



The Institutional, Empirical and Policy Limits of 'Modern Money Theory'

Gerald Epstein

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Gerald Epstein

Professor of Economics and Co-Director of the Political Economy Research Institute (PERI)
University of Massachusetts Amherst
gepstein@econs.umass.edu

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Abstract

Modern Money Theory (MMT) economists acknowledge a number of empirical and institutional limitations on the applicability of MMT to macroeconomic policy, but they have not attempted to explore these empirically nor have they adequately addressed their implications for MMT's main macroeconomic policy proposals. This paper identifies some of these important limitations, including those stemming from modern international financial markets, and argues that they are much more binding on the policy applicability of MMT than many of MMT's advocates appear to recognize. To address these limitations, MMT analysts would have to enter the messy institutional, policy and empirical realms that undermine their simplistic policy conclusions that might be appealing to some policy-oriented followers of MMT. My conclusion is that, in light of these limitations, MMT's major macroeconomic policy suggestions are of little practical relevance today for progressive politicians and activists, much less to macroeconomic policy formulation in general.

JEL Codes: E58; E61; E62; F42

Key Words: Modern Money Theory, Monetary Policy, Fiscal Policy, Exorbitant Privilege, Full Employment, Public Debt

I. Introduction

Modern Money Theory (MMT) has recently gained a significant amount of attention. This has stemmed largely from the “shout-outs” it has received from prominent progressive politicians such as Alexandria Ocasio-Cortez. MMT’s recent appearances in the news and social media have also drawn a variety of criticisms from economists of various stripes. Though much of the previous debate about MMT has concentrated on theoretical and doctrinal issues, less seriously discussed have been those MMT monetary and fiscal policy proposals that have attracted the attention of progressive politicians and activists.¹

The recent appeal of MMT is understandable. For almost forty years, neo-liberal economic theory and policy has dominated macroeconomic policy with its focus on balanced budgets, austerity and the elevation of “independent central banks” to focus on inflation to the virtual exclusion of all other goals, including full employment. (eg. Epstein and Yelden, 2009; Pollin, 2003). In this world, neo-liberal economics was used as a justification for macroeconomic policies that tolerated high unemployment, and government budgets that starved important public investments and social programs for the poor and working class. Mainstream Democrats in the US and similar politicians in Europe and elsewhere also adopted this approach, with devastating results on our economies and the livelihoods of many people (Blyth, 2012). Austerity for the working class and riches for the rich also helped to fuel the rise of the right in the US, Europe and elsewhere.

The apex, and partial denouement of this neo-liberal austerity approach came with the onset of the Great Financial Crisis of 2007-2008 and the restoration of austerity budgets in Europe and to some extent in the US, following the brief post-meltdown “Keynesian” moment. Many people in the US and elsewhere could see the hypocrisy and venality of bail-outs for the bankers and austerity for everyone else. The pushback gained force with the devastating revelations of the problematic econometric analysis of Reinhart and Rogoff (2010) published by Herndon, Ash and Pollin which greatly undermined the pseudo “scientific” underpinnings of the austerity ideology. (Herndon, Ash, Pollin, 2014). Former austerity hawk Republicans and Donald Trump implemented their deficit busting tax cut for the rich accompanied by claims that “Nobody cares about deficits anymore”.

Still, austerity ideology lives on in a selective and anti-worker fashion, as Trump and other Republican tax cut advocates have proposed massive cuts to social security and other social insurance programs in order to reduce the “ballooning” government debt that they said no one cares about.

MMT theorists were not the first or only economists to criticize neo-liberal austerity economics. Keynesian and heterodox economists more generally have been pushing back against this cynical

¹ For MMT’s recent popularity among some progressive politicians see Guida, 2019 and Holland and Bosesler, 2019. Among the recent well-known mainstream economic critics are Lawrence Summers, 2019, Fed Chair, Jerome Powell (McCormick, 2019) and Kenneth Rogoff, 2019. Doug Henwood has recently criticized MMT from the left (Henwood, 2019) while James Galbraith has come to MMT’s defense (Galbraith, 2019). For important contributions to the earlier, more academic, theoretical debates see Mehrling, 2000, Palley, 2013, 2015, 2018 and Lavoie, 2013. Wray, 2012, is a classic presentation and defense of MMT.

and destructive policy and ideology for decades (See the articles, for example in Dymski, Epstein and Pollin, 1993, Palley, various; Blyth 2012; Galbraith, 2012). Very recently, a key bloc of former mainstream Democratic economist budget hawks in both the Clinton and Obama administrations, have begun to argue for a “new approach” to fiscal policy which is, for the most part, an implicit acknowledgement that the Keynesian and heterodox economists have been right about these issues (though they would not admit as much). (Blanchard and Summers, 2017, Blanchard, 2019, Furman, 2016)

But, MMT has gained many adherents by putting this anti-austerity argument on a whole new plane by claiming that, in principle, government spending never has to be paid for and is typically implemented by a mere stroke of the monetary pen. This way, MMT has recently been able to capture a large amount of attention in the progressive debate. Naturally, along with this positive attention, MMT has come in for a good deal of criticism from some economists (some more scathing than others) including from prominent heterodox economics.² This debate is for the most part is a healthy one, as new ideas must be vetted thoroughly, especially if they are going to guide public policy.

My paper is an attempt to contribute to this debate by looking at some important, and mostly neglected aspects that are relevant to the policy debate. While the economists’ debate thus far has shed some important light on theoretical and doctrinal issues, there has been virtually no discussion of the empirical, historical and institutional validity and limits of the MMT approach to macroeconomic policy. While theoretical and doctrinal discussion can be very useful, empirical assessment is especially important when theories are possibly on the verge of moving from the academic stage to the policy ones.

Thus, in this paper I focus on the monetary and fiscal policy recommendations promulgated by MMT advocates.³ Roughly speaking, as developed by Randall Wray, Stephanie Kelton and others, MMT’s macroeconomic approach amounts to Abba Lerner’s “functional finance” approach with a twist of “sovereign money” and “debt monetization” (Lerner, 1943). For them, the main goal of fiscal and monetary policy is to maintain full employment without (excessive) inflation. Their point about sovereign money is that governments do not need to save or levy taxes to “pay for” goods and services because all they need to do is print their sovereign currencies and use this money to acquire them. In fact, when the central bank and the treasury are institutionally connected, this money payment happens automatically, according to MMT. But, in the case of the U.S., and other countries, as Marc Lavoie (2013) points out, these policies are not automatic but amount to deliberate decisions by the Federal Reserve to monetize Treasury debt since the Federal Reserve charter prohibits the Fed from directly lending to the U.S. government.

² See the references in footnote 1 above.

³ I am aware that there is a debate within MMT circles about whether MMT should exclusively focus on “descriptive” issues or should also address “normative” ones. (Wray, 2012). Galbraith (2019) defends MMT, for example, by arguing that it is mostly a descriptive theory, not a policy one. My paper focuses on the validity of key policy and political messages of MMT so I focus on the normative claims. For a summary of these see Wray, 2012, Chapter 6. In this paper I will not address various doctrinal or theoretical issues concerning the nature of “sovereign money”, the role of money vs. credit, and so forth, except insofar as these address the specific focus of this paper..

What then is the role of monetary and fiscal policy? The “functional finance” claim is that the role of “taxes” and “borrowing” should be to drain spending from the economy when necessary to prevent excessive inflation, not to “finance” spending, per se. MMT advocates add that the proper target of monetary policy should be to keep interest rates very low in the long run, while fiscal policy should be adjusted when necessary to maintain full employment and moderate inflation. According to MMT, any level of sovereign debt is sustainable in the narrow sense that the issuers of sovereign money will never need to default on its debt; they just need to print more money to service and even repay the debt if necessary.

There are obvious questions about the viability of MMT macro policies: what would be their impacts on inflation, exchange rate instability, interest rates, financial instability, investment and economic growth? What, ultimately, are the limits and constraints on MMT macro policy?

Wray and other MMT analysts have recognized some of these issues, and have discussed them in various writings, including Wray’ 2012 “Primer”.⁴ But, in my view, MMT advocates have not sufficiently addressed the institutional, empirical and policy realities of the modern international financial system and their implications for the limitations on MMT policy.⁵ My conclusion is that, when one takes these into account the substantial empirical and institutional literature that has studied these issues, the applicability of MMT policy proposals, appears to be, at best, extremely limited.

To start, even though MMT advocates claim that its macroeconomic framework applies to all countries with “sovereign currencies”, there is significant evidence that it does not apply to the vast majority of such countries in the developing world that are integrated into modern global financial markets. As is well-known, in the modern world, these countries are subject to the vagaries of international capital flows, sometimes called “sudden-stops”. The problem is that, in light of these flows, these countries have limited fiscal and monetary policy space, surely insufficient to conduct MMT prescribed monetary and fiscal policies for full employment. Wray argues that that flexible exchange rates would provide sufficient policy space for these countries to undertake MMT macro-policies. Occasionally he briefly mentions capital controls but these are not seriously discussed as a complementary policy.⁶ But, I argue that a careful survey of the empirical evidence casts grave doubts on the effectiveness of flexible rates for giving policy autonomy or insulating these countries from the vagaries of global financial flows. This problem is worse for countries that cannot borrow in their own currencies, but also applies to small open countries that are able to borrow in their own currencies. The upshot is that the number of countries to whom MMT might apply is quite limited, namely, only countries that issue their own internationally accepted currency.

Even for those countries that issue their own international currencies, the sustainability and “exploitability” of the international role is not absolute. The country that has the greatest fiscal and monetary space is the United States, which issues the predominant key currency, the US

⁴ See, for example, Wray, p.112, p. 189, and my discussion below.

⁵ There are exceptions. MMT analysts have carefully studied some of the institutional limitations in the Euro Zone (see, for example, Wray, 2012, Sections 5.6 – 5.9,) and their proposal for Employer of Last Resort (ELR), has paid close attention to institutional details (see Tcherneva (2019).

⁶ See Wray’s cursory mentions on pages 139, 211, 216.

dollar. Whereas Wray has written that the predominance of the dollar is not something we will need to worry about in our lifetime, historical and empirical evidence suggests that even considerable forces for persistence of key currency positions can weaken over time, perhaps even rapidly and dramatically.⁷ This is especially true when there are competing currencies with both a “will” and a “way” to achieve key currency status. China (and to a lesser extent, the Euro zone) are competitors in this sense. There is significant evidence of a move to a multi-currency system in which dollar holders can more easily switch out of the dollar if significant, perceived problems arise, such as high exchange rate instability, or excessive inflation. In such a world, the ability of the US government to exploit the dollar’s “exorbitant privilege” to sustain very large debt levels or sustained low interest rates will have limits. To be sure, these limits are uncertain, but history suggests that the US cannot completely ignore them, even in “our” lifetime.

But even if the dollar’s role continues indefinitely to create space to implement MMT macro-policies, that doesn’t mean that the US should actually do so. The MMT proposed policy amounts to an “America First” macroeconomic policy. While it is traditional for the US (and other countries) to ignore the impacts of their macroeconomic policies on the rest of the world, presumably a progressive approach to policy would adopt a more internationalist perspective. There is significant evidence that there are substantial spillover effects of US monetary policy on emerging market and developing countries that are transmitted largely through the dollar’s predominant international role. These spillover effects can be highly destabilizing if the Federal Reserve pursues excessively loose or tight monetary policy without any consideration of their impacts on developing countries. For example, as Jane D’Arista (2019) shows, the low interest rates of the Greenspan era helped to generate dangerous levels of dollar denominated leverage in emerging markets which contributed to the spread of financial crisis in 2007-2008. A more internationalist, progressive approach to macroeconomic would take these impacts into account. At a minimum, to address these impacts, MMT analysts would have to evaluate institutional arrangements such as capital controls, and financial regulations to mitigate these negative impacts. These receive at most only a cursory mention in their work.

MMT advocates might argue that their proposed low US interest rates would facilitate growth in developing countries by reducing the cost of capital for these countries, so that the spill-overs would be good, not bad. But by itself, this claim ignores the highly speculative nature of modern international financial markets. A careful analysis of the impact of low, long term interest rates shows that in the absence of strong financial regulations domestically and internationally, the impact is likely to be the accumulation of high leverage, asset bubbles and financial instability. Yet MMT theorists talk very little in the context of their proposed macroeconomic policies about the necessary role of financial regulations and capital account regulations in channeling funds productively and limiting financial crises. This lacuna is puzzling in view of MMT theorists’ long-standing association with the work of Hyman Minsky. In short, this relative lack of attention to financial instability and financial regulation in the context of their proposed monetary and fiscal policy is a key example of their relative inattention to institutional and empirical constraints on the macroeconomic policies they propose.

As I mentioned earlier, much of MMT’s policy appeal stems from the strong perception that MMT implies that progressives with programmatic plans do not need to say or worry about the

⁷ See Wray’s claim on p. 72. (Wray, 2012)

costs of these programs or how they are going to be “paid for”. But even within the framework of MMT itself, this claim of a free lunch is incorrect. Recall that MMT theorists recognize that at or around full employment, further economic expansion could lead to an increase in inflation and if this fiscal and monetary expansion were pushed too far, inflation could accelerate. In this world, at full employment, MMT theorists argue that the government would have to raise taxes or cut private or other public spending in order to make room for new fiscal initiatives. This is no free lunch. Yet, MMT advocates do not emphasize this point in a systematic way to their would-be followers. I believe this presents a serious danger to progressive politicians and policy advocates.

In the rest of the paper, I develop these points in more detail.

II. Expansionary Monetary and Fiscal Policy: Limits, Imagined and Real and The Appropriate Policy Mix

As mentioned in the introduction, the key MMT macroeconomic policy proposal is that government spending should target full employment, and that the central bank should keep interest rates low by monetizing the debt.⁸ Moreover, the government should not worry about “financing the budget” through taxes or cuts in other spending. This is functional finance with an MMT twist. MMT advocates argue that at full employment, the fiscal authorities should raise taxes or cut spending to drain demand from the economy to maintain full employment without inflation. (Wray, 2012; Palley, 2013; Tymoigne and Wray, 2015.) In this rendering, then, macroeconomic policy should be guided by fiscal spending to achieve full employment, and then policy should be subject to an inflation constraint managed by fiscal policy tools. Monetary policy, in turn, should focus on keeping the interest rate low.

What are the limits and constraints on this policy?

To their credit, MMT advocates correctly dismiss some of the most catastrophic scenarios raised by some critics.

Hyperinflation

MMT advocates correctly argue that debt monetization and increases in the supply of money are not, by themselves, typically a cause of hyperinflation. They correctly claim that most hyperinflations are due to profound structural disruptions in economies, such as famines or wars or gross mismanagement on the supply side of the economy, not the demand side. Excessive foreign debt can play a role in some cases to be sure. The hyperinflation in Germany in the 1920’s for example, was due to the supply shortages generated by the war combined with reparation demands from the Treaty of Versailles. As Kindleberger shows, it was exacerbated by a depreciating exchange rate due to financial speculation (Kindelberger, 1993 ch. 17.). There is virtually no evidence that increases in the money supply, or debt monetization, in the context of a well-functioning supply side of the economy (and proper management of demand (see below), is likely to lead to hyper-inflation. In short, there is a massive literature on the causes of hyper-

⁸ In the US, the Fed would monetize the debt by buying government securities on the open market because the Fed is prohibited by law from lending directly to the Treasury.

inflations in different historical episodes and as Wray and many others have argued, these causes are extremely diverse and cannot be reduced to simplistic explanations of excessive debt accumulation or excessive monetary easing.

The Unsustainability of High Debt Levels

The MMT argument that the sustainability of public debt levels should not be a concern at any level is more questionable. As I mentioned earlier, sometimes they mean by this simply that, in sovereign currency countries, countries cannot be forced to default because they can always just print money. But this is of little macroeconomic import. For that, we are concerned about the macroeconomic impacts of very high and growing levels of public debt. Sometimes, MMT theorists do discuss the term “sustainability” in its more common (and important) meaning in terms of the macroeconomic impacts of high levels of debt (Wray, 2012, pp. 66-75). We will address this issue in more detail below but here point out that the evidence on this point for developed countries is quite murky and uncertain. (Developing countries are a different matter and treated separately below). I already mentioned the devastating empirical critique by Herndon, Ash and Pollin ((2014) of the iconic study by Reinhart and Rogoff (2010) which purported to show that economic growth falls off a cliff after a threshold level of public debt to GDP of around 90%. HAP showed that this threshold does not exist (2014). Follow up work by Ash, Basu and Dube (2018) delve further into causality issues to show that in the case of advanced capitalist countries, there is little to no evidence that higher debt levels cause reductions in economic growth, and within the range of debt levels that characterize these countries, there is no sign of a threshold in terms of causality.

Still, of course, these results do not speak to debt levels higher than that experienced in their data set. Thus these results are not definitive for all levels that might be reached if an MMT policy were implemented. This remains an area of uncertainty and potential concern.

That being said, another factor might allay this concern in the current period. Evidence on current financing costs on public debt relative to growth rates also should reduce concerns about debt sustainability in the immediate period. A commonly understood relationship indicates that debt “sustainability”, defined as a bounded public debt to GDP ratio, hinges importantly on the rate of growth of GDP relative to the interest rate on debt. Pollin showed several years ago that financing costs on US debt were going down because of the low existing interest rates generated by central banks and stemming from the sluggish world economic growth (Pollin, 2010). A recent study by an IMF economist joins a number of recent papers that show that for advanced capitalist countries in the last five decades or so, interest rates on government debt are often below the growth rate of the economy (Barrett, 2018, and the references therein). With a negative “interest rate minus growth rate” level, any ratio of debt to GDP is sustainable, as long as annual deficits do not grow at too high a rate.

Note that this finding does mean that increases in the level of budget deficits can be unbounded: on the contrary, they are constrained by the size and stability of the gap between interest rates and growth rates.⁹ In addition, while Barrett shows that this factor (growth rate – interest rate) has on average been negative for long periods of time, it does fluctuate and in some periods for

⁹ The growth rate of the budget deficit must also not keep going up indefinitely.

some countries, it jumps up to positive territory, where high debt levels can begin to grow from debt service at a rate higher than GDP driving the ratio of debt to GDP to higher and higher levels. Barrett's empirical analysis suggests that there is some uncertainty as to whether the relationship between interest rates and growth rates is steady enough to warrant a highly aggressive public debt growth strategy. Moreover, there is of course uncertainty about future growth rates relative to interest rates. Still, Barrett's empirical results and those of others suggest that the constraints on advanced countries' public debt accumulation in an era of low interest rates is much looser than the austerity hawks have suggested. (See also Furman and Summers, 2018).

MMT analysts, such as Randall Wray, have argued that for sovereign money countries, this ratio can always be made negative because the central bank controls the interest rate (Wray, 2012, pp. 71-75.) But there are many interest rates, and even central banks with a lot of policy space like the Federal Reserve can only easily control only its policy rate which might not be the rate most relevant for financing government debt.

Mason and Jayadev (2018) have addressed this question of debt financing vs monetary financing of budget deficits in the context of MMT. They argue that the issue of the validity of the MMT argument can be analyzed in terms of the familiar assignment problem in macroeconomic policy analysis, built on the work of Tinbergen and Mundell. They claim that the debate over MMT can be framed in terms of two goals for macro policy – full employment and stable public debt to GDP ratio – and two instruments – fiscal policy and interest rates (monetary policy). The assignment problem asks if you assign one instrument to each target, what should the assignment be? Mason and Jayadev show that in a closed economy context, it doesn't matter when debt levels are low, but, paradoxically, at high debt levels, fiscal policy should be assigned to maintaining full employment and monetary policy should be assigned to sustaining the debt levels by keeping interest rates low – what they call “the MMT (or functional finance) solution”. As we have just seen, the economics behind this argument is that at high debt levels, it is critical to keep interest rates low so that their growth rate from servicing costs does not get out of hand.¹⁰

Still, the Mason and Jayadev discussion as a defense of MMT leaves out some crucial issues. First, MMT analysts have not accepted the need to maintain a target federal debt to GDP level. Their argument is that sovereign money can “finance” any debt level. Second, the Mason and Jayadev analysis ignores important financial market issues and open economy considerations. In particular, in the domestic arena they do not consider the impact of low interest rates on private debt accumulation and the possibility of financial speculation and asset bubbles; and, in terms of open economy issues, they do not consider the spill over impacts from the US to the rest of the world. They also do not consider whether their model applies to a country that does not issue an international currency so in their model there are no exchange rate, or international financial speculation constraints. Thus their interpretation is subject to the same limitations that plague MMT macroeconomic analysis in general.

¹⁰ As Palley notes, their discussion follows on a large literature by Keynesian economists of the government budget constraint and the impacts of debt vs. monetary financing on the growth and stability of the economy (see for example, Blinder and Solow, 1973).

Even though MMT theorists deny that rapidly growing public deficit and debt levels can be a serious problem for sovereign money countries, they nonetheless do recognize some relevant constraints on fiscal policy. Wray (2012) discussed possible limits and constraints on policy this way: He argues that: “Just because government can spend doesn’t mean that government ought to spend” (Wray, 2012, p. 187) and proceeds to discuss possible legitimate limits or constraints on government spending: 1) too much spending can cause inflation 2) too much spending can pressure the exchange rate 3) too much spending by government might leave too few resources for private interests 4) government should not do everything – impacts on incentives could be perverse 5) budgeting provides a lever to manage and evaluate government projects. (Wray, 2012, p. 188.) These are reasonable points and suggest a research agenda of careful theoretical and, more importantly, empirical analysis of these possible constraints in different contexts. But to my knowledge, MMT advocates have not implemented such a research agenda for the United States or any other country.

Wray (2012) explores these constraints casually. I have already mentioned the argument (which is common to “functional finance”) that when the economy reaches full employment, the government should use fiscal policy to “drain” demand from the economy to avoid excessive (and possibly accelerating) inflation. I will discuss this at some length in various parts of this paper.

Wray’s second potential constraint “too much spending can pressure the exchange rate” is importantly related to the issues addressed in this paper. This becomes especially important for understanding the possible constraints to MMT type policy undertaken by developing countries.

Wray’s major argument in this regard is that “flexible exchange rates” will provide significant policy space for developing countries with sovereign currencies allowing them to pursue MMT policies. (Wray, p. 129, pp. 185-86).¹¹ But as I discuss below, there is a significant amount of empirical evidence that flexible exchange rates do not fully insulate developing countries from the waves of capital sloshing around the international financial markets, and that flexible exchange rates will not create sufficient policy space for these countries to pursue MMT macroeconomic policies. (Section III). While points 3) and 4) might be of interest, they are not germane to the focus of this paper. I will return to point 5 “budgeting provides a lever to manage and evaluate government projects”) in section VI.

While, as I suggested, most of the previous heterodox economists’ critical discussions of MMT have focused on theoretical and doctrinal issues, some have made some important points that bear directly on the issues I address in this paper.

Palley has addressed the problems of using fiscal policy to fine tune the economy to reach full employment without excessive inflation (Palley, 2013, 2015, 2018). These are familiar from the old debates about fine tuning vs rules and emphasize uncertain lags, uncertain shocks to the economy, and poor understanding of key parameters such as multipliers associated with different policies and the shape and position of the Philips Curve. In addition, there are many related problems associated with this idea of fine-tuning fiscal policy at the point of full employment:

¹¹ Wray does not claim that this space is absolute but argues that for developing countries with sovereign currencies it is significant, and, importantly, protects these countries from “default”. (Wray, 2012, p. 186).

how exactly do we define full employment? What about underemployment? What about variations in labor force participation rates over the cycle? ¹² While these are potentially important problems, these are not the ones I focus on here.

Lavoie (2013) argues that while MMT theorists are correct about some aspects of their theory, many other claims are based on a consolidated functioning (balance sheet) between the central bank and the Treasury, a consolidation that does not exist in most countries. Here is an important institutional constraint, pointed out by Lavoie, that undermines some of the key MMT claims. In the US, specifically, monetary financing of deficits does not happen automatically. The Federal Reserve has to choose to monetize the debt by doing open market operations, and this choice is as much a political one as an economic one. In practice, the Fed has done this sparingly. Understanding the political economy of the Federal Reserve is therefore key to understanding the institutional limits of MMT (see, for example, Epstein, 2019, forthcoming). For example, in the current regime of a Federal Reserve (and other central banks) with some political autonomy, there is the possibility, and even likelihood that they would push back against the highly expansionary fiscal policy by raising interest rates. The argument that they will not do this because this might destabilize the economy is only one possible political outcome; another is that a different political coalition will come into power and support higher interest rates and lower deficit spending. This political backlash from bankers and their allies is what has established and sustained “independent” central banks and austerity policy in the first place. ¹³

Mehrling (2000) has noted that MMT emphasizes money but underplays the role of credit in these discussions. He says that in the modern world, money is a type of credit instrument. This issue of credit in the modern financial economy goes way beyond this point, however. Focusing more on credit allows us to have a window into multiple issues of financial instability, speculation and crisis connected with credit conditions. Kindleberger (1978) noted multiple examples of low interest rates and loose credit conditions leading to excessive lending, asset bubbles and crisis. Since Kindleberger’s book came out, many economists have studied the connection between interest rates, credit conditions and financial instability and crisis. (See for example, D’Arista 2019). The implications of these findings are not necessarily that low interest rates are always a bad thing; but the thrust of the discussion implies that other institutional policies such as prudential regulations, credit allocation techniques, capital controls, speculation taxes and the like may be needed to accompany low interest rates for them to be effective without leading to financial speculation and crisis (see, for example the chapters in Wolfson and Epstein, 2012).

¹² There are additional problems. What happens when the economy crosses the threshold between the unemployment/low taxes world and to the full employment/higher taxes world: Let’s say we do know where to set the full employment threshold. We are now introducing a massive shock into the economy when we cross into full employment. That is, just before full employment taxes are very low. After we cross the threshold, all of a sudden, the government is collecting a significant amount of taxes. How do we avoid a significant de-stabilization? (Thanks to Robert Pollin for pointing out these complications).

¹³ I agree with those who argue that these central banks are not truly “independent”. They are embedded in a complex political economy and power struggle that does not reduce to – they will do whatever the fiscal authorities want – or to they will be completely independent of the government. See Epstein (2019) for a lengthy discussion of these issues.

The main implications of these contributions are as follows:

Under current conditions of low interest rate and global financial markets, there is very good evidence that the austerity focused mainstream economists of both Republican and Democratic ilk in the US and similar stripes in Europe, have greatly exaggerated the dangers of budget deficits and growing debt for advanced economies. This point aligns with some of the claims of MMT, and especially, the functional finance perspective.

At the same time, the reluctance, of MMT economists to take seriously institutional constraints on their analysis and policy raises serious questions about the validity of their arguments in the context of real world environments: the ability to fine tune fiscal policy to implement MMT policy; the institutional configuration of central banks in relation to fiscal authorities; and the key role of credit and broad financial institutions and markets in the dynamics of the modern national and global economy, are all important elements demanding much more empirical and institutional analysis and raise serious concerns about the validity of MMT policy ideas.

Even if these concerns were resolved, there are still further institutional issues and constraints that render MMT type policy quite particular and applicable, if anywhere to a small slice of humanity: mainly those living in countries with international currencies and especially the U.S. As the next section shows, there is a significant amount of empirical research demonstrating that fiscal and monetary policy space is highly constrained in developing countries, even those that have “sovereign currencies”. It also shows that “flexible exchange rates” alone are no panacea that will set these countries free, as some advocates of MMT have claimed.

III. MMT Policy is relevant, at best, to Only a Few Countries: Those with Significant International Currencies

MMT advocates argue that MMT style policy applies to any country with a sovereign currency, though they acknowledge that small open economy countries from the global south might have less policy space generally than large rich countries (see, for example, Wray, 2012, chs. 3, 5, and 6). Wray argues, furthermore, that the key to MMT policy in smaller or poorer countries with sovereign currencies is to operate a flexible exchange rate. (see, for example, Wray, 2012, p. 129 and Ch. 6).

Unfortunately, these claims do not appear to be backed up by rigorous empirical work. In this section, I will try to help fill this gap by referring to systematic empirical studies that have addressed these issues.¹⁴ The empirical work suggests that contrary to MMT claims, many economies with sovereign currencies are forced to stop well short of full employment because of financial speculation and “sudden stops” of capital from international capital markets. This is true in regimes of both fixed and flexible exchange rates. These results strongly suggest that, to the extent that MMT theory applies, it applies only to countries that issue important international currencies. A broader literature, which I will briefly discuss toward the end of this section, do address how non-key currency countries can enhance their policy spaces, but this require a set of institutional innovations such as broader central bank policies, capital management techniques,

¹⁴ Esra Nur Uğurlu prepared an excellent literature review from which much of the material of this section is drawn. I also thank Juan Antonio Montecino for his helpful comments on this section and section V.

and other policies.¹⁵ While heterodox economists have studied these institutional constraints and institutional alternatives for decades, as far as I know, MMT theorists have not, even though such institutional innovations would be necessary to achieve the kind of fiscal space they assume exists for developing countries with sovereign currencies.

Sudden Stops and Speculative Exchange Rate Crises Even before the Time of Emerging Markets Crises

Although I will be focusing in this section on more current episodes of reductions in fiscal space for developing countries, it is worth remembering that these problems of fiscal and monetary policy space plagued advanced European countries such as Italy in earlier times. In the 1960's, 70's and 80's, Italy frequently had balance of payments and exchange rate crises which interrupted fiscal and monetary expansions. This was true under both fixed exchange rates and managed floating regimes. While it is true that Italy, like most other countries, never adopted pure floating as Wray has recommended, an obvious question is why? As I discuss a little later in this section, "fear of floating" is usually sensible and rational for small open economies, especially highly indebted ones like Italy. One of the reasons Italy joined the Euro is because it calculated that (managed) floating exchange rates were either not viable and did not sufficiently create fiscal and monetary space. The same was true of many other sovereign currency countries in Europe. Hence, in Europe we have many examples of countries with sovereign currencies that concluded that they could not achieve enough fiscal space in an integrated global economy with high degrees of capital mobility to achieve full employment.

Emerging Market Economies: The Extreme Difficulty of Pursuing MMT Policies in a Globally Financially Integrated World

Whatever difficulties the southern European countries and France had in launching full employment macroeconomic policies in the 1980's and 1990's, the problems confronting poor and emerging markets – even those with sovereign currencies – is far greater.

Countries with open capital markets are subject to hot money inflows and outflows, surges and "sudden stops". (See, for example, Akyuz, 2017). Surges, or "hot money inflows" are associated with increased liabilities on the balance sheets of local borrowers, instability in exchange rates, and difficulties managing liquidity conditions. Such inflows can often lead to over-valued exchange rates, current account deficits, and then rapid capital outflows and sudden-stops, leaving local financial institutions and businesses with debts that are hard to service and repay (see Taylor, 1991, Chapter 6 for a classic model of this cycle).

These problems are exacerbated for countries that are not able to borrow internationally in their own currencies.¹⁶ In this case, when capital flies out and the exchange rate depreciates, the local value of international debt increases, making it difficult for institutions in these countries to service their debts. Such excessive debts can have damaging impacts on investment, productivity

¹⁵ "Key currency" countries are those that issue major international currencies.

¹⁶ For some strange reason, the mainstream of the economics profession refers to this state of affairs as "original sin": a bizarre practice of blaming the victim dressed up in biblical garb.

and employment. It can also lead to bankruptcies. Note, that many of these countries are those with sovereign currencies.

There is substantial empirical evidence in support of these channels and problems. Eichengreen, et. al. (2005) demonstrate that developing countries are much more volatile in their capacity to service their debt compared to advanced countries (p.16). If a country's debt is denominated, let us say in US dollars, its capacity to service its debt will depend on the value of its GDP in US dollars. Given the volatility of exchange rates (which is typically between 2 to 3 times higher in developing countries), a typical developing country with these constraints would face volatility of around 13 percent whereas a developed country without them would face volatility of around 2.7 percent per annum. Eichengreen et al. further argues that the volatility of the real exchange rate is not a concern only for short-term debt. The authors document that the volatility of movements in the five-year moving average of the real multilateral exchange rate is also very high; indeed, it moves for more than 60 percent in an average developing country. Hausmann, 2003 shows that countries unable to borrow in their own currencies have lower evaluations of solvency as it intensifies the dependence of debt service on the movements of the exchange rate, which may be subject to crises and crashes due to its volatility. Further empirical evidence on the ability to borrow abroad in local currency is presented by Hausmann, et. al. (2001) and Bordo and Flandreau 2001. These two papers document that the set of countries that can borrow internationally in their domestic currency is quite limited, mainly to G-3 countries, with a few surprises such as Poland, South Africa, and Taiwan. The Bank for International Settlements (BIS) similarly documents that outstanding international debt securities are denominated in only four currencies, namely the US dollar, the pound sterling, the Euro and the Japanese Yen (quoted in Jeanneret and Souissi, 2016, p. 202).

No matter what the underlying cause is, the prevalence of high-interest rates limits fiscal expansions by lowering the sustainability of even *domestic* debt issued in the country's own sovereign currency. Indeed, there is significant evidence that most developing countries are unable to issue domestic currency debt at reasonably low interest rates. Most of the time, developing country governments have to offer high yields to make their bonds more attractive, even in their own countries. For instance, an IMF study shows that in a sample of 65 low-income countries, domestic debt, which only represent 21 percent of total debt absorbs 42 percent of the total interest bill.

There is the further problem of fiscal procyclical fiscal policy in developing countries. Procyclical fiscal policies are often attributed to difficulties of obtaining credit during recessions. Countercyclical policies require countries to issue debt when it is expensive to do so and to retire debt at a time when it is cheap to borrow (Panizza, 2007). (see also: Aizenman, et. al. 2018.)

Do Flexible Exchange Rates Provide The Solution?

As we have seen, Wray (2012) argues that the solution to these problems for developing countries with sovereign currencies is to adopt flexible exchange rates. But flexible exchange rates do not appear to work any better in developing and emerging economies than they did in vulnerable European countries in the 1980's and 1990's.

There is an enormous literature on the issue of the possible insulation properties of flexible exchange rates. This literature is not uniform. Some empirical studies suggest that flexible exchange rates do provide some insulation properties for developing countries (see for example, Klein and Shambaugh, 2015). But even they find that this protection is far from complete. The preponderance of evidence, on the other hand, is that, in the age of massive capital flows and financial openness, flexible exchange rates provide very little, if any, monetary or fiscal policy autonomy or insulation properties for developing countries and emerging markets. (See for example, Montecino, 2018; and Hofmann and Takats, 2015)

Jorda, et. al. (2018) study the issue over a long time span and find that financial fluctuations emanating from global financial markets generate significant instability in developing countries. Looking over 150 years of history they find that “these fluctuations are transmitted across both fixed and floating exchange rate regimes, but the effects are more muted in floating exchange rate regimes.” Focusing on the more recent period of high capital mobility and open capital markets, Rey (2015) and others find that the exchange rate regime has very little impact on providing policy autonomy for developing countries.

In short, flexible exchange rates are no panacea for MMT policy in the developing world -- not even close.

IV. The Role of the Dollar as an International Currency and It's Limits in A Multi-Key Currency World

I have just argued that the MMT approach to macro policy is not feasible for developing countries and that, in a highly financialized global financial system, flexible exchange rates will not substantially alter this verdict.

But for the United States and other large, wealthy countries, and especially those with internationally accepted currencies, the fiscal and monetary space is much greater. This is especially true for the United States which issues the predominant global currency, the US dollar. During the financial crisis of 2007-09, the importance of this role for US fiscal and monetary policy was dramatically evident: when the US implemented a large fiscal expansion accompanied by extremely loose monetary policy, international capital poured into US dollar assets, lowering interest rate even further and appreciating the US exchange rate. This is a far cry from the market reactions to expansionary policy during recessions by developing and emerging market economies where there might be significant capital flight, depreciations of the exchange rate and increases in interest rates.

Still, the global financial consequences of a sustained MMT style policy could be significant. The financial and debt accumulation implication of MMT policy for the US are likely to be as follows: under this policy, the Federal Reserve would keep interest rates low indefinitely which, given the dynamics of domestic and global banking institutions and financial markets, would flood the global economy with dollar assets and liabilities strewn across the balance sheets of private and public institutions around the world. The expansionary macroeconomic policy would pull in imports and likely substantially increase the US current account deficit. Inflation would

likely ratchet up. The dollar exchange rate could become for variable. These dynamics would raise “red flags” for global dollar holders and investors.

To what extent will the international role of the dollar sustain wealth holders’ demand for dollars and prevent a flight from the dollar with its consequent increase in interest rates and possible fall in the exchange rate, as would surely happen under a similar policy regime in other countries? Will these limitations be avoided as US macroeconomic policy “exploits” the dollar’s international role? Or, are there limits to the degree to which MMT fiscal and monetary policy can exploit the international role of the dollar? Are there economic limits to which the Fed can effectively print money to maintain low interest rates in a financially globalized world even with the dollar’s mighty international role? What are those limits? How costly would it be to violate these limits?

In short, how sustainable is the dollar’s international role?

These are important questions for an assessment of the long-term viability of MMT macro policy in the one country that provides the best opportunity for MMT viability, the U.S.. We do not have precise answers (eg. one cannot identify a precise threshold) but history and analysis do provide some useful parameters. The historical, theoretical and empirical research suggests that there is quite a bit of stability and persistence in key currencies’ roles, but this persistence is not absolute. When there are plausible rivals to the dollar’s role, economically, militarily, diplomatically and a desire to internationalize their currencies, then the stability of the major currency’s role has tighter limits than when there are no rivals in this sense. As I discuss below, in the current international environment there are two plausible rivals to the dollar, each with its own problems and potentials: The Euro and the Chinese Renminbi. While neither of these currencies is likely to overtake the US dollar as the dominant currency, their substantial existence means that we are likely to have a multi-currency international system. In such a world of currency competition, substitution among currencies in international transaction and portfolios is cheaper, easier and safer and this competition, like any competition, places limits on the price, stability, and general behavior of the dominant currency, the US dollar.

The “Exorbitant Privilege”

A country that is able to print a currency that is broadly accepted for payment internationally experiences an advantage, effectively extending monetary sovereignty to the international sphere. Furthermore, being able to issue international debt denominated in your own currency extends those advantages because it makes it possible to service and even repay that debt simply by printing money rather than having to run a trade surplus or borrow more from foreign institutions. These are benefits that accrue to countries that issue “hard currencies”. Countries whose currencies are not acceptable in these ways are said to issue “soft currencies” (Epstein 2019, introduction).

Nevertheless, as we saw in the previous section, even for countries that issue hard currencies in this sense, many are subject to strong waves of turbulence from the international financial markets that can lead to fickle flows of short term and even long term capital in response to perceived weaknesses in countries’ exchange rates, or changes in domestic interest rates that

seem out of line with “international interest rates”. In short, even for many “hard currency” countries, central banks and fiscal authorities can be highly constrained in their policies even *before* they get to full employment. In these countries, effectively, MMT policies do not apply. For soft currency countries, the problems are much more severe.

But what about those countries that set, or have the major influence over international interest rates? Are they in a different boat? The answer yes. They have more freedom to apply MMT type policies. The question is: to what extent and with what limits?¹⁷

These countries are known as “key” currency countries. Their currencies are used extensively internationally for all the standard functions of money plus some exclusively international functions: unit of account (invoicing currency, denomination of derivatives, denomination of bond and equity issues), intervention and anchor currency (intervenes in foreign exchange markets to limit fluctuations in value vis a vis that currency), store of value (held in international foreign exchange reserves, safe heaven holdings), medium of exchange (buying goods and services), means of payment (servicing debt), as a funding currency (to engage in arbitrage and speculation) and relatedly, as a means of collateral for liquidity and speculative transactions in the shadow finance system.

Of course, the currency that is most widely used in global markets and official portfolios is the US dollar. Far behind the dollar are the Euro, the Japanese Yen, the British pound and the Chinese Renminbi. How valuable is this role for the US? In particular, to what extent does it mean that the US can apply MMT money financing of government spending, without tears?

Charles de Gaulle resented the role the US dollar played after the Bretton Woods system was established. His finance minister, Valery Giscard d’Estang referred to it as “an exorbitant privilege”. (eg. Eichengreen, 2011, p. 4). Jacques Reuff, a major economic adviser to De Gaulle put it this way: “If I had an agreement with my tailor that whatever money I pay him he returns to me the very same day as a loan, I would have no objection at all to ordering more suits from him.” (as quoted in McCauley, 2015, p. 2). As McCauley notes: the Gaullist view is that, under the Bretton Woods system, “not disciplined to settle debts, the US exploited the 1960’s gold-exchange standard to buy goods, services and whole companies with US dollar IOUs.” (ibid), which, in theory, they never had to pay back.

Though the situation has changed since the collapse of Bretton Woods including the lack of compulsion on foreign countries now to hold dollars to fix their exchange rates relative to gold (and implicitly, the dollar), many of these structural advantages remain.

Both Eichengreen and McCauley list and try to estimate the types of privileges the US receives under the current system and estimate their value. (Eichengreen, 2011, pp. 4-5; McCauley, 2015.)

These privileges include¹⁸:

¹⁷ Wray recognizes that, to some extent, the US is a special case (Wray, p. 133).

¹⁸ There might be other benefits as well, such as the ability of local US firms to access global capital markets because their debt is denominated in dollar and they do not have to pay the costs of hedging or otherwise bear

1. The U.S. need not settle its dollar liabilities with some other asset.
2. The U.S. can finance its current account deficits in its own currency.
3. The U.S. runs up a debt at very low interest rates with the rest of the world.
4. The U.S. treasury can borrow cheaply.
5. US financial firms harvest advantages (denomination rents) from global dollar use.
6. The US Fed has a big influence over global financial conditions and interest rates
7. The US dollar is a safe-haven which helps to insulate US interest rates¹⁹

Note that advantages 1-3 look very much like the characteristics of sovereign money as identified by MMT, but as a key currency, these are extended to the international arena.

Eichengreen, McCauley and others have attempted to quantify these impacts some of which are relevant here and discussed more below. The most relevant for our discussion are points 1, 2, 3, 4, 6 and 7. It is not hard to see that, to the extent that these are true and quantitatively important, they create space for the US government to issue more sovereign debt without risking an explosion of debt to GDP ratios, and allows the Federal Reserve to establish low interest rates despite this increase in debt, without risking to the same extent as otherwise a foreign exchange crisis or negative feedback effect driving up interest rates in the US.

What are the limits on this debt creation and debt monetization process by the Fed? At one level this question comes down to the question of how persistent and durable is the key currency role? This question in turn depends on the answer to another question: what determines the key currency role?

There is a huge literature on this topic, spanning many decades (see for example, Kindleberger, 1970, Bergsten, 1973, Epstein, 1981, Krugman, 1984, Kirschner, 1995, Prem, 1997, Cohen, 2015, Eichengreen, 2011, 2019 and the vast literature cited therein).

Taken as a whole, the literature has focused on five key factors:

1. The so called economic “fundamentals” of key currencies which are primarily driven by: breadth, depth and liquidity of the financial markets and the economic size of the economy
2. The political and legal “fundamentals”: the commitment to open markets in trade and finance, and the commitment to the rule of law and property rights (in short, the commitment to capitalist principles of property rights).

exchange rate risk (see Maggiori, et. al., 2018). Note that there might be costs of issuing an international currency as well, such as over-valued exchange rates. We ignore these because they are not germane to the main focus of the paper.

¹⁹ Points 6 and 7 are not included in the lists created by Eichengreen or McCauley but are potentially important and relevant to the issues discussed in this paper. McCauley (2015) argues that most of these benefits, to the extent that they exist at all, are either shared with other currencies or are relatively small. The claim that many are shared with other key currencies is certainly true, but not important for the question of limits on MMT policies which is the focus here. The argument that they are small is more relevant, though disputed by other authors.

3. High levels of macroeconomic “policy credibility”. Here, policy credibility refers to commitment to relatively low and stable inflation, exchange rate stability, and monetary policy stability. This credibility can be established by past practice, and or by institutions which are likely to convince investors of these commitments, such as “independent” central banks. Commitment to “sustainable” sovereign debt levels would fall under this category.

4. Economic principles that generate persistence or dominance (monopoly): some have argued that phenomena such as network effects, economies of scale, and fixed costs and increasing returns to scale create persistence effects and first mover advantages that allow a currency to remain a key currency and even a dominant currency even after its fundamentals wane. If these effects are important, then MMT style policies are more likely to be sustainable and effective, if they compensate for some of the other factors, such as credibility.

5. Military and diplomatic power: while most economists focus on economic issues noted in points 1 – 4 above, historians, political scientists, policy observers and some economists note the coincidence between countries that have strong military power and dense political and diplomatic alliances, and the maintenance of key currency role. Some economists have pointed out that military and diplomatic power can substitute to some extent for some of the other factors, including policy credibility, and trade prowess. (see eg. Prem, 1997; Cohen, 2015; Eichengreen, Mehl and Chitu, 2017).

Various analysts have undertaken econometric analysis of the determinants of the key currency roles. (see Prem, 1997, Eichengreen, Mel and Chitu, 2017, Eichengreen, Mel and Chitu, 2018; Chinn and Frankel, 2007, 2008.) There are major empirical challenges to answering these questions. First of all, data on demand for international currencies is spotty and limited. Second, the number of key currencies in the mix are relatively small so the number of data points are sparse.

All the empirical difficulties aside, there are useful empirical results that come from the body of empirical work on this issue. (See Eichengreen, et., al., 2017 and 2018 for surveys and Prem, 1997.) The size of the economy, the breadth and depth of domestic financial markets, and extensiveness of trade networks are robust determinants of demand for the key currency.

The so-called credibility variables – inflation, budget deficits or debt ratios, and exchange rate variability generate mixed results. They usually operate in the expected direction, but tend not to be statistically robust. This might be because countries that have been able to accumulate a significant key currency role based on large and deep financial markets, also have political coalitions dominated by finance and are associated with “independent central banks” aligned with finance. This underlying political structure might underpin both the key currency role and the tight control over inflation and budget deficits. (Epstein, 1981).

One reason why the credibility factors might not be as robustly important as typically thought is related to a more general phenomenon: The evidence just described also suggest persistence in key currency role: that is, even if some of these economic factors, such as credibility, relative economic size, and trade signal a decline, the key currency role is sustained. In other words, considering the decline in the relative size of the US economy compared with that of China, the

rise of Europe as a unified actor in this space and the relative size of Japan, the US dollar appears to punch above its weight. What accounts for this?

Possible answers include: the importance of military and diplomatic power, persistence due to network and related effects, and the evolution of new roles for the dollar in light of innovations in global financial markets and trade. The latter include the role of derivatives, safe assets, and global supply chains, including the role of US multinational corporations, and the rise of currency zones.

Rohi Prem (1997) was the first to show econometrically the important role of relative military power in preserving the key currency role. Eichengreen, et. al, 2017 provide strong evidence for the important role of political alliances and other diplomatic infrastructures. According to these analyses, a key currency country can to some extent, sustain its key currency role, even in the face of declining power of “economic” and “credibility” factors, by enhancing military and diplomatic pressures in the service of maintaining the international demand for the currency. We know, for example, that during the time of the Empire, the United Kingdom required that India hold its rupee balances in the form of pound sterling rather than cashing them in for gold, in order to help Britain stay on the gold standard (De Cecco, 1981). Likewise, we know that the US applied pressure on the Germans to hold more dollar balances than they wanted, threatening to reduce US military protection against the Soviet Threat (Bergsten, 1973).²⁰ In some cases, holders of key currencies might also prefer that the key currency have a strong military in order to protect the underlying property rights and economy from political threat.

Of course, the effectiveness of this relative military and diplomatic power falls as new military and diplomatic powers rise. The current conflicts between the US and China reflect some of the tensions involved here and suggest that the US dominance is no longer as assured on this front as it once was. As this evolves, the ability for the US to “substitute” military power for “credibility”, trade prowess and other “fundamentals” is likely to weaken. Likewise, Donald Trump’s weakening of US global diplomatic ties is unlikely to enhance these supports for the international role of the dollar.

Another possible explanation for persistence in the face of “fundamentals” decline is network effects, economies of scale and fixed costs. (Eichengreen, et. al, 2011 and 2018). As Eichengreen, et. al, explain, some of these factors tend to generate monopolization of the key currency role, while other versions generate persistence but accommodate the presence of multiple key currencies. Eichengreen argues strongly for the latter and historical observation strongly suggests that he is right: leadership is persistent but not assured, and at any moment there is certainly room for multiple and competitive players in the key currency space.

As Krugman showed decades ago (Krugman, 1984) some network and economies scale arguments for persistence also have a dramatic feature: they generate a tipping point so that fundamentals can decline for a while without generating any reduction in key currency role; but at a certain point, a marginal additional decline in fundamentals can cause a dramatic decline in key currency usage with all the attendant consequences.

²⁰ This smacks of a kind of “vassal” tribute the master extracts through actual or implied force.

Unfortunately, it is difficult to test this empirically. We have only had one major switch of leadership in the last century and a half: from the pound sterling to the US dollar. This doesn't provide many data points. However, it has been suggested that after years of decline by Sterling following the second world war, there was a fast and sharp unraveling following the Suez crisis of 1956. Similarly, in the run up to the Great Financial Crisis, the Euro seemed to be gaining significant ground on the dollar (Frankel and Chinn, 2007). But with the financial crisis followed by the Euro sovereign debt crisis, this rise of the Euro was stopped in its tracks and partially reversed. (Eichengreen, et. al, 2018). So there is some evidence of dramatic changes in response to shocks, suggesting some kinds of persistence effects that can quickly unravel.

Another important source of persistence is the role of “currency zones” or areas where countries anchor their currency values to the US dollar (Ito and McCauley, 2018). As Ito and McCauley show, the size of the US currency zone relative to world GDP is much larger than the size of the US economy, and that the current account deficit of the zone is much smaller than of the US per se. In other words, if key currency “fundamentals” are measured by currency zone rather than by country, US key currency fundamentals are quite strong, which reduces the puzzle over the persistence of the international role of the dollar. It also suggests that, all else equal, the key currency role is likely to be more robust to erosion of US “credibility” in the face of some inflation and increase in government debt ratios, in short to MMT type policies.

Looking at the broader picture, how robust is the dollar currency zone? Again, a lot depends on the role of China, the China-US relationship, and the decisions made by the Chinese government. A big chunk of the dollar zone consists of China. As Ito and McCauley show, if China leaves the dollar zone, then the dollar zone shrinks considerably, thereby increasing the importance of other factors supporting the dollar's key role, such as military power and market “credibility”.

MMT and The Role of the Dollar: The Upshot

What then is the upshot of this discussion for the question at hand: does the key currency role of the dollar enhance the effectiveness of MMT style policy? It almost certainly does. Can too much of this policy undermine the key currency role and generate a negative feed back effect on the viability of such policies? The answer is almost certainly: yes.

The answer is that no one can know for sure. Those who argue that theory, history and other evidence show that the dollar's staying power is absolute are certainly incorrect: From the false start of the dollar in the early 20th century, to the decline of sterling, to the rapid decline of the Euro following the global financial crises, there is plenty of movement up and down in key currency roles in the course of history to disabuse any talk of invincibility. This fragility is particularly true when a “rival” to the dollar –namely China's Renminbi- exists that currently has most of the requirements to play that role: large trading role, huge foreign exchange reserves to give stability (much as the US gold stock provided for the US), a rising military and diplomatic presence in significant parts of the world, and a growing and liberalizing financial sector. Most important, is not only the apparent willingness on the part of the Chinese government to play a key currency role, but, it seems, a desire to do so. Analysts say that what is missing is deep and liquid financial markets, but that would not be hard for China to create once it decided to go all in.

Moreover, as Eichengreen has argued, one need not have a full switch from one key currency to another: the world is likely to live with a multi-currency system; this system need not necessarily be an unstable one, but it does provide more constraints and competition on each key currency. Hence, exploiting the “exorbitant privilege” becomes more difficult without disruption.

Does this all mean that an MMT policy of money financed budget deficits would quickly be undermined by global flight from the dollar? This seems unlikely in the short run, as long as macroeconomic policy doesn't allow excessive, accelerating inflation. Still, the risks of this flight from the dollar increases as the Chinese shrink the dollar zone and build a Remninbi one. In other words, despite what Wray has argued, this is likely to become a concern in “our life time”.

Nonetheless, all this begs the question: even if the dollar's international role will help to protect the viability of a MMT path, is it responsible and right from an international perspective to follow this approach?

V. “America First” Monetary Policy and Its Costs

Even if an MMT low interest rate, expansionary deficit macroeconomic policy, accompanied by fiscal tightening at full employment does not threaten the sustainability of US's “exorbitant privilege”, it doesn't mean that this is an appropriate policy for the rest of the world. This is a U.S. centric macroeconomic policy. While it is true that US macroeconomic policy has usually been national centric, that doesn't necessarily mean that this is the right policy for a progressive agenda. This “America First” policy does raise questions that should be of burning concern to progressives, especially those with an internationalist orientation. Would this policy inflict unjustified costs on other parts of the world, and especially the least powerful and wealthy parts? If so, should the policy be modified? Reversed? Augmented with other policies to mitigate the negative impacts?

There is good reason to believe that this MMT oriented macro policy could create significant policy problems in other countries. Many of these spill-over effects are caused by the dominant role that the US dollar plays in the global arena. Thus, these negative costs for others is at least partly a direct result of the very institutional arrangements that would help to sustain MMT policy at home. I argue that a more solidaristic US policy would be modified, and/or be accompanied by compensatory or preventative policy reforms, to mitigate these negative impacts. Unfortunately, there is no evidence that MMT advocates seriously consider, much less develop solutions to these potential negative spill-over effects on the rest of the world. Fortunately, much of this analysis and research has been taken on by other heterodox economists and researchers for many years.

Hot money floods and famines: Global Monetary and Financial Instability Emanating from the Federal Reserve and the Role of the Dollar

Developing country economies have always been subject to the vagaries of financial decisions made by “center” countries, including the United Kingdom and in later years, the United States

(eg. Kindleberger, 1978). Diaz-Alejandro (1978) famously tied these center-induced financial crisis to center country financial conditions and financial liberalization on the periphery. Epstein (1981), among others, identified the dramatic Volcker interest rate hikes as sending dangerous shockwaves that would generate financial crises in Latin America and abroad, causing significant problems for many economies. Thus, the financial conditions and monetary policy in the center countries have driven financial conditions in the periphery for decades and this is especially true now.

A great deal of empirical research demonstrates that the multiple and leading international roles played by the dollar is a key channel through which the Federal Reserve monetary policy is a dominant force that spills over to the financial conditions in much of the rest of the global economy. These spillover effects impact the richer countries (see for example, McCauley, 2015) but their impacts are larger on so called “emerging market” economies. At the same time, these economies have fewer tools of coping with these spill-overs. (Akyuz, 2017; D’Arista, 2019).

As I discussed earlier, current research demonstrates, capital flow surges and sudden stops remain frequent and large vis a vis emerging markets and have major disruptive effects. Whereas the frequency in recent years is not larger than in the earlier ones, Eichengreen show that the magnitude of the turn around is larger and the negative impacts are larger as well in the later period. Declines in GDP with flow surges and sudden stops are now often of larger magnitude than they were in the earlier period (Eichengreen and Gupta, 2016).

What are the main causes of these surges and sudden stops? Current research points the finger largely at the policy of the US Federal Reserve as transmitted through the key, multiple roles of the dollar (Rey, 2015, Eichengreen and Gupta, 2016, Brauning and Ivashina, 2018, Avdjiev, et. al., 2018, Jorda, et. al., 2018). Rey (2015) was among the first researchers to identify changes in risk perception as a driver of global financial conditions. She indicated that Fed policy had a particularly strong impact on these risk perceptions.²¹ Eichengreen and Gupta show that these risk perceptions drive inflows and sudden stops in their sample. They also find evidence that changes in the Fed’s Federal Funds rate also drives these flows.

Other recent research has identified the channels through which US monetary policy impact global financial conditions, and the “fingerprints” of the US dollar and US financial institutions are all over these flows. For example, in a study using detailed loan level data on bank lending from 1990 to 2016 Brauning and Ivashina (2018) find that over 80% of cross-border loans to EMEs are denominated in US dollars. This high portion is common in most regions of the world. “Outstanding shares of foreign banks’ dollar credit for African, American and Asian emerging economies are over 90%. Even for emerging Europe this number is over 60 percent”. (p. 28). They show that “this dollarization of cross-border credit prevails over time and across different geographic regions and industries.” (p. 3). As a result, conclude Brauning and Ivashina, “U.S. monetary policy plays an important role as a “push factor” for credit cycles through its impact on US interest rates.” (p. 3).

Brauning and Ivashina do a regression based analysis to identify the specific effects of US monetary policy on bank lending to emerging markets both during periods of easing and

²¹ Typically, risk perception is measured by the VIX index in this literature.

tightening, relative to the impacts on developed market economies. They estimate that over a “typical US monetary easing cycle, EME borrowers experience a 32 percentage point greater increase in the volume of loans issued by foreign banks than do borrowers from developed markets, followed by a fast credit contraction of a similar reversal of the US monetary policy stance... (They also) show that the spillover is stronger for riskier EMEs, and, within countries, for higher risk firms. (ibid, p. 1). These results help to illustrate how spill-over effects of Fed policy, through bank lending based on the US dollar, can induce financial instability in emerging market economies”. ((See also Avdjiev, et. al, 2018).

This outsized impact of US monetary policy on macroeconomic conditions in the rest of the world, and especially in developing countries, would seem to call out for a more globally oriented monetary policy on the part of the Federal Reserve. At the minimum, it would suggest the need for consultation and cooperation between the Fed and other monetary authorities. But such coordination and cooperation is spotty, at best.²²

Certainly, a progressive macroeconomic policy can do better than this, can it not?

Implications of Fed Spill-over Effects for MMT policy

MMT advocates’ responses to these points might be as follows:

First, they could argue that a MMT policy of stable, low Fed interest rates and full employment fiscal policy would not amount to a “stop-go” macroeconomic policy that has generated so much instability in the rest of the world. On the contrary, they might argue, the MMT policy would amount to a steady as it goes policy that would minimize unstable global spill-overs.

Second, they could argue that a full employment expansionary policy with low interest rates would drive a global economic expansion on the demand side and would help to generate growth in developing countries. At first glance, both of these points have merit. But on deeper consideration, these points generate many questions that require careful analysis and further study.

First, is it really true that the MMT policy of keeping interest rates low and fiscal policy oriented to full employment, subject to an inflation constraint, amount to a stable policy? Palley, for example, has pointed out the difficulties of implementing such a fine-tuned policy, given lags in policy, uncertainty and shocks, and the dynamic evolution of the economy such that policies can lose their effectiveness and predictable effects over time. We simply do not know to what extent this kind of “fine tuning” can succeed to stabilize the economy.

Second, there is a far larger problem that the MMT policy might engender, one that the MMT focus on sovereign money, and ignoring credit, leaves in the shadows: the possible impact of excessive private credit creation on financial speculation, bubbles and financial instability.

²² During crises this cooperation and consultation tends to increase. The Federal Reserve’s extensive international lender of last resort actions through extending swap lines and coordinated interest rate declines are cases in point; but most emerging and poor countries were not included or consulted in these actions.

Numerous authors have identified the dynamic, instability inducing impacts of excessive private credit flows on domestic and international economies (Minsky, Kindleberger, 1973, D'Arista, 2019). There is some considerable evidence that, with liberalized financial markets, long term low interest rates can generate a stretch for yield, leading to risky lending, and promote asset bubbles, which eventually crash. (eg. Schularack and Taylor, 2010). In conjunction with liberalized financial markets, this low rate monetary policy also contributed to the housing speculation and crisis (Mian and Sufi, 2018). Further evidence is found in the work of Jorda, et. al (2018) who look at the factors driving global financial cycles with a data set that spans 150 years and 17 “advanced capitalist” countries. They find that extended periods of low interest rates appear to contribute to an increase in risk taking and can contribute to financial instability. They find that it is “fluctuations in risk premiums....that account for a large part of the observed (global)equity price synchronization after 1990....(they) also show that U.S. monetary policy has come to play an important role as a source of fluctuations in risk appetite across global equity markets.”

In short, MMT policy of very low long term interest rates and full employment fiscal policy might contribute to increases in speculative lending, asset bubbles and financial instability, both in the US and, given the international role of the dollar, to many other parts of the world. Note that these negative impacts come even from steady as you go, very low Fed interest rates in a financially liberalized and integrated world.

This does not necessarily mean that low interest rates are bad. But it does suggest that key complementary policies, such as financial regulations, capital controls, and credit allocating central banks are likely to be an important accompaniment to such policies if they are to avoid destabilizing the economy.

Mitigating possible negative impacts of MMT macroeconomic policy:

Can anything be done to ameliorate these negative effects?

The answer is: presumably yes. Fortunately, heterodox economists, and, increasingly, mainstream economists, have been studying policy options facing emerging markets and others which would allow them to manage such problems. Jose Antonio Ocampo (2003, 2017), Epstein, Grabel and Jomo,(2003) (Chang and Grabel (2014), Gallagher, et. al (2011), Erten and Ocampo (2017) among others have extensively studied how developing countries can insulate themselves from dangers emanating for center country monetary and macroeconomic policy, focusing on capital management techniques, Tobin Taxes, and other capital account regulations. The IMF and BIS have recently built on this work and developed policies of prudential regulation (IMF, 2018). But U.S. policy would have to support such initiatives. Going further, some Keynesians have long proposed a global currency and central bank the would eliminate exorbitant privileges. (Stiglitz, 2010). But pursuing this would involve giving up the dollar's exorbitant privilege, and thereby limit national MMT style policy in the U.S.

VI. The Mirage of MMT Leads to a Perverse Outcome: Fight Your Friends, Spare your Enemies

The Necessity of Trade-Offs and National Priority Setting for a Progressive Agenda, Even in an MMT World:

As I discussed at the outset, MMT appears to say to progressives who propose ambitious policy initiative that they should simply argue for the desirability of these policies, and do not need to worry about how these initiatives are going to be “paid for”. In response to claims from the austerity hawks that we cannot “afford” these proposals, the MMT answer is: by definition we can always afford them because all we have to do is get the Fed to print dollars.

How liberating and empowering this message is. But as I show in this section, this appearance of liberation and power is an illusion. Worse, it is a dangerous illusion.

The fundamental problem stems from a limitation that the MMT advocates themselves recognize. If nothing else, there is a limit on the ability of the government simply to print money to finance government spending: this limit is full employment/full capacity utilization. Once full employment (or full capacity utilization) is reached further demand for goods and service cannot be satisfied by new supply, but must be provided by labor and production capacity that is already employed doing something else. Hence, the new government spending will have necessarily “crowd out” the supply of other production and if this spending is to be effectuated, this crowding out can be accompanied by increases in prices (inflation). At this point, there is no “free lunch”, and all additional government spending has a “cost” in terms of other goods and services not being produced and possible further costs associated with high and increasing inflation if the policy is pushed too far.

The problem is that, while some advocates such as Stephanie Kelton mention the need to make trade-offs at the point of full employment, the overwhelming message that MMT conveys is that we don’t need to worry about this because we can always “afford” to pay because we have “sovereign money”.

For example, a recent account of the “Green New Deal” explores the question of how to pay for it (Roberts, February, 23, 2019). Roberts goes through various tax proposals and other financing possibilities and then comes to this: “The fourth, and boldest, is to reject the question entirely. There is great enthusiasm on the left right now for Modern Monetary Theory and related ideas and scholars. The core ideas are fairly simple. If the question is what the US can afford to invest, the way to think about it is not in terms of how much money the country has. It literally has as much money as it wants. It prints its own money! (The US has a “fiat currency,” in the lingo.) The US government can spend all the money it wants. What ultimately sets the limits on America’s ability to invest are its resources. It has so much labor potential, so much natural resources, so much manufacturing capacity, etc. By paying for stuff, injecting money into the economy, the government puts those resources to work. If the economy overheats, one or more of those resources nears its limits, scarcity drives prices up and inflation ensues. To stop short of that, the government can pull some money out, by scaling back programs or raising taxes. Taxes are simply a way of extracting money from the economy. Stony Brook University professor Stephanie Kelton (a Modern Monetary Theory guru,

“If the deficit has to be 4.7 percent of GDP to create the economy we want, with full employment, low inflation, and poverty going down,” she says, “who cares? If we can create the economy we want with a deficit of 2.1 percent, that’s fine too. The budget outcome isn’t the thing that matters, it’s the real economic conditions.”

Kelton, goes on to say: “The way to approach a Green New Deal” GND is to adopt the method of economist John Maynard Keynes in his book *How to Pay for the War: Model the economy’s available resources; figure out what you can deploy and still avoid inflation; figure out how much private consumption spending you have to displace to make room for the necessary war spending; and finally, ensure a just transition, i.e., make sure that the poor and middle class, the ones deferring their private consumption spending, are rewarded for their sacrifice.*” (quoted in Roberts, 2019)

Such reasonable sounding arguments have not prevented MMT advocates from reportedly heavily criticizing those progressive politicians who have proposed higher taxes, (such as Congresswoman Alexandria Ocasio-Cortez who has proposed a 70% marginal tax breaks on very high incomes, or Senator Elizabeth Warren who has proposed a wealth tax), or for complaining when analysts who have evaluated key components of progressive policies such as the “Medicare for All” plan proposed by Senator Bernie Sanders, have included programs for “paying for” these programs. These MMT advocates have insisted that government programs do not need to be “paid for”. (See, for example, the reporting in Henwood, 2019).

So, at the very best, MMT analysts are sending a mixed message to politicians and activists. It appears that they are not sufficiently emphasizing in policy discussions that the MMT policy framework does imply trade-offs, real costs as the economy gets close to full employment. And to ignore them is very problematic for progressive initiatives.

To see this, work through the following scenario. Let’s say we have a coalition of various progressive groups want passed into law the following set of policies:²³

1. Employer of Last Resort Policy to guarantee full employment (a favorite policy of MMT advocates)
2. A Green New Deal²⁴
3. Medicare for All²⁵ (note that this one may pay for itself)
4. Free (or debt free) college education
5. Universal Child Care

²³ See the program of the “Green New Deal” <https://ocasio-cortez.house.gov/sites/ocasio-cortez.house.gov/files/Resolution%20on%20a%20Green%20New%20Deal.pdf> Elizabeth Warren’s “Universal Childcare Plan” <https://www.vox.com/policy-and-politics/2019/2/22/18234606/warren-child-care-universal-2020> and the Employer of Last Resort plan, MMT’s signature program for full employment (Tcherneva, 2019).

²⁴ The Green New Deal as proposed by Ocasio-Cortez and Senator Markey itself contains many of these programs, including a public employment guarantee.

²⁵ As evaluated by Robert Pollin, this program more than pays for itself as far as the private economy is concerned but increases the costs to the government. (Pollin, 2019).

The illusion of empowerment that MMT seems to bring is that the coalition of forces that promotes these plans don't have to discuss who is going to pay for these programs.

But going through a simple exercise shows that this is an illusion. If we implemented all these policies, then we would have “over” full employment. This is true almost by definition, in fact, because the ELR policy creates full employment.²⁶ The Green New Deal plan itself also has a public job guarantee program. Even if we see these programs as pulling people into the guaranteed jobs and then pushing them out as new, better jobs get created, somewhere along the line this group of programs will generate full employment and full capacity utilization. Implementing the remaining programs will therefore create “over” full employment. So whichever ones get implemented first will get a free ride. All the others will be abandoned unless their proponents can explain how the program will be paid for, by raising taxes or cutting spending elsewhere.

In short, if the coalition does not find a way to “pay for” the group of programs as a whole, those that come up above the full employment line will have to be abandoned. Who gets to go first is therefore crucial; or second; or third. Whose plan should be on the chopping block? In this world, the different members of the coalition will simply have to fight it out amongst themselves unless, they create the freed up production capacity in some other way: for example, by cutting government expenditure on less valuable or even destructive spending, such as the military, and or raise taxes to cut back consumption by those who already have too much.²⁷

So, the important point is that, unless they are just going to fight it out amongst themselves to see who gets to go first, they will have to develop a *joint plan* to “pay for” their programs. MMT liberation from trade-offs and costs is an illusion.

One way to loosen this constraint is to focus spending on investment that creates more capacity. And indeed, this capacity expanding impact of new spending has long been a key consideration in assessing the desirability of different types of spending for heterodox economists and Keynes himself.²⁸ The phrase “spending on infrastructure will pay for itself” reflects this valid point that the supply side impacts of government spending are an important consideration in determining whether that type of spending can be fit in under the full employment-full capacity budget. Perhaps this is what Wray had in mind when he mentioned budgeting as a useful exercise as mentioned above.

²⁶ ELR proponents might point out that their program is like a “buffer stock” so that as job opportunities arise that pay better than the ELR, these workers would leave the ELR and be available to work elsewhere. But this point does not fundamentally alter the fact that somewhere along this group of policies, full capacity will be reached and, in anticipating that, all programs are on the “chopping bloc” of possibly pushing the economy past full capacity utilization. Hence, how to “pay for” the package through cuts elsewhere, increases in taxes, or pursuing policies that will increase capacity and productivity cannot be avoided. (See Tcherneva, 2019)

²⁷ Dean Baker (2019) in a recent post argued that from a MMT perspective, high marginal tax rate programs like Ocasio-Cortez's is a bad idea because rich people don't have high marginal propensities to spend. So taxing them won't withdraw much aggregate demand. This is not a serious objection since in that case, they should be taxed even more. Dean Baker's related point about problems with tax evasion may be more valid. (Baker, 2019).

²⁸ When he wasn't making satirical points against the gold standard or “classical economics”—hence his tongue in cheek suggestions in the General Theory to build pyramids, churches, and put pound bills in bottles, bury them in the ground, and then dig them up, in order to generate employment.

But this simply says that we do have to engage in these “old” discussions of trade-offs and opportunity costs, investments vs consumption – including supply side impacts -- even in a country with sovereign money and the world’s premier international currency. The failure to acknowledge this leads to a completely perverse situation. By not talking about national priorities and cutting wasteful or destructive spending, progressives inadvertently give a pass to those who are wasting our resources or worse, using them in destructive ways. This means that we have to revive the discussions of national priorities; reducing the consumption capacity of the very rich (high marginal income taxes); tax reform, public investments and the like. This in an old discussion; pre-MMT. Some might see this as “old hat” and obsolete in the world of modern money. But Stephanie Kelton and other MMTers recognize this to be true at full employment. These costs and trade-offs should be emphasized from the outset in discussions of progressive macroeconomic policy, not brought in mostly as an after-thought.

VII. Conclusion: The Empirical, Institutional and Political Limits to MMT Macroeconomic Policy

In this paper, I have argued that the MMT macroeconomic framework is of extremely limited applicability because of its relative inattention to empirical and institutional limitations in the US and abroad. I argue that much more empirical and institutional analysis needs to be incorporated into the MMT macroeconomic policy framework to explore the nature of these limitations and how to overcome them in terms of policy applications. Much more useful work could be done to integrate the insights of a vast body of empirical, institutional and policy work that has been undertaken by scholars from other “schools” within the broad heterodox and Keynesian tradition in order to better understand the way forward in implementing progressive macroeconomic policy initiatives.

Thus a better alternative macroeconomic policy framework to guide progressive programs can in fact be built on the principles long enunciated by heterodox economists and increasingly, even some neo-Keynesian economists²⁹: analyze the costs and employment implications of various policies. (Of course, in a recession and with high unemployment, these opportunity costs are much less, even, perhaps, close to zero); understand the long-term investment aspects of the policy and the social returns resulting from those investments; insist that increasing public debt to finance investments is sensible if these investments are sufficiently productive; understand the externality-solving and social wealth creation contributions that these programs can generate; assess the superiority of these proposed policies relative to other uses of our resources, and cut back on those uses that are found inferior. We already largely know what those are: military spending, fossil fuel production and consumption financial speculation that threatens our financial stability; and the accumulation of excessive wealth that destroys our democracy. Put pressure on or try to restructure the Central Bank to appropriately support these initiatives as part of a coordinated and coherent public effort. Regulate the private financial sector to play a constructive role in channeling resources to these initiatives.

In the absence of these ideas, the macroeconomic policy framework of Modern Money Theory will, at best, by itself, be insufficient to guide the progressive macroeconomic policy revolution

²⁹ For example, on the employment effects of “Green New Deal Policies”, see Pollin, 2015; on Medicare for All, see Pollin, et. al., 2018; on a full employment macro strategy for South Africa, see Pollin, et. al, 2006.

in the U.S. or abroad. And at worse, it could lead progressives to act on the basis of dangerous policy illusions that will be a force of division and threaten to discredit their important policy proposals.

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