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Modern Monetary Theory: Merits, Critiques, and Contemporary Implications

Rebecca Singleton
rsingle5@lion.lmu.edu

Thomas Herndon
Loyola Marymount University, thomas.herndon@lmu.edu

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Modern Monetary Theory:
An Undergraduate Perspective of its Critiques and Implications

Rebecca F. Singleton

Loyola Marymount University

May 2022

Abstract

The study of macroeconomics is a diverse field, with conflicting opinions and numerous camps of thought. The election of 2016 brought this to the public attention - as the appointment of Stephanie Kelton as Senator Bernie Sanders's campaign economic advisor brought Dr. Kelton's heterodox school of macroeconomic policy to the attention of mass media. In particular, Modern Monetary Theory became a public discussion, particularly in the wake of stimulus spending during the COVID-19 pandemic. Modern Monetary Theory (MMT), a heterodox macroeconomic theory most discussed in far-left and Post-Keynesian academic circles, has faced backlash from a centrist mass media. I investigate the three main critiques of Modern Monetary Theory as an undergraduate in the field, and address these critiques from my learned perspective.

Introduction

The study of the heterodox school of economic theory requires a few preliminary matters and understandings. First, it is important to understand that the theory presented in depth in the following paper is both highly contested and acclaimed by experts in the field and discusses minimally in comparison to the amassed literature within the field. While my discussion of Modern Monetary Theory may make it appear mainstream, it is still merely a theory discussed by a specific sect of academics. In fact, mathematical models and approaches to MMT have only emerged recently. While these models may be in its infancy, the MMT movement within the post-Keynesian school of economic thought is not.

What is Modern Monetary Theory?

MMT poses the question: in a society without the gold standard the central bank becomes the sole issuer of currency, so what, then, are the true consequences of printing that currency?

MMT is defined by the following tenements, that governments in control of their own currency can and should print money as expansionary fiscal policy to bring the economy to full employment, and any created inflation can be prevented by tax stabilizers in the private sector. There are three key ways that MMT sees the world: currency is a public monopoly, there is no physical financial restraint on fiscal policy, and fiscal policy can be used to close the output gap.

MMT is not a new, groundbreaking theory. Its roots can be seen in chartalism (the idea that money is a creation of the government, with value derived solely from its use as legal tender) first discussed in 1924, the introduction of Keynesian economics in the 1930s, John Maynard Keynes's "How to Pay for War" published in 1940, and Warren Mosler's theories and

talks on full employment from the 1970s. MMT has, however, gained traction recently in the political media as a direct result of the COVID-19 pandemic. As governments find themselves expanding fiscal policy to relieve failing economies, MMT has re-entered the conversation as governments and citizens see success in stimulus budgeting. Additionally, the theory has been popularized on current social media platforms by far-left academics.

While more popular on the far-left, MMT is not drastically different from the traditional understanding of macroeconomic theory. In fact, MMT is merely a post-Keynesian interpretation of monetary policy that centrally critiques the U.S. bank's shift away from the infrastructure maintenance and spending that dominated the New Deal era. Keynesian macroeconomics holds that macroeconomic policy can be used to stimulate the economy in times of unemployment. MMT holds a similar central belief, that monetary policy can be used to stimulate the economy and *maintain* full employment.

But does money really work that way? The Endogenous Money Debate¹ bears the question of who creates money, and what is that money worth? Endogeneity is defined as “the property of being influenced within a system,” or often also defined as simply having an internal cause. Experts that have weighed in on the Endogenous Money Debate have made clear that in modern economies such as the United States, the government has the most influence within the financial and monetary systems. Perry Mehrling's “The State as Financial Intermediary” as published in the *Journal of Economic Issues* in June 2009 makes clear that the constant, reliable stream of tax revenue as well as the social acceptance of the value of government spending (especially in terms of defense spending, education, healthcare, etc), any capacity in which the state acts as a financial institution is “socially quite useful, but also commercially viable,” (368).

¹ My complete literature review titled “Background on the Endogenous Money Debate” can be found in the Appendix of this paper.

Because we trust the state to spend money responsibly, we trust the state to hold debts and maintain a steady revenue stream, and we trust the state to create and issue money of value - making it the best creditor, debtor, and issuer of currency. Robert Pollin reinforces the importance of the central bank's willingness and desire to expand financial and economic markets, because while initial savings is key to any savings-constraint model, the extent at which those savings lead to investment potential is defined by the central bank, at least in the case of the United States, in his 1997 work "Financial Intermediation and the Variability of the Saving Constraint," published in *Macroeconomics of Saving, Finance, and Investment*. Experts seem to agree that the state is the most efficient intermediary between money and holders of money, and while banks require proper motivations to function as creditors and intermediaries, the state has the most influence over the money supply through the functions of the central bank. The central takeaway of the endogeneity of money is that the state has a strong influence over the money supply, how it should apply (and the extent at which it does apply) such influence is where MMT makes its claims. That claim being, according to economists Jaydev and Mason, that "...governments should set their fiscal position at whatever level is consistent with price stability and full employment," (1).

In February 2014 Thomas Palley published "Modern Money Theory (MMT): The Emperor Still has No Clothes," and made the following statement: "MMT is a mix of old and new, the old is correct and well understood, while the new is substantially wrong." What are these new ideas that Palley criticizes as failing to "provide an explanation of how MMT generates full employment with price stability; lack a credible theory of inflation; and fail to justify the claim that the natural rate of interest is zero," and how do these differ from the old MMT tenements that Palley upholds? I seek to analyze three central ideas and how the old and

the new function together to make a central reflection of MMT: the achievement of full employment and price stability, the act of printing more money, and mathematical modeling. Within the following I will also argue that MMT is a vibrant theory for a stable economic future, with implications for a more equitable and sustainable economy. I find that MMT extends beyond fiscal and monetary policy by addressing concerns of social justice and the government's responsibility for all of its people. MMT has the ability to redefine the definition of money as the public sees it - to transform money from the limit to growth, to the way of growth and development.

To understand what Palley could describe as "old" MMT, I look to Abba Lerner's theory of Functional Finance. Functional Finance, much like MMT, offers solutions for the government itself to maintain full employment in the economy and prevent from times of inflation and mass unemployment through fiscal policy and taxation. "Functional Finance and the Federal Debt" was published in *Social Research* in 1943. Lerner emphasizes the effects that government action (such as taxation and borrowing) have directly on the people. Since over-taxation takes money out of citizens' pockets, it should be reconsidered, for instance (41). The most common belief between Functional Finance and MMT is the responsibility of the government to its citizens. Lerner states that "the first financial responsibility of the government (since nobody else can undertake that responsibility) is to keep the total rate of spending in the country on goods and services neither greater nor less than that rate which at the current prices would buy all the goods that it is possible to produce," furthermore, "the government can increase total spending by spending more itself or by reducing taxes so that the taxpayers have more money left to spend." (39). Both theories, at their core, hold that it is in the government's power and responsibility to maintain full employment and steady inflation.

Lerner's Functional Finance also holds that "the payment of the interest constitutes no burden on society" (47). This does differ slightly from more modern takes on the national debt. MMT theorists, such as Stephanie Kelton, view the national debt as a tool for furthering the U.S. economy, and that building on debt (i.e. investing in infrastructure and welfare projects) leads to faster growth (*The Deficit Myth*). This holds with one of the most important tenanaments of both Functional Finance and MMT: full employment.

Full Employment

Full employment is a classic post-Keynesian discussion - and that is because of its social importance. Full employment in theoretical practice can best be traced to the original writings of John Maynard Keynes at the turn of the nineteenth century. Full employment is defined as the absence of involuntary unemployment. Meaning that, in a world with full employment, any individual that wants to be employed and is eligible for employment has a job. The best example of the application of Keynes's full employment is Roosevelt's New Deal. In which, President Franklin Delano Roosevelt created various agencies aimed to provide jobs funded by the U.S. government and return the U.S. economy to full employment following the Great Depression and its unprecedented levels of unemployment (FDR Library). The New Deal entailed completely unprecedented levels of expanded fiscal policy and government spending. Full employment has continued to be held as one of the most important goals of post-Keynesian theory. Simplified models continue to solve recessions and threatening fluctuations in the economy with the expansion of fiscal spending. And as any student of macroeconomic theory can inform us, expanding fiscal spending often leads to an increase in inflation.² Which is a concern that Palley

² While MMT generally rejects the traditional trade-off of unemployment and inflation (Tymiogne and Wray, 2013), Palley does not and therefore I will continue to follow his line of thinking as I analyze his argument.

expresses; in particular, Palley is concerned for the ability of deficit spending to promote **both** full employment and price stability (2). To investigate Palley's concern, let us turn to Warren Mosler's 2018 work, "Full Employment AND Price Stability."

"Full Employment AND Price Stability" details Mosler's proposal for the Employer of Last Resort (ELR) Alternative to welfare and, as Mosler believes to be, the government's current policy of utilizing excess unemployment in the name of price stability. ELR is a government employment system, similar to workfare, that would abolish unemployment and enable the government to maintain both full employment and price stability by providing a safety net (Mosler 2). These public service jobs would provide a wage close to the existing minimum wage, and would abolish the need for most welfare programs by offering a permanent solution to unemployment. Mosler argues that the private and public labor market will generally level each other out, as there would be little need for cutthroat competition in a reality where every person is guaranteed employment and a living wage (3). In particular, "an initial ELR wage should be one that is not so high as to draw workers away from the private sector, and not so low as to require a general deflation" (Mosler 12). Mosler contends that prices will stabilize according to the set ELR wage, since this factor is the most impactful on both general government spending, aggregate demand, and wages in the private sector (12). I find ELR to be a compelling and necessary plan for a more stable future. ELR not only uncomplicates the wage market and the demand for a livable wage, but it implies a certain level of minimum comfort for all citizens. The ELR would address questions of justice and ethics within the current economic system, and presents a clear path forward.

This assumption by Mosler begs the question: why are current prices not stabilized around the federal minimum wage? The answer to this question is simple: the current system,

which allows for constantly fluctuating involuntary unemployment, leads to a less predictable supply productivity of the private sector, and a fluctuating aggregate demand. In Mosler's ELR reality, where every citizen is guaranteed a job and a livable wage, demand will be stabilized, thus stabilizing prices to meet that constant (and predictable!) demand.

"Printing More Money"

A number of further consistencies in MMT have existed over the past century, and have defined the threshold of supposed "radical" thought - printing more money. As even Palley agrees, this is not a groundbreaking discovery nor thought of MMT in particular (19). Printing money can finance debts and allow the economy to function on a standardized path (not burdened to the fullest extent by lasting government debts). But "printing more money" is the current buzzword for MMT in the media. While Palley purports MMT as "a policy polemic for depressed times" (19), it is my assessment that this printing aspect of its proposal is what has truly garnered the attention that Palley speaks of. In fact, its mere existence as a proposed solution has the unique ability to catch conservative wrath and the hearts of the uninformed, yet well intentioned, advocates for the less-than-wealthy.

The idea seems simple enough - more money, a better minimum standard of living. This idea takes hold because of the United States' use of fiat money - defined only in value by monetary policy. Alan Greenspan, former chair of the Federal Reserve, seemed to agree in 2005 when he stated that "There is nothing to prevent the government from creating as much money as it wants." And I tend to agree - the refusal to print more money seems to create an artificial ceiling to the standard of living and wage in the United States. Especially in our new world of digital currency and banking, money is a limited resource that the current system has the ability

to expand. The availability of this fiat currency does not need to be the limit to spending and progress when the government can already use fiscal tax policy to place limits and control inflation when needed.

As I mentioned before, these are not new ideas. Lerner's thoughts on the topic in 1941 were as follows:

The almost instinctive revulsion that we have to the idea of printing money, and the tendency to identify it with inflation, can be overcome if we calm ourselves and take note that this printing does not affect the amount of money spent. That is regulated by the first law of Functional Finance, which refers especially to inflation and unemployment. The printing of money takes place only when it is needed to implement Functional Finance in spending or lending (or repayment of government). (41)

Limits to cash and money are arbitrary and needless in a system with the ability to adjust controls as needed through policy. While "printing more money" may seem to be low hanging fruit for an untrained public, it would do what the masses hope it would: increase the general standard of living and put money into the hands of people that need it. We have seen it happen previously, with the most prolific example being the aptly named "stimulus checks" of the CARES Act. The Coronavirus Aid, Relief, and Economic Security Act (CARES) was enacted in March 2020 in response to mass unemployment of the COVID-19 pandemic (Belsie, NBER). Part of this act involved the distribution of "stimulus checks" to households around the country. The government essentially decided that each recipient now had an additional sum of money (a pseudo-way of printing more money) and the National Bureau of Economic Research (NBER) found that recipients spent on average forty percent of these checks, with other portions going towards debt or savings payments (Belsie, NBER). Why is this important? Essentially, it

demonstrates 1) that the government had the ability to put money into the hands of the public, and 2) that doing so did not dramatically alter the economic state of this country. If anything, such a distribution of spending demonstrates the security that such an action had on the public. These checks were relatively low in amount, about \$1200 (only applicable to certain brackets of taxpayers), and according to NBER, liquidity-constrained households tended to pay down debts and those that were unemployed reported that the stimulus “actually caused them to look harder for a job” (Belsie, NBER). In short, the government stimulus bettered the immediate living standards of those with uncertain and unstable finances. I see no ground to stand on for the argument that the government cannot and should not expand this practice and inject financial and economic stability into the lives of all Americans.

Mathematical Modeling

Modern Monetary Theory does not have an applicable and understandable model yet. As a student of macroeconomics myself, I have seen the importance of clear, concise modeling within the field of economics both for educational and explanatory purposes. In fact, to any reader or member of the general public, MMT lacks credibility because it does not have a model. This is one point that Palley and I agree on - “proponents of MMT have a professional obligation to provide such a model to help understand and assess the logic and originality of their claims,” (Palley 2). A model to explain the concepts presented by MMT would make it more digestible on an academic and general level.

Palley made his critiques in 2014, and one mathematical model and approach to MMT has only emerged recently. Sam Levey, a graduate student in Economics at the University of Missouri-Kansas City authored the first (currently, working) paper that seeks to define a model

of MMT; “Modeling Monopoly Money: Government as the Source of Price Level and Unemployment” was only recently published as a working paper in August of 2021 by the Levy Economics Institute of Bard College. This mathematical approach to the theory was made possible by Pavlina Tchernva’s groundbreaking mathematical structure and analysis of monopoly money, as discussed in “Monopoly Money: The State as a Price Setter” in *Oeconomicus* in October of 2002. These mathematical approaches to the subject and attempts to demonstrate it in a simplified model, as demanded by the broader field, are still in their infancy.

I do not use “infancy” sparingly. While I was originally quite excited to learn of Levey’s proposed model, I found that still five pages into his working paper I was yet to see the dynamic modeling that usually marks economic theory. Levey branded this work as “a basic model that shows how ‘monopoly money’ can naturally explain the source of the price level and the persistence of deficient effective demand,” (Levey 2). Yet, as one reads on it becomes clear that this model comes with one too many caveats to serve as an effective design. As an example, Levey states that “the purpose of the models below are to show plausibility: they demonstrate that we *can* construct a mathematical system that operates according to the mechanisms described by MMT’s monopoly money theory,” (Levey 2). Levey admits that he has not produced a model that demonstrates the dynamics of MMT, but that he has demonstrated the ability of theorists to maybe (possibly, one day) create such a model. Furthermore, Levey’s model does not reflect proper post-Keynesian modeling practice. He admits, “The monopoly money theory outlined here is a relatively high level of abstraction that ignores many real-world issues related to how business sets prices. By contrast, the Post-Keynesian tradition [...] stresses the importance of realism and institutional detail as the basis for a theory of prices,” (Levey 6). While Levey claims that his abstracted model does not present a theoretical conflict with reality

(6), but a practical one, I must argue that the practice of policy and possible applicability to policy is the only aspect of modeling (particularly in the case of MMT, whose entire premise is related to policy) that has any importance. Other caveats of this model include discrete time and an economy closed to foreign trade (8). The inability of this model to be applied to the real world and to accurately portray the dynamics of MMT further perpetuates critiques of MMT as a theory still in its infancy.

I do, however, find very useful aspects within the Levey model. This model has proper mathematical definitions for a fixed money supply in the steady state, and unchanging prices in the steady state (these equations can be found on page 12 of Levey's working paper). These equations have an importance that nearly outweighs the need for a graphic model because of their controversial implications. To have these equations written out simply has more of a rhetorical importance in my eyes than a literal one; these equations are solidified statements of the broad ideas that MMT touts to the public.

Conclusion

Modern Monetary Theory is not new. It is not based on abstractions or contradictions, nor is it the ultimate answer to all questions of the socio-economic realm. MMT is one proposed lens and theory through which post-Keynesian economists understand the relationship between fiscal and monetary policy. Theorists argue for the expansion of monetary policy to stabilize and achieve consistent full employment, and the use of fiscal tax policy to tackle possible inflation. From an undergraduate understanding, MMT envisions a world of stable employment, stable prices, and the achievement of the livable wage.

As a leftist theory, MMT certainly receives its critiques, three of which I have addressed.

First, that is not a comprehensive plan to maintain full employment and price stability. However, the implementation of the Employer of Last Resort policy would hold the government has a source of a livable wage. These government jobs would be promised to any citizen that wants one, and by the laws of labor demand would force the private sector to provide a livable wage. This plan would eliminate unemployment - inherently stabilizing the economy and reaching a steady state of supply and demand. Critics of MMT's goal of full employment and price stability fail to envision an economy without involuntary unemployment and an unsteady business cycle.

The second critique I addressed was in regards to MMT's plan to "print more money." While I do agree that this aspect gains media and public attention because of its controversy, I think that it is more than that. Sensibly, the value of money is only decided by how much of that money is taxed - since that is how much is left over to spend on everything else. So why not print more? Aside from the theoretical understanding, we have seen what an influx of cash into the hands of people has done for their stability with the stimulus checks of the CARES Act in 2020 - and it would be unsensible to underestimate the potential of more money in the pockets of the public.

Lastly, I find that the lack of a dynamic mathematical and graphic model of MMT is a serious issue. This issue is one of the reasons why I believe that this theory has failed to escape its image of infancy. While one model has emerged recently, it has yet to completely and wholly capture the dynamics of MMT in an applicable way. Levey's working model has too many caveats to overcome the critics of this leftist theory.

In conclusion, while MMT may be criticized, it is not a leftist fantasy. Despite its lack of complete mathematical modeling, MMT envisions and plans for an economy that allows its

agents to prosper. MMT's understanding of monetary policy takes the welfare of the public into the hands of those with control of our fiat currency. Within the realm of MMT, stability is possible for the overall economy and each of its individual agents.

Appendix

“Modern Monetary Theory: An overview of the theory, its applications, and role in current events” was a short project presented and conducted by myself in 2021. I include an abridged version below as an introduction to the topic.

If we consider that without the gold standard the central bank becomes the sole issuer of currency, what are the true consequences of printing that currency. With this in mind, I present Modern Monetary Theory. MMT is defined by the following: governments in control of their own currency can and should print money as expansionary fiscal policy to bring the economy to full employment, inflation can be prevented by tax stabilizers in the private sector. There are three key ways that MMT sees the world: currency is a public monopoly, there is no physical financial restraint on fiscal policy, and fiscal policy can be used to close the output gap.

MMT is not a new, groundbreaking theory. Its roots can be seen in chartalism (the idea that money is a creation of the government, with value derived solely from its use as legal tender) first discussed in 1924, the introduction of Keynesian economics in the 1930s, John Maynard Keynes’s “How to Pay for War” published in 1940, and Warren Mosler’s theories and talks on full employment from the 1970s. MMT has, however, gained traction recently in the political media as a direct result of the COVID-19 pandemic. As governments find themselves expanding fiscal policy to relieve failing economies, MMT has re-entered the conversation as governments and citizens see success in stimulus budgeting. Additionally, the theory has been popularized on current platforms by far-left academics.

While more popular on the far-left, MMT is not drastically different from the traditional understanding of macroeconomic theory. In fact, MMT is merely a post-Keynesian interpretation of monetary policy that centrally critiques the U.S. bank’s shift away from infrastructure maintenance and spending that dominated the New Deal era. Keynesian macroeconomics holds that macroeconomic policy can be used to stimulate the economy in times of unemployment. MMT holds a

similar central belief, that monetary policy can be used to stimulate the economy and *maintain* full employment. As economists Jaydev and Mason stated in 2018 in “Mainstream Economics and Modern Monetary Theory: What Really Divides Them?” , MMT holds that “...governments should set their fiscal position at whatever level is consistent with price stability and full employment.”

Background on the Endogenous Money Debate

Perry Mehrling, “The State as Financial Intermediary,” *Journal of Economic Issues*, June 2002

Mehrling addresses the state’s role and the public understanding of the state and its relationship with debt and money in “The State as Financial Intermediary,” as published in the *Journal of Economic Issues* in June of 2002. Mehrling discusses the state as an issuer of currency, a holder of debt, and a creditor to the public. Most particularly, Mehrling considers the state as having the best money, the best debt, and the best credit as compared to banks and other lenders. Being that the state is capable of all of these monetary functions, as well as being a trustworthy recipient of credit, any debts it holds are socially useful and powerful. The constant, reliable stream of tax revenue as well as the social acceptance of the value of government spending (especially in terms of defense spending, education, healthcare, etc), any capacity in which the state acts as a financial institution is “socially quite useful, but also commercially viable,” (368). In short, we trust the state to spend money responsibly, we trust the state to hold debts and maintain a steady revenue stream, and we trust the state to create and issue money of value - making it the best creditor, debtor, and issuer of currency.

Robert Pollin, “Financial Intermediation and the Variability of the Saving Constraint,”

Macroeconomics of Saving, Finance, and Investment, 1997

Pollin addresses the roles of different financial institutions and involved parties as they shape the definition of savings and the savings constraint models in “Financial Intermediation and the Variability of the Savings Constraint,” as published in the *Macroeconomics of Saving, Finance, and Investment* in 1997. While savings is defined as the difference between income and consumption, Pollin argues that this simplified model fails to “capture the evolving institutional

mechanisms through which financial markets generate and allocate loanable funds toward capital innovation and other ends” (314). This then leads to Pollin’s central question, which revolves around how financial factors influence the determination of the saving-investment equilibrium. Pollin first turns toward the Keynesian “casual-investment” approach, which Pollin argues was approached using an incomplete analytic framework, which did not mitigate the “multiplier-accelerator” analysis of savings and investment. The “multiplier-accelerator” analysis is able to more properly describe the current financial system and investment-to-GDP growth, as seen more simply in the paradox of thrift. Regardless of “causal-investment”’s inability to completely capture today’s more complex financial institutions, its focus on initial saving is still undoubtedly a key determinant in the slope of the loan-supply curve. Pollin and Keynes both agree however that private intermediaries, such as banks and investment firms, need central initiative to thrive in any savings constraint model. Expanding on the central bank’s initiative, Pollin turns to Kaldor and Asmakopulo’s upward slope interpretation of the loan-supply schedule, conceding that we must consider that “for any given level of savings, the equilibrium quantity and price of lending will depend on the nature of the financial structure in place[...]including its innovative potential” (319). This model essentially reinforces the importance of the central bank’s willingness and desire to expand financial and economic markets, because while initial savings is key to any savings-constraint model, the extent at which those savings lead to investment potential is defined by the central bank, at least in the case of the United States. This then brings forward the central concern, “what is the impact of public policy initiatives, including those of central banks, to influence the quantity and cost of funds?” (319).

Michael McLeay, Amar Radia, and Ryland Thomas, of the Bank’s Monetary Analysis Directorate, “Money creation in the modern economy,” *Bank of England Quarterly Bulletin*, 2014 Q1

McLeay, Radia and Thomas dissect the creation of money, and assert that most money in the modern economy is created by commercial bank loans, in the “Money creation in the modern economy,” as published by the *Bank of England* in 2014. McLeay et al further describe the common misconceptions of the current financial systems, because while most believe that banks function solely as intermediaries, but in the modern economy are much more than an

intermediary. McLeay et al asserts that the amount of money in the economy ultimately depends on central bank policy. Bank deposits must then be redefined as a record of how much the bank owes its customers, rather than the foremost measure of money in circulation. Lending is one of the most important transactions for money creation, since the act of lending creates deposits and encourages economic activity. However, the bank has lending constraints, and are constituted by the following conditions: banks must lend profitably in a competitive market, banks must mitigate risks associated with additional loans, and banks are required to follow regulatory policy (5). While the bank plays an important role in money creation, its constraints therefore constrain its ability to create money. McLeay et al further explain that monetary policy can expand credit lines and economic activity. They argue that monetary policy should be set “appropriately to meet the inflation target should ultimately ensure a stable rate of credit” and money creation consistent with economic growth and goals (7). When this interest rate has reached a lower-bound, and cannot go down any further, McLeay et al argues for the transition to a policy of ‘quantitative-easing’ to increase the money supply. The policy focuses on monetary policy rather than the actions of financial intermediaries to increase the economy’s quantity of money. The central bank, in the case of McLeay the Bank of England, can influence and stimulate spending and money supply through certain policy actions while not directly controlling the quantity of money in the economy.

Endogeneous: having an internal cause or origin. -Oxford Dictionary

Robert Pollin, “Two Theories of Money Supply Endogeneity: Some Empirical Evidence,”
Journal of Post Keynesian Economics, 1991

Pollin takes on the task of differentiating and clarifying accommodative and structural theories of money supply endogeneity, the two main camps of Post-Keynesian money supply thought, as they relate to conditions within the United States in “Two Theories of Money Supply Endogeneity” as published in the *Journal of Post Keynesian Economics* in 1991. Both camps of experts seem to agree that “pressures emerging endogenously within financial markets are the basic determinant both of fluctuations in money supply growth and, more broadly, of credit availability,” (366). That is, that the money supply is determined by demand-side pressures.

Pollin takes a tiered approach to describing the two camps: first within in depth descriptions of each, and then following those descriptions with empirical evidence of those thoughts in action. Accommodative endogeneity is based on reverse causality of the money supply, and the belief that loans become deposits, and deposits then generate reserves. In its most narrow definition, “a fully accommodative regime is one that responds to lending growth by supplying a sufficient amount of resources” (370). In the short term, accommodative endogenists assert that the central bank maintains direct control over the discount rate and banks’ private market reserve borrowing. Accommodative endogenists hold the supply curve to be horizontal, and believe that loans and reserves will grow at a proportional rate. Pollin, as a member of the structural camp, responds to the horizontal supply curve with a historical example, and asserts that investment and interest rates do not have a lagged interest rate. Particularly, that “borrowed resources have never constituted more than a small fraction of total bank reserves in the postwar U.S. economy” (372).

Pollin moves on to describe the theory behind his own camp, structural endogeneity. He notes that structural endogeneity is “initially distinguished from the accommodative endogeneity approach because it does not recognize any imperative on the part of the central bank toward pursuing full quantitative accommodation” (373). From this approach it becomes clear that any effort by the central bank to restrict nonborrowed reserves will lead directly to quantity constraints on total reserves in the financial markets. This becomes an issue in the structural model, because this theory places emphasis on the role of market forces and how these forces affect the money supply. Pollin gives one example for this assertion and the influence of the private sector, as, “the growth of liability management³ must exert upward pressure on interest rates within a given institutional structure” (374). Structural endogeneity holds that administrative restrictions are effective in controlling the money supply on the financial market, effectively controlling the general market as well. Structural endogeneity does not believe that the central bank has complete, direct control however, because “the problem for even compliant central banks is that they operate under a set of strong constraints that limit their ability to pursue accommodative open market operations” (374). Comparing this assertion to the theory behind accommodative endogeneity; the central bank does not have the liberty to be accommodative.

³ Liability management is an aspect of the private sector, and is loosely defined as the management of assets and cash flows to reduce the firm’s risk of defaulting on a liability, and effectively losing money.

Pollin's empirical sections investigate certain variables of interest in both parties, such as the liability-reserve ratio (and its supposed proportionality) and the importance of borrowed reserves compared to non-borrowed reserves. These results only lead to more questions, and Pollin yields that "these positions lead to an overly rigid framework for monetary analysis that is inconsistent with the ever-growing complexity of financial market behavior" (393). Pollin's conclusion yields that research on money supply endogeneity needs a shift of focus, and that "a more fruitful research direction would be to investigate more fully the relationships between financial market forces, innovation, and central bank behavior" (393).

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