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Resource Constraints and Economic Policy

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1. Introduction

As Modern Money Theory (MMT) has become more popular in recent years, mainstream economists, commentators, and policymakers have had to grapple with it. Some, like the Fed Chair Jerome Powell have claimed that it is "just wrong" (McCormick 2019), while Treasury Secretary Janet Yellen has stated that "'applying' MMT can have dangerous consequences" (Curran 2019). Others have been more nuanced, arguing that even within the MMT framework taxes have to be raised in line with increases in government spending, especially for major programs such as Medicare-for-All or a Green New Deal. According to this view MMT does not necessarily change the policy calculus even if one were to accept that taxes do not pay for spending in financial terms.

Modern Money Theory explains that governments that issue their sovereign currency are not subject to a budget constraint as traditionally conceived. As issuers of currency, governments can always buy what is for sale in their currency. They do not and cannot rely on tax revenue to finance their spending. The amount of output for sale in the country's currency, its real resource space, rather than the government's financial capacity, is what constrains government's spending. When total spending in the economy is insufficient, real resources, such as labor, are left idle. Alternatively, if total spending in the economy exceeds the economy's potential to produce real goods and services, this may result in inflation. In the MMT framework, taxes therefore play the important role of creating space for non-inflationary public spending by preventing the private sector from potentially using all of the economy's resources.[1]

This paper explains the MMT approach for evaluating the affordability of spending programs, contrasting it with the mainstream approach. Using the examples of the Green New

[1] In addition to the constraints imposed by the economy's productive capacity, MMT has also always acknowledged the existence of self-imposed constraints, such as the debt ceiling in the US, as well as the constraints imposed by the Congressional budgeting process.

Deal, Medicare-for-All, and Build Back Better, it argues that rethinking spending and taxes as claims on, and releases of resources, respectively, leads to different conclusions about the affordability of these programs. Unlike the mainstream view, the MMT approach does not lead to the conclusion that taxes necessarily must go up to "pay for" more spending. Conversely, just because money is not a constraint does not mean that every government program is immediately "affordable". The resource demands of certain programs might be beyond the economy's potential, at least in the short-term. The MMT approach thus leads to different solutions for how to make a program "affordable"; to do so it focuses on creating the necessary resource space through the tools the government has at its disposal, such as public investment and taxation.

The rest of the paper is organized as follows: Section 2 summarizes the mainstream approach to government finances and the policies this framework logically leads to. Section 3 explains the MMT approach to affordability of spending and the role of taxes in that process. Section 4 explains what difference the MMT methodology makes relative to the mainstream approach using the example of various policies, such as the Green New Deal, Medicare-for-All and Build Back Better. Section 5 concludes by discussing the MMT alternative to the current approach for "scoring" the feasibility of government spending.

2. The Mainstream Approach to Affordability of Spending

The conventional approach to costing government programs is based on mainstream economic theory on government finances, accepted by most economists and policymakers and baked into the policymaking process in the U.S. and beyond. According to this view the government has to finance its spending just as private sector entities do, in other words it has a budget constraint. The government has three options for financing its spending: tax revenue, selling bonds and, unlike the private sector, the option to "print money". The desirable state for the government's budget is one of balance or, better yet, a surplus. That means that new government spending has to be paid for, ideally, through taxes so as to not add to deficits and the national debt. There are obviously limits to how much tax revenue the government can raise and consequently how much it can spend. Borrowing has limits too; as the government runs up the national debt, it might become unable to continue borrowing from capital markets or may only be able to do so at usurious interest rates. As a government's borrowing costs go up, interest rates

for everyone in the economy go up as well, crowding out private spending. Indeed, Reinhart and Rogoff famously claimed that once the debt-to-GDP ratio surpassed 90%, economic growth suffered (Reinhart and Rogoff 2010). The so-called money printing option, which is also viewed as a last resort option, is one of the biggest taboos in economics. Its undesirability is supposed to be so self-evident so as not to merit much analysis.

The mainstream approach to government finances is codified in the U.S. Congressional appropriations process. Congressional "pay-as-you-go" rules require that new legislation not increase the federal budget deficit or reduce the surplus. Both the House and the Senate have "pay-go" rules. It is also enshrined in law in the Pay-As-You-Go Act of 2010, the goal of which is to ensure that new legislation does not increase government deficits (i.e. "deficit neutral"). The 2010 Act itself was basically a renewal of the Budget Enforcement Act of 1990. If legislation is going to either reduce revenue or increase mandatory spending, it needs to be "fully offset by revenue increases or cuts in mandatory programs" (The White House, n.d.). This rule applies regardless of whether the overall federal budget is in a deficit or a surplus. "If Congress enacts PAYGO bills cutting taxes or increasing mandatory expenditures without fully offsetting the costs, the Act specifies a penalty, called 'sequestration,'" (ibid).

As a result of negotiations with Republicans over the debt ceiling in 2011, President Obama also signed the Budget Control Act of 2011. It raised the debt ceiling, but only in exchange for spending cuts that more than offset the increase in the debt limit – around a trillion dollars over 10 years. The act also established the so-called Deficit Reduction Commission, the purpose of which, as the name suggests, was to come up with ways to cut the federal deficit. It is noteworthy that both the Pay-As-You-Go Act of 2010 and the Budget Control Act of 2011 were enacted in times of record-high unemployment in the US (the unemployment rate was 9.6% in 2010 and 8.9% in 2011, some of the highest values in the post-WWII period).

Although the PAYGO rules were circumvented to pass the $5 trillion COVID spending packages in 2020 and 2021, that logic was quickly revived when the Biden administration proposed its Build Back Better (BBB) plans. For comparison, the BBB, as originally proposed, amounted to about one tenth of the COVID spending on an annual basis. The White House proudly proclaimed that BBB spending "will be fully paid for within the next 15 years and

reduce deficits in the years after," (The White House 2021a). Politically, this was framed as fulfilling a campaign promise since the president "had pledged that his long-term economic agenda would not add further to the growing national debt," (ibid). Treasury Secretary Yellen reaffirmed the mainstream view by arguing that, "We do need fiscal space to be able to address emergencies, like the one that we've been in with respect to the pandemic. We don't want to use up all of that fiscal space and over the long run deficits need to be contained to keep our federal finances on a sustainable basis. So, I believe that we should pay for these historic investments," (Politi, 2021).

This same "pay for" approach gets invoked in the discussion of any government policy, including fighting climate change, which is arguably necessary to prevent the collapse of human civilization. The affordability of proposals, such as a Green New Deal, is evaluated according to the "pay for" logic—adding the financial costs of the different components of a GND and determining what kind of tax increases would be required to financially "pay for" it (Holtz-Eakin et al. 2019). Even progressive advocates of addressing climate change often work under the assumption that financing is the main obstacle. Rather than worrying about whether the real resources to implement climate policies are available, they focus on structuring the financing (i.e. what kind of taxes can be levied or how many "green bonds" need to be sold to raise sufficient revenue). Bernie Sanders's own spending plans, such as the Green New Deal or Medicare-for-All, were all proudly fully "paid for". This financial scarcity approach thus prioritizes efforts that are inadequate relative to the scope of the problems with the argument that there is only so much funding that can be raised. It also often leads to the insistence that governments must recruit private finance to fund climate mitigation since the public sector alone cannot come up with sufficient funding.

3. The MMT Approach to Affordability and "Pay-fors"

3.1 Affordability of Spending

MMT demonstrates that the issue of affordability of government spending has nothing to do with money. Instead, the true constraint on spending is the productive capacity of an economy. The lesson policymakers should have learned from the economic response to COVID

is not that the government needs to preserve fiscal policy space, as Secretary Yellen implied. This same argument was often invoked during the post-Great Recession austerity campaign, and yet the US government quickly found $5 trillion to spend just a few years later. Rather, the COVID fiscal measures should have made it clear that while more aggregate demand can always be financed by the public sector—because a government cannot run out of its own currency—the availability of finance cannot immediately solve the problem of a shortage of real goods and services. As the experience with supply disruptions in the aftermath of COVID demonstrates, real resources, rather than finance, constrain government spending.

This has been confirmed again since the pandemic. Congress passed the Infrastructure Investment and Jobs Act in 2021 and the CHIPS and Science Act in 2022 to modernize US infrastructure and to build semiconductor production facilities in the US. It has thus made the "money" available for these purposes. However, attempts to actually realize these programs are reportedly hamstrung by the lack of skilled workers and necessary materials. Hence, while MMT de-emphasizes financial constraints as irrelevant to sovereign governments, it correctly elevates the importance of real resource constraints which matter a great deal. By doing so it points policy in the direction of alleviating these resource constraints rather than raising money.

MMT is thus critical of the mainstream claim that "there is no such thing as a free lunch". If there are idle resources available for sale in a nation's currency, the government can afford to buy them without displacing private buyers (Wray 2015; Wray 2022). By definition idle resources are not being used by anyone and hence the government is not competing for resources that are used by the private sector. A good example of the existence of an enormous slack in the economy is the aftermath of the Great Recession when unemployment and underemployment were high and widespread. Hiring these unemployed workers would not involve bidding them away from the private sector (and hence would not put pressure on wages and prices). Instead, it would have eliminated the inefficiency of wasting scarce labor resources.

Mainstream economists might claim that MMT makes no difference. But it was the mainstream economic framework that was used to not only justify an inadequate fiscal stimulus during the GFC, but to also impose an austerity program in times of rampant unemployment and consistent shortfalls of GDP from its potential. The argument at the time, still in line with

orthodox economics, was that policymakers had to cut government spending to bring the national debt to more sustainable levels to preserve fiscal space to fight future recessions. This deficit hysteria clearly hindered an adequate fiscal stimulus and, consequently, a robust recovery. Instead, this approach left the economy slugging along through a jobless recovery which was hardly complete before COVID hit in 2020.

While it is true that individual economists themselves might not have favored such stringent measures, or even austerity (although Reinhart and Rogoff's research clearly led to such conclusions and was used to provide support for them), what is clear is that their theoretical framework for government finances underpinned such efforts. There is no scenario under which the MMT framework leads to the prescription of balancing budgets in the middle of widespread unemployment and hence an abundance of idle resources. And it was certainly not the MMT logic that informed the PayGo legislation or the Budget Control Act of 2011.

On the other hand, MMT recognizes that as the economy approaches full employment, resources might no longer be abundantly available. Instead, they might be limited in supply, and hence government competition for them may crowd out the private sector by bidding up prices. The US saw such pressures materialize early on during the COVID pandemic as the productive capacity of the economy was not yet ready for demand for particular products related to the pandemic, such as masks and hand sanitizer. More money, which the US government could easily throw at this problem, would not have solved the problem—at least not in the short run (it could, and did, stimulate more production over time). While this was not an example of the economy reaching its macroeconomic limit, but rather an issue of localized shortages, it serves to illustrate the point about the importance of resources.

Both private and public spending represent claims on real resources. When the government spends, it is claiming some of the resources available to the nation. If there is not enough real stuff to go around then the private and public claims may compete with each other, potentially pushing up prices. It is possible for government spending to crowd out the private sector in real terms—preventing it from using those resources. A government trying to buy more of what is already in short supply would be able to get more only at the expense of the private sector (by offering higher prices) (Nersisyan and Wray 2021). Obviously, there are situations

when it might be desirable for the government to compete with the private sector for resources – e.g. during a war, for fighting a pandemic, etc. But the government has tools that can allow it to do so without creating much inflationary pressures (see Levey 2019) and while being mindful of equity concerns. MMT allows governments and policymakers to contemplate what the appropriate solutions are, something that mainstream theory does not afford because it fails to identify the correct constraints.[2]

3.2 Fiscal space

MMT thus redefines fiscal policy space, which economists such as Yellen think of in financial terms, as the real resources a nation can command rather than as the amount of money the government can raise through taxes and bonds (Mitchell, Wray and Watts 2019). While mainstream economists often argue that policymakers need to maintain fiscal space to be able to fight the next recession, such propositions do not make any sense in the MMT framework. Governments do not save fiscal capacity by allowing resources to go unused. Instead, not utilizing capacity effectively leads to it shrinking thus contracting the real resource space in the long-term, a point expanded upon later in this paper.

During the GFC, mainstream economists, and politicians informed by them, argued that governments had reached their fiscal spending limits and hence had to engage in austerity. These austerity policies were applied in the US, but also in the UK and especially in the Eurozone. These economies are still dealing with the consequences of such policies in the form of low productivity growth, decreased labor force participation rates, and decreased potential GDP. An MMT economist, on the other hand, would not look at an economy with 8% unemployment and proclaim that it had run out of fiscal policy space, regardless of its deficit- and debt-to-GDP ratios. Indeed, the latter would not figure in the calculus.

3.3 The Role of Taxes

As discussed above, MMT demonstrates that sovereign governments have no financial constraints, but instead have to be careful about the real resource constraints that an economy faces at a given point in time. This often leads to the misinterpretation that taxes are not

[2] While real resource crowding out is possible in the MMT framework, financial crowding out makes no sense under MMT as government spending creates the surpluses with which government bonds can be purchased. Further, interest rates, usually short-term, but also potentially long-term rates, are set exogenously by the central bank.

important or that MMT makes no difference because taxes have to be raised to pay for spending anyway. However, taxes do play an essential role in the economy, and MMT recognizes that. But to use them effectively this new approach shows policymakers need to approach them functionally (i.e. design tax policy with a prospect of achieving certain goals that taxation can actually help governments achieve). The MMT approach to taxation is in line with what Beardsley Ruml recognized in the 1940s. He argued that the development of modern central banks and the elimination of convertibility of the dollar had made taxes “obsolete” as a source of revenue for the government. Rather, taxes served several important functions, including removing private demand to free up resources, reducing income and wealth inequality and punishing or encouraging certain behaviors. Ruml (1946) correctly argued that:

> [T]he war has taught the government, and the government has taught the people, that federal taxation has much to do with inflation and deflation… If federal taxes are insufficient *or of the wrong kind*, the purchasing power in the hands of the public is likely to be greater than the output of goods and services with which this purchasing demand can be satisfied. If the demand becomes too great, the result will be a rise in prices, and there will be no proportionate increase in the quantity of things for sale….The dollars the government takes by taxes cannot be spent by the people, and therefore, these dollars can no longer be used to acquire the things which are available for sale, (36).

Taxes thus withdraw purchasing power and demand from the economy which creates non-inflationary room for public spending in pursuit of the public purpose. They are “an indispensable policy requirement in order to ensure the government can operate at its desired scale, without pushing the economy into an inflationary episode,” (Mitchell 2022). But that means that taxes should only be raised if the government needs a bigger resource space to accomplish the public purpose-–not to financially fund spending. A new spending proposal may need to be accompanied by tax increases, but that is not a given.

The MMT proposition that taxes might need to be raised when government engages in new spending has led some to argue that what MMT offers is no different from mainstream theory. For instance, Paul Krugman has argued that, “heterodox monetary theory won’t let you avoid the reality that this [progressive] agenda will have to be tax-and-spend, not just spend,” (Krugman 2019). Similarly, according to Josh Barro (2019), MMT brings policymakers back to square one:

> The government is not constrained by its ability to obtain dollars, but the economy is constrained by real limits on productive capacity. If the government prints and spends money when the economy is at or near full employment, MMT counsels (correctly) that this will lead to inflation, and prescribes deficit-reducing tax increases to reduce aggregate demand and thereby control inflation. See how we have ended up back where we started? Whether you take a Keynesian view or an MMT view, if the government spends more, it's likely going to need to tax more, sooner or later.

Neither Barro nor Krugman seem to fully understand MMT, which insists on assessing the inflationary impacts of policy before determining whether taxes have to be raised. It is not a mechanical tax and spend approach, unlike what they seem to imply. In his critique, Krugman unwittingly shifts the debate to what MMT has been saying all along: "[e]ven if you consider debt a meaningless number, the size of the things progressives are proposing means that pursuing those initiatives without an offsetting increase in revenue would create a lot of inflationary pressure," (Krugman, 2019). The fact that Krugman emphasizes inflation, rather than government solvency, as the concern for spending and taxation decisions demonstrates how MMT has reoriented the conversation away from finance and toward real resource considerations.

As explained above, unlike in the mainstream theory with the government budget constraint, in MMT taxes do not have to increase simply because spending goes up. If there are still idle resources in the economy, spending can be increased without the need for additional taxes. Depending on how the government is spending and what it is spending on, it might even lead to less total spending in the economy (e.g. a single-payer healthcare system that controls costs/prices) or to more supply (e.g., infrastructure investment).

If, however, spending does exhaust a government's real resource capacity and taxes have to be raised, simply matching spending and taxes on revenue grounds is not useful. Just because a tax proposal raises enough revenue to match spending does not mean it creates the needed resource space. As Ruml explains, taxes have to be of the right kind, deliberately targeted to increasing the real resource space whether by withdrawing purchasing power or by discouraging certain behaviors. For instance, progressives in the U.S. often propose to finance the fight against climate change by imposing financial transactions taxes or taxing the wealthy. However, these kinds of taxes are unlikely to free up resource space to prevent inflation. The function of a

financial transactions tax, for example, is to curb financial speculation. If it is successful, which means it has eliminated or reduced the amount of speculation, it will raise zero or very little revenue. Even if it does raise the "needed" revenue, however, it is not certain that those paying these transaction taxes are going to lower their spending on goods and services as a result. Similarly, a tax on the very wealthy, while a worthy goal in and of itself, is unlikely to curb their consumption sufficiently to free up real resources in the economy. Hence, tying spending programs to taxing the wealthy may be counterproductive.

On the other hand, a functional approach to taxes would argue for even higher taxes on the wealthy and high-earners to alleviate the problem of income inequality. As Saez and Zucman (2019) show, setting a lower wealth tax rate leads to little deconcentration of wealth, although it raises "revenue" forever, while higher tax rates rapidly lower the concentration of wealth, but do not raise revenue for long. If the objective of taxation, therefore, is to reduce wealth inequality (as it should be since the state is not revenue constrained), then a higher wealth tax rate is desirable. Similarly, if policymakers want taxes on the wealthy to be useful for fighting climate change, they need to impose them in a manner to curb certain behaviors. A good example would be imposing confiscatory-level taxes on polluting activities, such as the use of private jets or mega-yachts.

4. MMT vs. the Mainstream on Build Back Better, Medicare-For-All, Green Finance and Social Security

The examples of the Build Back Better (BBB) and Medicare-for-All serve to further contrast MMT with the mainstream approach. In Biden's BBB proposals, an alphabet soup of tax changes was slated to "fully pay for" 8 years of government spending over 15 years. From the MMT perspective, which views taxes as a "sinking fund" (i.e. a withdrawal of purchasing power), it makes no sense to inject spending over 8 years while taxing income for 15. There is no rationale for withdrawing purchasing power through taxes for 7 more years after the spending has stopped. But within the mainstream framework, this mechanical matching of tax revenue and spending makes logical sense. After all, the government is viewed like a household.

Further, the long run impact of infrastructure investment envisioned in BBB would likely be disinflationary, not inflationary since it would increase the economy's productive capacity. For instance, investments in green energy that BBB promised to make would increase the U.S.' capacity to produce energy, and would eventually put downward pressure on prices. And in general, to the degree that spending today increases both physical capital and human capital in the future, it is likely that the supply side of the economy could grow as fast as, or faster than, the demand side (Nersisyan and Wray 2022b). And if that is the case, the notion that governments need tax revenue (which can reduce demand) to keep pace with public investment that boosts supply is wrong-headed. If there is any need for tax policy, it would be in the direction of lowering taxes, not raising them, to counteract this deflationary tendency.

Similarly, when considering a program such as Medicare-for-All, which Krugman used as an example in his critique of MMT, one reaches completely opposing conclusions when evaluating it financially vs. doing a real resource accounting. Financially, the government has to increase its spending. But given that a single payer system will lead to lower costs of medical care, due to price controls of said care, and less spending on administering the system due to simplifying it, the society as a whole will be spending less on healthcare, not more (Nersisyan and Wray 2022a). Total spending could, therefore, go down, creating disinflationary pressures, which if anything, would need to be offset by a tax cut, not a tax increase.

Instead of doing a financial exercise of matching taxes with revenue, a truly useful analysis of the affordability of Medicare-for-All would evaluate whether resources needed for implementing it were available. Will the US have enough doctors, nurses and other medical professionals to serve those who now have access to care? Will it need more hospitals, equipment and other medical facilities? The answers to these types of questions then lead policymakers and economists to the next set of questions. Is there anything the government can do *today* to have more of these specialized resources in the future? Does it make sense to invest more in education today? Should the government encourage more young people to go into care work and medical fields? These are the relevant issues which cannot be tackled if policymakers approach affordability as a financial matter.

Similarly, the MMT logic leads to completely different conclusions when evaluating the sustainability of Social Security. While at the individual level the affordability of retirement is a financial question ("will I have enough money saved for my old age") that same calculus does not apply to the federal government. The appropriate question is, will there be enough workers and will they be productive enough to provide goods and services for themselves and for the elderly? If the goods and services are not available, the government can still financially afford to send Social Security checks to seniors. But that money would simply be competing for a limited amount of goods and services, causing inflation (see Nersisyan, Liu, and Wray 2023 for more). But this type of analysis is completely absent from the national discussion on how to put Social Security on a sustainable footing.

Finally, when the MMT's logic is applied to issues such as climate mitigation, it is concluded that the government's ability to address it has nothing to do with money—more money can always be had. Instead, the two main issues policymakers have to contend with is whether a country has the technology to effectively address climate change and whether it has a sufficient amount of the right kind of resources. Do the existing technologies allow a country to transition away completely from fossil fuels? If a country needs to build more wind and solar power, what kind of resources does it need and do they have them? If it does not have enough, where can it find more? Can a government help develop more efficient technologies that use fewer resources? These are the appropriate questions economists should be grappling with, not how to set up the "financing".

It is undoubtedly true that governments will need to mobilize a significant amount of resources to address climate change, especially if they want to do it on a condensed timeline. But first they would need to do a real accounting of resources to understand whether they can afford to address climate change within their current resource capacities. If governments determine that their existing capabilities do not allow for that, they can then move on to the important task of creating the necessary resources (Nersisyan and Wray 2021; Nersisyan 2022). If the goal is so important, as addressing climate change is, then policymakers can also debate whether it is justified to limit the use of resources by the private sector and to shift them to public priorities to achieve the said goal.

While the Green New Deal is only a hypothetical case of major resource mobilization, there are real world examples of how economies have dealt with such resource mobilizations historically. A good example is obviously World War II, during which US government spending reached almost half of GDP. As the war was ramping up, Keynes (1940) similarly argued that war planning was not a financial, but a real resource problem. He had previously argued that the tradeoffs that neoclassical theory emphasizes come into play at full employment: to produce more guns a country needs to produce less butter. Keynes did not think full employment was the normal state of capitalist economies, however. The norm instead was to operate with significant underutilization of capacity. During the war, however, Keynes (1940, 17) argued that the government should move from an "age of plenty" to the "age of scarcity" approach, since the economy was operating close to its productive capacity. More military production means more income and hence consumption, which needs to be constrained to avoid inflation. There were three fiscal tools the government could use to constrain consumption: tax some of the income away, encourage voluntary savings, or devise schemes for "forced saving". The main problem of war planning, therefore, was not finding revenue to pay for the war financially, but rather to limit civilian consumption to the portion of output that was available after war needs were satisfied. The problem that economic policy had to solve, therefore, was that of resources and inflation, something Keynes argued was not done successfully during WWI.

Even during WWII, there were calls to tax the rich to pay for the war, something that sounds familiar today. But what Keynes (1940) recognized was that taxing the rich might not be sufficient; even if a government took away all or a large part of the income from the rich, it would not lower consumption sufficiently. Taxes on incomes or consumption of working-class people, on the other hand, would be most effective in constraining consumption. This was the economic fact, but Keynes saw an issue with taxing those who already were not doing so well economically. Instead, he offered generous exemptions for lower-income people from taxes and proposed a deferred compensation scheme to constrain consumption (Keynes 1940; Nersisyan and Wray 2021).

The United States successfully used its fiscal tools—largely taxes and voluntary savings—combined with others, such as price controls to constrain private spending and inflation during WWII. It engaged in patriotic savings campaigns to encourage lower-income and

middle-class households, who were more likely to try to consume a larger portion of their increased income, to save it instead. It began offering bonds with lower denominations to incentivize even those with very low incomes to buy them (Morse 1971). But this was only one of the many actions taken during the war. The government did intervene more forcefully in the economy to redirect the use of resources toward war production, after giving private companies the chance to do so voluntarily. It established different entities, such as the War Production Board, to estimate the needs for resources, prioritize them and to try to match them with existing supplies (Brinkley 1996).

Obviously, the scale of the fight against climate change is nowhere near what had to be done during WWII. But the policies used at the time highlight the options available to the government in pursuit of the public purpose, from fighting climate change to instituting a Medicare-for-All program. What these demonstrate is that the MMT approach to affordability of spending is the correct one, while the mainstream approach is not a useful guide for addressing such important issues.

While the above analysis often assumes the capacity of the economy is fixed, that is only true in the short-term. In normal times that capacity expands year after year. The pace at which capacity grows depends, to some extent, on how intensively an economy is using it; if it does not use it, it loses it. Prolonged periods of depressed aggregate demand lead to a downgrading of an economy's capacity, while robust recoveries often do the opposite. Keeping demand strong positively influences firms' investment decisions, which have important consequences for productivity. Further, it keeps workers attached to the labor force allowing the participation rate to recover quickly (as happened during the COVID pandemic).

As a case in point, the CBO revised its estimates of nominal potential GDP sharply downward in July 2020, only to swiftly revise them upward in February of 2021. It is likely that the CBO initially expected a slow recovery similar to the one after the Great Recession. It thus lowered its estimates of potential GDP just as it had had to consistently lower them after the Global Financial Crisis as the collapse of actual GDP forced a reappraisal of the trajectory of its potential. During COVID, on the other hand, more adequate fiscal measures changed the performance of the economy and thus the trajectory of its potential.

5. Conclusion: MMT and Functional Budgeting

While mainstream economists and commentators claim that MMT does not make the policy calculus any easier, what this paper has demonstrated is that MMT makes the appropriate kind of policy calculus: that of resource accounting. By contrast, mainstream economic methodology, which simply relies on matching tax revenue with spending, is useless for evaluating the "affordability" of policy. Instead, the affordability of any program depends on the net addition to aggregate demand resulting from such spending and whether or not the economy can accommodate that increase in a non-inflationary fashion. Even if policymakers believe that excessive spending leads to inflation, simply imposing taxes does not solve the inflation problem. Instead, taxes have to be targeted to achieve the goal of creating resource space.

What follows from the analysis is that a government's ability to undertake spending programs aimed at achieving the public purpose is not limited by the amount of money a government has or the amount of financing it can raise through taxes and bond sales. Instead, it is a government's capacity to mobilize real resources and to push the limits of its real resource space that determine what is feasible. At full employment the tradeoffs emphasized by mainstream theory become real. In such circumstances, to have more solar panels an economy might need to have less butter; finance cannot help if an economy does not have enough resources in the moment. But financial constraints do not exist, regardless of whether a nation with sovereign currency is at full employment or not.

MMT economists have therefore proposed to replace CBO's financial *scoring of proposed* legislation with inflation scoring. Scott Fullwiler (2015), for instance, has suggested that:

> Just as the CBO and OMB [Office of Management and Budget] now evaluate government budget proposals regarding their effects on the budget stance, the CBO and OMB could instead shift focus on evaluating these proposals against the inflation target…. Much like how policy makers supposedly take estimates of effects on the budget position rather seriously in making budget conditions, they could replace these with projections of inflationary effects.

In some sense there is one area of the US federal budget where policymakers partly apply this functional approach—the military. The question is never whether the government has enough money for the military. Instead, the military sets certain goals, whether to build a stealth warplane or start a space force, and then the budget is approved in view of achieving these goals. What policymakers do not do when it comes to budgeting for the military is asking whether there is enough tax revenue for it. Neither does the government earmark certain taxes to "pay for" military spending.

MMT views money as a tool to mobilize existing resources to achieve full employment or to create new ones to achieve certain policy goals, such as fighting climate change. US Congressman John Yarmuth perfectly summarized the MMT approach: "Historically, what we've always done is said, 'What can we afford to do?' And that is not the right question. The right question is, 'What do the American People need us to do?' And that question becomes the first question. Once you answered that, then you say, 'How do you resource that need?'" (Gerling 2021).

Policymakers can debate these policy goals and hopefully agree on them through a democratic process. Policymakers and economists can also debate what the best way to create the needed resource space is. What is not debatable is where policymakers are going to find the money. There is only one place where it can be found and that is the federal government.

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