—i.e., to

counteract the inflationary pressure it creates. Well-targeted taxes are probably the best such policy.

Third, if we introduce UBI with at least enough new taxes to make the net cost relevant, it is far less likely to exceed the available fiscal space, and if it does exceed the available space, it will do so by a far lower amount than if we introduce it with no new taxes whatsoever. Therefore, any excessive expansionary fiscal pressure the UBI system might create will be easier to counteract with contractionary fiscal policies. If we treat UBI this way, we need to calculate its net cost.

Fourth, even if there was more than enough available fiscal space to “resource” a high and stable UBI year after year without any new taxes or borrowing, UBI is not the only thing the government could do with that fiscal space. Government could devote available fiscal space to providing healthcare, education, housing, transportation, the police, the military, or literally anything else, including politicians’ favorite: the enrichment of campaign contributors. We need to know how much UBI costs to weigh it against other things the government might do with the available fiscal space and make the case that this is a good, cost-effective thing to do with the government’s available “financial” tools or “resourcing” tools.

Fifth, “fiscal space” is *not* a *limit* on the amount of spending that is possible. It is the amount of spending needed to employ the available unused resources. If the government wants to expand public sector resource use more than that, it needs to discourage private sector spending to free up the necessary resources. If the government ever adopts any version of functional finance, the available fiscal space will be quickly taken up by popular spending programs. If so, the case for UBI will have to be made in more traditional terms: given that we begin at capacity and that UBI has a net cost \$X, what are the best tools available to free up the resources necessary to make \$X of new spending by net beneficiaries possible without creating inflation? Those tools are likely to be taxes targeting the wasteful and/or inflationary spending of wealthy people.

Sixth, UBI is likely to be more inflationary than many other spending policies. Net beneficiaries are all relatively low-income people who are likely to spend a larger portion of the money they receive from the government than higher-income people. Also, the higher the UBI, the more likely people are to respond by demanding higher wages and better working conditions.

The reason supporters want to introduce UBI is so that low- and middle-income people can buy more goods—a lot more goods if we want a UBI high enough to eliminate poverty and give individuals the market, political, and personal power I talk about throughout my work on the ethics of UBI.¹³ If we want those goods to be available, either we have to produce more goods than we are currently (which, environmentally speaking, might be a mistake) or we have to get higher-income people to purchase fewer goods. Well-targeted taxes are the best tool we have to get higher-income people to spend less. Borrowing works too, but borrowing has other effects that we might want to avoid, most especially the promise to pay interest to wealthy bondholders for a long period in the future, increasing economic inequality, and—to the extent that bondholders spend the interest they receive on goods or physical assets—injecting new inflationary pressure into the economy over the period of time in which the government pays off the bond.

Almost anyone who’s inclined to consider UBI probably thinks that higher wages and better working conditions for the lower 60% of people are good things, but they also need to recognize that higher wages and better working conditions have a cost in terms of real resources. We measure the cost of resources in money.

For all of these reasons, even in light of functional finance insights, we still need to estimate the cost of UBI; and we need to be just as much or more concerned with the question of how to

ensure the resources net beneficiaries will consume are available, and what taxation policies are best suited to make those resources available.

2. Functional Finance and the Sustainability of UBI

Some MMT economists have used the simple and obvious fact that taxes don't "finance" spending as an excuse to ignore the interaction of UBI and the taxes used to "resource" it, greatly exaggerating its cost and its effects on both net beneficiaries and net contributors.¹⁴ I've estimated that for every \$1 of increase in net income experienced by net beneficiaries, as much as \$6 of spending and taxes simply cancel each other out, having no effect at all on either beneficiaries or contributors. One cannot meaningfully assess the costs and benefits of UBI while ignoring this fact. Rather than arguing that point here, I refer readers to earlier work on the gross and net cost of UBI.¹⁵ This section focuses instead on the arguments related to labor-market driven inflation.

Although some mainstream and some functional finance economists agree that a livable level of UBI is sustainable, some economists in both camps argue that the effect of UBI on the labor market will make it unsustainable. If UBI is high enough to live on, it creates a voluntary-participation economy.¹⁶ People can accept unemployment if they are willing and able, but they can refuse employment and still have access to the goods and services they need to survive. Many agrarian and hunter-gatherer societies until the last couple centuries had voluntary-participation economies. Because people had direct access to the land and resources, they didn't need to accept employment—i.e. they did not need to take orders from a boss—to live.

The twin movements of enclosure and colonialism, which privatized the resources of the Earth without compensation for the propertyless, established the current mandatory-participation economy.¹⁷ Tcherneva writes, job guarantee "proponents have explicitly stated that the public sector job is ... voluntary (no one is ever forced to take it)."¹⁸ This is true only in the sense that no one forces hungry and homeless people to seek food and shelter; and only in the sense that if the only legal option to keep oneself alive is to take a job (whether in the public or private sector), the laws indirectly but very effectively force that person to take one of the available jobs.

A livable UBI reverses the establishment of the mandatory-participation economy by compensating people for their lack of direct access to resources with a regular cash income. But it is the voluntary nature of a UBI economy that drives the argument that UBI has unsustainable inflationary effects.

In mainstream terms, the argument is fairly simple. If UBI gives people a choice whether or not to accept jobs, too many people will refuse to work. They will leave their jobs, causing wages and prices to increase. If so, the argument goes, two things can happen. If UBI goes up to maintain livability, more people will quit their jobs, and a hyperinflationary spiral will follow. If UBI doesn't go up, inflation peters out once the inflation-adjusted value of UBI falls to the point where people are effectively forced to go back to work.

The MMT argument starts in a different place but finishes with the same inflationary spiral for very much the same reason. In MMT theory, the reason currency has value is that people need it to pay taxes. David Graeber (who incidentally was a UBI supporter) has a great explanation of this view:

Say a king wishes to support a standing army ... if [the king] simply hands out coins to the soldiers and then demands that every family in the kingdom ... pay one of those coins back

..., one would, in one blow, turn one's entire national economy into a vast machine for the provisioning of soldiers ... Markets are brought into existence as a side effect.¹⁹

Through this method, taxes give value to otherwise worthless tokens called money or currency. Money doesn't need to be made out of anything valuable. As long as people need currency to pay taxes, people will recognize value in otherwise worthless tokens, such as coins, pieces of paper, or entries in an electronic ledger.

Graeber's example uses a head tax: the law demands one coin *from* everybody. UBI is a negative head tax: the law gives one coin *to* everybody. If a head tax gives value to money, a negative head tax takes value from money. With UBI in place, no one needs to do anything to get more money if they don't want to. The motivation that gives value to money in Graeber's example is reversed. A simplistic MMT argument against UBI would either declare this problem insurmountable or ignore possible strategies to counteract the inflationary pressure caused by the negative head tax we call UBI. The same sort of inflationary spiral I attributed to mainstream theory would begin if the government tried to maintain the value of UBI without employing measures to resource it.

Such an argument would be oversimplified because raising prices are not the only thing that can happen in response to rising wages. It is also possible that profits will fall, redistributing consumption from the most to least wealthy people without necessarily affecting the price level. If this effect is not enough to counteract the inflationary pressure of UBI, taxes targeting the spending of high-income people are available to counteract UBI's downward pressure on the value of currency.

Graeber's example does not reveal that humans are only one of many taxable factors of production. The government can give value to the currency by taxing land, capital, and noncorporeal resources like the broadcast spectrum or the financial system. The owners of these resources create markets as they attempt to get the money they need to pay taxes they owe for the assets they own. To paraphrase Graeber: labor markets are brought into existence as a side effect.

Income taxes can also do the trick in the . Unlike the head taxes in Graeber's example, no one is legally required to pay income taxes if they choose not to make money. Given the background conditions created by the enclosure and colonial movements discussed above, people who make no money will eventually become homeless and hungry. That threat effectively forces people to work and pay taxes, thereby giving value to the currency and providing things people want to buy in the market as a side effect.

People who have a livable UBI aren't forced to work, but they still have a significant motivation to obtain more currency than UBI provides: the desire to buy luxuries. If this desire entices enough people to work and, therefore, to pay income taxes, they will give value to currency and provide things people want to buy in the market despite the non-participation option afforded to them by UBI.

To say definitively that UBI is unsustainable, one would have to add an additional premise to the argument: if UBI gives people the choice of whether or not to accept jobs, too many people will refuse to work. That means that as different as MMT and mainstream economics are on finance, their arguments against the sustainability of UBI both rest on the same premise, which is not about finance at all, but about human behavior and motivation. The need for this premise is probably why both mainstream and functional finance economists are divided on the issue of sustainability. Some people in both camps think there are many people who will refuse all work if

their needs are met no matter how many luxuries they're offered by employers; others think everyone has their price.

Whether enough people will work to sustain a livable UBI is an empirical question. It cannot be determined by pure theory alone. The relevant questions are what is the highest sustainable UBI, and is it large enough for people to live on? The only way to answer with certainty is to try it out, but I will argue that theory and experience indicate that a livable UBI is likely to be sustainable.

Recall the most basic insight of functional finance: anything that is physically possible is financially possible. Is a voluntary-participation economy physically possible? Is it strictly necessary to use force (via the threat of hunger and homelessness) to get a sufficient number of lower- and middle-class people to do the work necessary to sustain the economy? Is it strictly necessary to use negative sanctions, such as homelessness and hunger? Or is it physically possible to use solely positive rewards (such as good pay and good working conditions) to get people to do the jobs necessary to sustain the economy?

I doubt force is necessary. I've argued elsewhere that experimental evidence for the sustainability of UBI is highly promising.²⁰ The rest of this article discusses theoretical arguments and casual observations that also suggest that a livable UBI is likely to be sustainable.

One reason to disbelieve people who assert the premise that too few people will work if given the power to refuse is the lack of hard evidence they have offered to support it. It's an unargued premise in all the mainstream and MMT literature I know of that uses it. I don't know of any monetary economy that has ever really given the lower and middle classes the choice of whether or not to work, but yet for hundreds, perhaps thousands of years, people have claimed they know for sure that once you give people who aren't already part of the wealthiest class a real choice of whether or not to work,²¹ the whole system will collapse. If they know this, how do they know it? Perhaps so many people think they know it because so many other people keep saying it.

For centuries, laws—justified largely on this claim—have effectively forced the vast majority of people to work and, therefore, to accept lower wages to the benefit of wealthy employers. In a democracy that is supposed to represent all people, not just the wealthiest employers, shouldn't we at least test this belief before we rest so much on it? Show us the proof or let us try to do things differently.

One reason not to fear trying to identify the highest sustainable level of UBI is that doing so cautiously involves little or no risk. We could start with an unlivable UBI, gradually increase it to a barely livable UBI, and eventually to a comfortably livable UBI. Try different taxes and regulatory policies to counteract UBI's inflationary effects, and when we seem to be running out of effective ways to counteract those effects, hold or reduce the UBI. Experimental researchers examining guaranteed incomes as high as 150% of the US poverty line (at a time when per capita GDP was less than half what it is now) found participation rates they judged to be well within the sustainable range,²² suggesting that we have very little to fear from a strategy that begins with less ambitious policy and cautiously expands it.

Another way to cautiously introduce UBI would be to start with a comfortably livable UBI for a limited number of years—say, people are eligible only when their age is an odd number, or everyone is eligible except when they're in their 30s. If the age-limited UBI proves sustainable, gradually increase the number of years of eligibility.

Another reason to believe luxuries are sufficient to motivate people to work, even if their basic needs are met, is that our economy produces a *lot* of luxuries. US economic output (measured in terms of per capita real GDP) has doubled more than *three times* since 1933. That means that

US output is more than 8 *times* what it was then.²³ Although 1933 was the worst year of the Great Depression, even in that year, the U.S. had more vacant housing than it had unhoused people, and it produced more food than would have been necessary to feed everyone.

Consider the World War II era: our economy now is several times larger than it was when the U.S. government removed nearly every able-bodied, 18-to-40-year-old male from the productive labor force to fight the war, but it found the labor it needed to keep them supplied with food, clothing, guns, ammunition, planes, bombs, landing craft, and so on.

During that war, Abba Lerner, the founder of functional finance argued that UBI was sustainable.²⁴ Even if we can't be certain he was right way back then, is it reasonable to believe that a several-fold-more-productive economy can't produce enough luxuries to entice people to do the necessary labor to meet everyone's needs without threatening them with hunger and homelessness if they refuse? I don't think so.

If our economic capacity's doubling, doubling, and doubling again hasn't been enough to make UBI sustainable, certainly it must have gotten us closer. How much more growth do we need before voluntary participation becomes sustainable—or at least until we feel safe experimenting with it? People who declare UBI unsustainable never seem to say. No matter how wealthy and productive our economy becomes must the middle and lower classes always face the stark choice of accept subordinate employment or be homeless? It seems unlikely.

Fans of the market economy have used claims about its enormous productivity as its central justification for almost as long as the market economy has existed. But these claims often go out the window whenever someone suggests that we use some of that productivity to give the lower and middle classes the freedom to choose whether or not to participate in that so-called free market. They seem to believe that the freedom to refuse to take orders is and will always be beyond the capability of the luxury-generating machine we call our economy. I suggest that only upper-class bias and status-quo bias can explain such incongruous beliefs.

Most functional finance economists think of themselves as critics rather than fans of the market. They think of themselves as progressive, pro-worker reformers,²⁵ but they could be a little more progressive, a little more pro-worker, and a little more like their founder Abba Lerner if they were willing to question the unproven premise in the argument that voluntary participation is unsustainable. A truly pro-worker economy would experiment not only with guaranteeing everyone a job but also with guaranteeing everyone the power to decide whether jobs are worth taking.

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² This article draws on my own impressions from many discussions I've had with MMT and mainstream economists ever since I worked at the Levy Institute in the late 1990s as well as books and articles, most particularly, Tcherneva, *The Case for a Job Guarantee*; Wray, *Understanding Modern Money: The Key to Full Employment and Price Stability*; Kelton, *The Deficit Myth: Modern Monetary Theory and How to Build a Better Economy*. I discuss some misuse of MMT theory below; most of that was found on social media.

³ Abba P. Lerner, *The Economics of Control: Principles of Welfare Economics*. pp. 266-8

⁴ Sloman, "John Maynard Keynes on Universal Basic Income: 'An Important and Excellent' Idea."

⁵ Sloman.

⁶ Hyman P. Minsky, "The Macroeconomics of a Negative Income Tax."

⁷ Wray, *Understanding Modern Money: The Key to Full Employment and Price Stability*.

⁸ Tcherneva, *The Case for a Job Guarantee*; Tcherneva, "At Issue: Should the United States Adopt a Universal Basic Income?"; Tcherneva, "The Job Guarantee: Delivering the Benefits That Basic Income Only Promises – A Response to Guy Standing"; Tcherneva, "The High Costs of UBI Are Not Financial"; Kelton, *The Deficit Myth: Modern Monetary Theory and How to Build a Better Economy*; Ehnts and Höfgen, "The Job Guarantee: Full Employment, Price Stability and Social Progress."

⁹ Crocker, *Basic Income and Sovereign Money: The Alternative to Economic Crisis and Austerity Policy.*; Santens, *Let There Be Money: Understanding Modern Monetary Theory and Basic Income.*; Graeber, *Debt: The First 5,000 Years*.

¹⁰ Kelton, *The Deficit Myth: Modern Monetary Theory and How to Build a Better Economy*.

¹¹ Abba P. Lerner, *The Economics of Control: Principles of Welfare Economics.*, Lerner pp. 266-8

¹² Abba P. Lerner., Lerner pp. 266-8

¹³ Widerquist, "Reciprocity and the Guaranteed Income"; Widerquist, "Who Exploits Who?"; Widerquist, "Why We Demand an Unconditional Basic Income: The ECSO Freedom Case"; Widerquist, *Universal Basic Income: Essential Knowledge*.

¹⁴ Tcherneva, "The Job Guarantee: Delivering the Benefits That Basic Income Only Promises – A Response to Guy Standing"; Tcherneva, "The High Costs of UBI Are Not Financial"; Ehnts and Höfgen, "The Job Guarantee: Full Employment, Price Stability and Social Progress."

¹⁵ Fouksman, "Why Universal Basic Income Costs Far Less than You Think."; Widerquist, "The Cost of Basic Income: Back-of-the-Envelope Calculations"; Arndt and Widerquist, "Deceptively Simple: The Uselessness of Gross Cost in the Cost-Benefit Analysis of Universal Basic Income"; Widerquist and Arndt, "The Cost of Basic Income in the United Kingdom: A Microsimulation Analysis."

¹⁶ Widerquist, *Independence, Propertylessness, and Basic Income: A Theory of Freedom as the Power to Say No*.

¹⁷ Widerquist and McCall, *The Prehistory of Private Property: Implications for Modern Political Theory*.

¹⁸ Tcherneva, "The Job Guarantee: Delivering the Benefits That Basic Income Only Promises – A Response to Guy Standing.", p. 77.

¹⁹ Graeber, *Debt: The First 5,000 Years*.

²⁰ Widerquist, "A Failure to Communicate: What (If Anything) Can We Learn from the Negative Income Tax Experiments?"; Widerquist et al., *Basic Income: An Anthology of Contemporary Research*; Arndt and Widerquist, "The Cost of Basic Income in the United Kingdom: A Microsimulation Analysis"; Widerquist, "The Cost of Basic Income: Back-of-the-Envelope Calculations."; Widerquist, *Universal Basic Income: Essential Knowledge*.

²¹ Widerquist and McCall, *Prehistoric Myths in Modern Political Philosophy*; Widerquist and McCall, *The Prehistory of Private Property: Implications for Modern Political Theory*.

²² Widerquist, "A Failure to Communicate"

²³ Author's calculation from FRED Economic Data, "Real Gross Domestic Product per Capita."

²⁴ Abba P. Lerner, *The Economics of Control: Principles of Welfare Economics*.

²⁵ Tcherneva, *The Case for a Job Guarantee*; Wray, *Understanding Modern Money: The Key to Full Employment and Price Stability*; Kelton, *The Deficit Myth: Modern Monetary Theory and How to Build a Better Economy*.