

Anti-MMT

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Anti-MMT

The Errors of Modern Monetary Theory

Edited with an introduction
by Jonathan R. Newman

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CONTENTS



Introduction	1
JONATHAN R. NEWMAN	
1. The Origins of Money: Menger Versus Modern Monetary Theory	17
JONATHAN R. NEWMAN	
2. The Spending Illusion: From Classical Monetary Theory to Modern Monetary Theory	41
JOSEPH T. SALERNO	
3. MMT Advocacy Using Financial Accounting: A Critique	67
ROBERT P. MURPHY	
4. The Effects of Modern Monetary Theory on the Structure of Production	91
PATRICK NEWMAN	
5. Modern Monetary Theory and Inflation Control from an Austrian Perspective	117
KARL-FRIEDRICH ISRAEL	
6. “Coming Up with the Money Is the Easy Part”: MMT and the Economy	141
PER L. BYLUND	

7. “Check Your Privilege”: MMT’s Privilege Position and Economic Destructionism JOSHUA A. MAWHORTER	165
8. Is It “Better to Produce Anything than Nothing”? Job Guarantees Versus Idleness LUCAS M. ENGELHARDT	189
About the Contributors	211
Index	215

INTRODUCTION



JONATHAN R. NEWMAN

T*he defenders of modern monetary theory* (MMT) claim it's unsailable. Nersisyan and Wray (2024, 3) recently boasted, “No one has found a flaw in any of the MMT work.” This book sets out to prove otherwise.

In the 1990s, Warren Mosler, a hedge fund executive, independently discovered a new way of understanding public finance and monetary operations and then shared it with a small group of early disciples: post-Keynesian economists Stephanie Kelton, L. Randall Wray, and Bill Mitchell.¹ These economists and others synthesized Mosler’s insights with the broader post-Keynesian framework,² chartalism (also known as “the state theory of money”),³ functional finance (articulated by Abba Lerner in the 1940s),⁴ and Hyman Minsky’s theories about financial instability.⁵

¹ Mosler developed his theories based on observations he made working in finance since the 1970s.

² Post-Keynesianism is a broad school of thought that places particular emphasis on “effective demand,” demand that is constrained by disequilibria in other markets. For example, if (really, *when*, due to their view of the instability of private markets) labor supply exceeds labor demand, then the demand for goods in general will be inhibited due to low aggregate income. Post-Keynesians also emphasize that the money supply is primarily determined by commercial bank operations and not central banks or governments.

³ Chartalism is the idea that money originated with the state. The state establishes a unit of account and announces obligations (e.g., taxes) denominated in that unit of account. It spends a currency that represents the unit of account and then collects it in payment of taxes.

⁴ Functional finance considers government spending, taxation, and debt in terms of what they can accomplish: full employment, stable economic growth, and low inflation. These policy levers should be managed for these purposes only, independent of any hawkish concerns over balanced budgets or excessive debt.

⁵ Minsky’s financial instability hypothesis is that risky financial behavior is a natural consequence of a prolonged period of stability. Stability tempts investors toward more speculative investment, meaning unregulated financial systems are subject to a cycle of crises.

MMT has grown in popularity over the past decade. Kelton's *The Deficit Myth: Modern Monetary Theory and the Birth of the People's Economy* became a *New York Times* bestseller in 2020. Her October 2021 TED Talk, "The Big Myth of Government Deficits," has more than 400,000 views on YouTube. Kelton, Wray, and Mosler star in *Finding the Money*, a 2023 documentary about MMT that was showcased in a variety of film festivals and is streaming on multiple platforms. As MMT has grown in popularity, so has the confidence of its proponents—dissenters are indignantly ridiculed for not understanding monetary operations or for arguing with basic accounting identities.

A handful of US politicians are open to MMT ideas. Representative Alexandria Ocasio-Cortez, for example, has spoken favorably of MMT (Guida 2019). Kelton was chief economist for the Democrats on the Senate Budget Committee and advised Bernie Sanders during his 2016 presidential campaign. MMT economists and the politicians associated with them are mainly in the left-wing progressive camp. This is evidenced by their common policy proposals: a job guarantee program, the Green New Deal, and strong government action addressing "COVID, climate catastrophe, mass extinctions, inequality, forever wars, [and] rampant racism" (Nersisyan and Wray 2024, 5).

MMT FUNDAMENTALS⁶

In the spirit of the principle of charity, before any critique is presented, I'll provide a brief description of MMT that its proponents won't find objectionable, and then I'll point out a few areas of agreement between MMT and the Austrian School.

MMT reverses the typical understanding of public finance for governments such as the United States, which issues fiat money and operates under a floating exchange rate policy. The typical understanding is that

⁶ The author would like to thank Warren Mosler, Sam Levey, and Douglas Robert (of AppliedMMT.com, @MMTmacrotrader on X) for helpful comments on this brief summary of MMT. These gentlemen obviously do not endorse this book and are not responsible for any remaining deficiencies in my summary.

the government must raise funds for spending through taxation and borrowing. In the MMT view, the government spends US dollars first, and then taxpayers and bond buyers use some of that money to extinguish their tax obligations and purchase treasury securities. Logically, US taxpayers cannot pay taxes and bond buyers cannot lend money to the government by purchasing bonds unless they have received US dollars issued by the government. These operations are all performed by the Federal Reserve, essentially an agent of Congress, by crediting and debiting spreadsheet entries. According to MMT proponents, any suggestion that the US must “raise money” through taxation or borrowing before it can spend is based on a misunderstanding of basic monetary operations.

Many MMT proponents refer to the US government and other governments that share these characteristics as “monetary sovereigns.”⁷ A monetary sovereign can meet all its financial obligations with the currency that it issues. The “users” of the currency, such as households and businesses, are constrained by a budget and must collect the currency to pay their bills. Currency issuers, such as the governments of the US, the UK, China, Japan, Australia, and Brazil, are not financially constrained. Such governments can never default on their debts involuntarily, because they can issue *ex nihilo* the currency that discharges their debts.

The debate over how to finance government expenditures becomes irrelevant in the MMT framework. Taxes do not finance spending for a monetary sovereign; instead, their functions are (1) to drive public demand for the currency, (2) to regulate aggregate demand, and (3) to reduce inequality. Government debts and deficits are not to be feared—in fact, “their red ink is our black ink.” Government debt merely represents currency that has been issued but not yet collected in taxes. All government deficits are mirrored by surpluses in the nongovernment sector,

⁷ “We define currency sovereignty as follows: the government chooses a money of account, imposes obligations (such as taxes, fees, and fines) in that money of account, and issues a currency denominated in its money of account that can be used to pay those obligations. Importantly, if the government issues other debt such as bonds, it is payable in the national currency, which itself is an IOU. Further, MMT argues that operating with a fixed exchange rate (i.e. pegged to gold or a foreign currency) usually constrains domestic policy space—so a floating exchange rate is normally preferred” (Nersisyan and Wray 2024, 1).

which includes the private and foreign sectors. When the government spends \$1 million and collects \$700,000 in taxes, \$300,000 remains in private and foreign hands. Balanced government budgets (or, worse, budget surpluses) drain the private sector of financial assets and run the risk of widespread defaults and financial crisis.

Politically, this understanding of how a monetary sovereign operates frees up a lot of space for the government to do big things, such as ensuring the economy is at full employment. Large government projects aimed at tackling important problems become feasible once MMT spectacles are put on. The only constraint on what can be achieved is the availability of resources and skilled individuals needed to accomplish these projects.

MMT proponents are aware that government spending, done in the wrong way, can cause excessive price inflation. This is why they argue that the government should carefully target its spending (especially toward idle resources) and coordinate it with appropriate tax policy. If government spending puts too much strain on productive capacity, taxes can be used to reduce excess demand and stabilize inflation. Moreover, as the monopoly issuer of the US dollar, the US government and its agents can establish the price level by spending (i.e., acting as a price setter) and demanding specific collateral for loans.

In the MMT framework, a federal job guarantee program provides another avenue for price stabilization, with the added benefit of keeping the economy at full employment. Such a job guarantee program is central to the macroeconomic goals of the MMT framework, and not just because it aligns with progressive politics. It's a replacement for the short-run Phillips curve idea that the only way to tame inflation is to increase unemployment. A job guarantee program creates a countercyclical buffer stock of labor—automatically expanding during a private sector slump and shrinking during a boom—and allows the government to set a critical nominal anchor for inflation expectations by setting the wage for those employed in the program. Without a federal job guarantee, residual unemployment indicates that the government did not create enough employment with its spending to offset the unemployment created by its tax liabilities.

AREAS OF AGREEMENT

Anyone familiar with the Austrian School of economics will already anticipate many points of disagreement with MMT; however, Austrians can agree with MMT on a few points:

1. An issuer of fiat money with debts denominated in its own currency is not in danger of a hard default. MMT proponents would certainly agree with Murray Rothbard when he writes that “many ‘right-wing’ opponents of public borrowing . . . have greatly exaggerated the dangers of the public debt and have raised persistent alarms about imminent ‘bankruptcy.’ It is obvious that the government cannot become ‘insolvent’ like private individuals—for it can always obtain money by coercion [taxation and fiat money creation], while private citizens cannot” (Rothbard 2009, 1028).
2. We cannot treat consumers, firms, or the whole economy as mere mathematical functions. Both Austrians and MMT proponents are critics of the neoclassical orthodoxy.
3. Modern commercial banks create money. Ludwig von Mises formulated the Austrian theory of the business cycle in view of this mechanism. Rothbard would wholeheartedly agree with the MMT claim “that both private money [bank deposits] and government money are created ‘out of thin air’” (Nersisyan and Wray 2024, 10).
4. Both MMT proponents and Austrian economists see the recurring debt ceiling standoffs and much of the budget hawkery in Congress for what they are: political theater and empty rhetoric.
5. Federal Reserve independence is a myth. In many cases, it’s best to consider the Federal Reserve and the US Treasury as a de facto consolidated entity.
6. Both MMT and Austrian economics lead to “radical” policy implications. While the policy implications of MMT and

Austrian economics are diametrically opposed, neither camp is afraid of where its analysis takes it. A job guarantee program is not off the table for MMT proponents, nor is abolishing the minimum wage for Austrians. MMT proponents calmly prescribe the minting of a trillion-dollar platinum coin to finance prepaid debit cards for all US residents, while Austrians calmly prescribe abolishing the Federal Reserve and returning to the gold standard or some other market-produced sound money.

ANTI-MMT

But we aren't exactly singing Kumbaya together: Underneath these superficial points of agreement is a mountain of disagreement.⁸ MMT is full of errors, fantasies, and misleading claims, from their theory of the origins of money to their job guarantee proposal.

Austrian economists are especially equipped to critique MMT. Thus, the title of this book has a double meaning: Not only do we critique MMT but the Austrian School is *the* anti-MMT school. MMT starts with a powerful state and works backward from there. The Austrian School, on the other hand, starts with an understanding of how the unhampered market economy works. The nature and effects of government intervention are analyzed later. We must understand how something works before we can understand how it breaks down.

Austrian economists are capable of both refuting MMT premises and showing that its policy proposals will not achieve the intended goals, even if its premises are granted. For example, Austrian economics has a solid counter to chartalism: Carl Menger's theory of the origins of money. Austrian economics can also better explain financial fragility using Ludwig von Mises's business cycle theory. At the same time, Austrian economics can show that even if public finance is "reversed"⁹—meaning

⁸ MMT has already been the target of many well-reasoned critiques from Austrian economists. See, for example, Bylund (2022); Murphy (2020); and Newman (2020).

⁹ The reversed framework is dubious. Since 1981, the US Treasury has not legally been allowed to overdraw its account at the Fed. Before 1981, it did occasionally overdraw its account during

that spending precedes taxation and borrowing—government control and direction of resources are still plagued by the economic calculation problem. Even if there is such a thing as “idle resources,” proposals such as a federal job guarantee would still result in terrible unintended consequences.

Mises’s critique of socialism is a prime example of this, and it applies to the MMT project due to its advocacy of government command over resources. An old but naïve critique of socialism centers on the incentive problem: Who would take out the trash? In a system based on complete economic equality, who would do the dirty and dangerous jobs? Who would go out on an innovative limb and try to produce something new or seek more efficient ways of producing consumer goods? Mises’s critique sidestepped this dilemma and granted the socialists’ dubious claim that a “New Socialist Man” would emerge—that human nature itself would change such that all members of the collective would happily do what is best for their comrades with no objections to personal sacrifice. Mises showed that even so, resources could not be economized due to the lack of market prices for profit and loss calculation. A benevolent central planning board could not rationally arrange production—resources would be wasted, and consumer goods would be produced in the wrong way, in the wrong quantities, and in the wrong times and places. The only possible outcome would be mass deprivation. Socialist experiments throughout history have validated Mises.

Readers will see this compelling style of argumentation, backed by solid economic theory and historical analysis, on display in this volume.

Chapter 1 dismantles MMT’s foundational myth that money originated with the state. Carl Menger explained that money originated in the market as market participants overcame the difficulties of acquiring what they demand in a barter economy. Chartalists, in contrast, posit that money is a “creature of the state”—that is, the historical record shows it was government authorities that instituted money. I show that

wars; however, these overdrafts were not due to insufficient funds but “exclusively for monetary-policy purposes” (Tymoigne 2016). See also Koning (2012) and Selgin (2019).

Menger's theory is impervious to this chartalist claim. While chartalists and credit money theorists consider ancient Mesopotamia an exemplary confirmation of their theories, I show that the textual and archeological evidence vindicates Menger's theory.

Chapter 2 diagnoses the "spending illusion" that infects MMT. Joseph T. Salerno shows that MMT is "the unwanted stepchild of the neoclassical quantity theory" and treats the flow of spending in an economy as a causal determinant of prices, severing money from value and price theory. Salerno traces the history of monetary theory starting with the classical school, which considered money a commodity valued by individuals and therefore subject to the same theory that explains how individuals value any other good. He continues to the neoclassical school, which purged marginal utility from the analysis of money in favor of a mechanistic flow-against-flow theory. The spending illusion not only persists in MMT but is put on steroids, resulting in bizarre claims about how the state institutes money and policy prescriptions that "will inevitably distort prices and interest rates, divert resources from those uses that best serve consumer preferences, precipitate inflationary booms and asset bubbles, and generate financial crises and economic depressions."

In chapter 3, Robert P. Murphy refutes the claim of MMT proponents that government debt represents private sector wealth. The sectoral balance approach is employed by MMT proponents in misleading ways. They imply that the only way the private sector as a whole can save and invest is if the government accumulates debt. Murphy exposes their faulty assumptions and sins of omission. Importantly, government debt is repaid with both explicit and implicit taxation (money creation), meaning that government debt service ultimately comes at the expense of the private sector. He offers an instructive analogy: If you lend \$1,000 to a gangster, who promises to pay you back \$1,050 but then robs you of \$1,050 before repaying his debt, is that debt truly your "net financial asset"? Murphy preemptively quashes MMT retorts invoking the risk-free nature of government debt and concludes that the MMT arguments based on accounting tautologies "rest on sleight of hand."

In chapter 4, Patrick Newman demolishes the idea that government spending can ever be productive. He examines inflation-financed government spending and its impact on the structure of production. Government spending involves a wasteful reallocation of productive resources and should therefore be considered consumption and not investment. Newman reviews Simon Kuznets's very Rothbardian concerns about the inclusion of government spending in aggregate production statistics such as gross national product and then evaluates the growth-inhibiting consequences of government spending in light of its true nature: waste.

In chapter 5, Karl-Friedrich Israel exposes the faulty premises of MMT's inflation management aspirations. MMT acknowledges that price inflation is an important constraint on government spending. Israel, however, shows that attempts to measure and respond to price inflation are bound to fail. Prices are exchange ratios based on individuals' subjective valuations and cannot be aggregated, averaged, or indexed in an economically meaningful way. Statistics such as the Consumer Price Index fail to fully account for the manifold vagaries of consumer choice and the unevenness of price inflation in various sectors. MMT has no dependable guide for determining if, when, and where government spending is pushing beyond productive capacity.

In chapter 6, Per L. Bylund points out the economics-shaped hole in MMT. Economics is fundamentally about human action, scarcity, opportunity costs, production, exchange, entrepreneurship, and prices. MMT proponents do not reckon in these terms. They ignore the wealth-creating, resource-economizing market process—entrepreneurship and economic calculation are wholly absent from MMT analysis. Instead, they reason from accounting tautologies such as aggregate sectoral balances and assume that policymakers can effectively and efficiently manage scarce resources without market prices and the profit-and-loss mechanism.

In chapter 7, Joshua A. Mawhorter shows that MMT prescribes policy from a "privileged position," taking for granted the *laissez-faire* preconditions for monetary sovereignty and proposing policies that would undermine monetary sovereignty. Monetary sovereignty, according to

MMT, opens the door for deficit spending, debt monetization, and government control of resources for the sake of full employment and other goals. Achieving monetary sovereignty, however, requires quite the opposite: limited government, sound money, and a flourishing private market economy based on capital accumulation. The US is the MMT proponents' "monetary sovereign *par excellence*," but its economic history exhibits institutions and policies condemned by MMT.

Chapter 8 is the chopping block for the MMT job guarantee proposal. Using William H. Hutt's analysis of idle resources, Lucas Engelhardt finds that MMT overlooks the fact that apparently idle resources are in such a state for a reason. Resources may have no known valuable use or may be held idle temporarily because the owner anticipates a valuable use in the future. Laborers may withhold their services because they value leisure more highly or as a negotiating tactic in a labor strike. A state-privileged cartel or monopoly may withhold productive capacity for higher profits. Engelhardt reviews what effect, if any, a job guarantee program would have on these forms of idleness. It would not reduce idleness in the way MMT proponents desire but merely redirect valuable resources and labor away from productive and economizing uses and toward wasteful projects chosen by central planners who are inherently unable to engage in economic calculation.

MMT VERSUS AUSTRIANS DURING THE COVID CRISIS

As a final introductory note, let us compare the responses from Austrian School economists and MMT proponents to the covid crisis and the US fiscal and monetary policy of 2020.

The World Health Organization declared a global pandemic on March 11, 2020. On top of the draconian lockdowns, mandates, and scientistic propaganda, the US government and its central bank responded with unprecedented spending and monetary inflation. From February 2020 to June 2020, the Federal Reserve's total assets exploded from \$4.16 trillion to \$7.17 trillion (Board of Governors of the Federal Reserve 2002–25). US government spending grew by about \$4 trillion over the same four

months. The money supply as measured by M2 increased by over \$4 trillion from February 2020 to February 2021 (a 26.7 percent increase) (Board of Governors of the Federal Reserve 1959–2025). Headline CPI inflation reached 9 percent in June 2022, well beyond the stated target of 2 percent and the highest since the stagflation fiasco of the 1970s and early 1980s (US Bureau of Labor Statistics 1947–2025).

After the global pandemic was declared, Austrian economists blamed the financial crisis on the inherent fragility of the US financial system and warned of a massive increase in the size and scope of government as well as high price inflation:

- On March 12, 2020, Mark Thornton (famous for predicting the 2008 financial crisis in remarkable detail years before it occurred) said, “The coronavirus is simply the match that lit the fuse.” The 2020 economic crisis was inevitable because of the Fed’s “decade-long campaign of ultralow interest rates and quantitative easing policy” (Thornton 2020).
- On March 13, 2020, Joseph T. Salerno pointed out that money printing cannot “bring about a miraculous replacement of the lost goods and services or repair broken supply chains.” The impending financial crisis “is due to the designed fragility of a financial system based on fractional reserve banking and propped up by governmental policies such as deposit insurance and the too-big-to-fail doctrine” (Salerno 2020).
- On the same day, Peter G. Klein (2020a) related the pandemic to Robert Higgs’s thesis in *Crisis and Leviathan*. Klein predicted a massive increase in government intervention, including restrictions on travel and assembly. The CDC and other agencies would swell in authority. Free markets and liberty would be blamed for all the bad outcomes. The “temporary measures” would stick, resulting in a permanently larger government in size and scope. Just a few days later, Klein (2020b) wrote, “What the economy requires during a crisis is a monetary system in which market

participants are free to negotiate and exchange; entrepreneurs can plan, experiment, and receive feedback; and resources can be allocated to their most highly valued uses. The last thing the economy needs is for state actors to ‘step in’ to rescue it.”

- On May 25, 2020, Thorsten Polleit, using rough estimates, predicted that price inflation (consumer and asset prices) would rise to about 6.5 percent per year: “The chances seem to be relatively high that the latest increase in the quantity of money will ultimately push money prices higher, eroding the purchasing power of money” (Polleit 2020).

What about those in the MMT camp?

- On March 21, 2020, Stephanie Kelton published an opinion piece in *The New York Times* titled “Just Use ‘the Computer’ at the Fed to Give People More Money.” On March 27, 2020, in an *Intercept* article, Kelton (2020) pointed out that the “how will we pay for it?” debate disappeared in Congress: “How was Congress able to come up with \$2 trillion so quickly? Why wasn’t there a knock-down-drag-out fight about how to ‘pay for’ this multi-trillion-dollar bill? Where is the money coming from?” She was not saying that this debate ought to have taken place but that the lack of the “how will we pay for it?” debate in an emergency shows that it’s mere political theater the rest of the time. Kelton said, “Congress is doing now what it could always have done. . . . Uncle Sam can’t run out of dollars. The US government is the issuer of our currency.”
- On March 23, 2020, Nathan Tankus wrote an FAQ about a proposal from Representative Rashida Tlaib and Rohan Grey that involves the US Treasury minting a platinum coin with a nominal value of \$1 trillion to finance “sending and/or delivering a debit card to every single resident of the United States” (Tankus 2020). Each debit card would be “pre-loaded with \$2,000 [and]

would be recharged with \$1,000 monthly until one year after the end of the Coronavirus crisis” (Tlaib 2020). In short, Tankus’s answers were as follows: Yes, this would be legal; no, it wouldn’t cause excessive inflation; and no, it wouldn’t “interfere with the conduct of monetary policy” (Tankus 2020).

- On April 17, 2020, Yeva Nersisyan and L. Randall Wray wrote, “Only a month ago, a stimulus bill of \$2tn would have been unthinkable. Indignant deficit scolds would have asked how one planned to pay for it, and complained about burdening our grandchildren with debt and bankrupting our country. . . . Once this crisis passes, the deficit scolds will be back at it again, trying to put roadblocks in front of progressive policies. We will be told we can’t afford Medicare for All, Jobs for All, College for All or halting climate change. The centrists will try to get us back to ‘normal’—i.e., an economy that leaves so many behind. It is imperative that we resist. What progressives need to push for is creating a different kind of economy through a Green New Deal” (Nersisyan and Wray 2020).

Austrians correctly warned that monetary expansion would result in price inflation and the crisis would result in an even larger Leviathan government. MMT proponents celebrated the silence from “deficit scolds” and demanded more government spending. One school called for prudence; the other called for profligacy.

MMT proponents didn’t let the crisis go to waste. They used it as an opportunity to double down on their larger agenda. If we can pass trillions of dollars of new spending, stimulus checks, and bailouts without anyone asking how we will pay for it, then why not “Medicare for All, Jobs for All, College for All” or a “Green New Deal”? Why not have the US Treasury mint trillion-dollar platinum coins and use them to fund debit cards for all US residents?

The difference in the responses from Austrian economists and MMT proponents makes sense. Austrian economists view the market economy

as a complex network of exchanges, a structure of production fashioned by entrepreneurs using economic calculation to determine the best ways to satisfy consumers. The state can only hamper and distort this process; it can only expropriate valuable resources and divert them into wasteful projects, enriching politicians, bureaucrats, and cronies. On the other hand, MMT proponents, in the words of Ludwig von Mises (1953), see “something miraculous in the issuance of fiat money”—they see in the government a power that surpasses “the art of sorcerers, witches, and conjurors.”

MMT is essentially a set of accounting tautologies used in misleading ways to promote progressive political goals. Its foundations are myths and illusions that have been refuted by Austrian economists for a century and a half. It’s not economics: There’s no human action, no understanding of market prices, and no entrepreneurship. It unapologetically brandishes state power over all else. Its policy prescriptions amount to silly fantasies that consumer goods can be squeezed out of green pieces of paper. Inflation is somehow both the *modus operandi* and the self-imposed constraint. MMT is a shiny green balloon, inflated with nothing but an air of sophistication.

It’s time to pop it.

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1.

THE ORIGINS OF MONEY: Menger Versus Modern Monetary Theory

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P*roponents of modern monetary theory* (MMT) reject Carl Menger’s (2009) theory of the origins of money in favor of the chartalist view. The “state money approach” is foundational for MMT (Semenova 2024, 14) because it paves the way for MMT policy prescriptions and accords with MMT’s views on the nature and functions of money and public finance. Consider Semenova’s concluding remarks:

Because money is a “creature of the state,” its supply is potentially unlimited which has important implications for the conduct of fiscal policy by the state. As the monopoly issuer of money, a sovereign state can create as much money as necessary to achieve full employment and a more equitable distribution of income and wealth. Contrary to the Metallist [Semenova’s misnomer for the Mengerian, market-driven theory of the origins of money] rhetoric, a sovereign state does not have to rely on taxation and borrowing in order to spend. The purpose of taxation is simply to create demand for the government’s money. (18–19)

Semenova further argues that Menger's theory "is based on false a-historical premises such as the notion of money's origins as a medium of exchange commodity" (19).

This chapter will show that Menger's theory is impervious to the historical case studies offered by MMT proponents and that the historical evidence supports Menger's theory and not chartalism or its sister, the credit theory of money. We will focus on the ancient Near East economy because Wray (1998) holds it up as an exemplary case study for chartalist theory and favorably cites the work of Mitchell Innes (1913) and Graeber (2014) on how ancient Mesopotamia conforms to the credit theory of money. Wray and Mitchell Innes particularly focus on the clay cuneiform tablets, but we will show that these tablets overwhelmingly indicate that silver (particularly in the form of hacksilver—i.e., pieces of silver broken or clipped from larger ingots, jewelry, and other decorative items) was used as money in ancient Mesopotamia and the surrounding regions for thousands of years before the emergence of coinage, vindicating the Mengerian account.

THE MENERIAN THEORY

Menger (2009) explained that money must have emerged from barter conditions as market participants deliberately used increasingly "saleable" commodities as media of exchange in order to acquire goods for direct use.¹ In barter, "each man is intent to get by way of exchange just such goods as he directly needs, and to reject those of which he has no need at all, or with which he is already sufficiently provided" (19). But such conditions allow for an extremely limited set of mutually beneficial exchanges—the famous "double coincidence of wants" problem severely constrained primitive trading.²

¹ See Hansen (2019) for an enlightening discussion of whether Menger's theory and Mises's regression theorem are apodictic or conjectural history. Hansen convincingly argues that they are of the same nature as other apodictic economic laws.

² "It is clear then, that in those circumstances the number of bargains actually concluded must lie within very narrow limits. Consider how seldom it is the case, that a commodity owned by somebody is of less value in use than another commodity owned by somebody else!" (Menger 2009, 19).

Thankfully, primitive people noticed a “remedy”: “These difficulties would have proved absolutely insurmountable obstacles to the progress of traffic, and at the same time to the production of goods not commanding a regular sale, had there not lain a remedy in the very nature of things, to wit, the different degrees of saleableness [*Absatzfähigkeit*] of commodities” (Menger 2009, 20). Market participants noticed that some goods could be sold more easily than others. Menger considers two dimensions regarding saleableness or marketability: (1) the losses associated with buying at one price and then selling at another and (2) the time it takes to find a buyer (23–28). A good is more saleable if the losses from buying it and then selling it are small. A buyer must outbid other potential buyers on the market to acquire a good, which means that the new owner’s selling prices must be lower if he is to sell it before market conditions change. To the extent that he must wait to sell at a sufficiently high price, the good’s saleableness decreases.

Indirect exchange emerges this way: Market participants enter the market with goods they intend to sell and some idea of the goods they would like to buy. People with less marketable goods are bound to find it difficult to trade for the exact goods they would like to buy. But if they trade with those selling more marketable goods—even if they do not value them for direct use—they put themselves in a more advantageous position to acquire the goods they do value for direct use. Someone who acquires in exchange a more marketable good with the intention of exchanging it for either an even more marketable good or, eventually, the good he values for direct use has used one or more goods as a medium of exchange. He has realized the benefits of indirect exchange. According to Menger (2009, 34), “by so doing he certainly does not attain at once the final object of his trafficking, to wit, the acquisition of goods needful to himself. Yet he draws nearer to that object.”

In contrast to the chartalist view, Menger (2009, 34) states, “Men have been led, with increasing knowledge of their individual interests, each by his own economic interests, without convention, without legal compulsion, nay, even without any regard to the common interest, to exchange goods destined for exchange (their ‘wares’) for other

goods equally destined for exchange, but more saleable.” Thus, media of exchange originated on the market, from barter conditions, due to market participants’ realization that they are more likely to acquire the goods they value for direct use if they first accept in exchange goods that are more marketable than the goods they originally brought to market. Convention cannot explain the origin of media of exchange, for the simple reason that convention cannot explain the origin of anything. Convention can only explain why people continue to do things the way they have been done. But Menger’s theory explains the emergence of a *new* mode of acquiring what one wants from the market.

Legal compulsion cannot explain the origin of media of exchange due to the lack of preexisting values for direct use (or expectations of future prices) that would establish exchange ratios in terms of a new fiat money. If legal compulsion is a part of any process that leads to the widespread use of a medium of exchange, the legal authority must have co-opted or monopolized an existing medium. If the legal authority issues some new object and stirs up demand for it by threatening with violence any citizen who does not return the object to the legal authority (i.e., via taxation), the object can only become a medium of exchange through the Mengerian process. Note that the Mengerian theory does not assign motivations to market participants’ valuations of a good that eventually comes into use as a medium of exchange. It does not matter if a good is valued because it can be used to make jewelry or because returning it to the legal authority means escaping imprisonment or some other punishment. Thus, the many examples offered by MMT proponents of authorities stamping coins, printing paper, announcing taxes, or otherwise meddling with money do not refute the Mengerian view.³

The development of money is a mere, but consequential, continuation of the process described by Menger in which market participants recognize the successes attributable to using goods that are more saleable as a stepping stone to acquiring the goods they desire for direct use.

³ See Bylund (2022) for a thorough refutation of MMT proponents’ claims that taxes drive the demand for money and that money originated by government fiat.

Interestingly, a good's marketability increases as more individuals use it as a medium of exchange. Rothbard (2009, 191) explains:

Thus, if butter begins as one of the most marketable commodities and is therefore more and more chosen as a medium, this increase in the market demand for butter greatly increases the very marketability that makes it useful as a medium in the first place. The process is cumulative, with the most marketable commodities becoming enormously more marketable and with this increase spurring their use as media of exchange. The process continues, with an ever-widening gap between the marketability of the medium and the other commodities, until finally one or two commodities are far more marketable than any others and are in general use as media of exchange.

Once a particular medium of exchange becomes widely accepted, such that virtually all exchange ratios are denominated in the same good, the good has become money. Thus, it is misleading to refer to the Mengerian view as “metallism,” because there is nothing in the theory that either prescribes or suggests that precious metals will inevitably become money. Precious metal became the globally dominant money for thousands of years simply because market participants chose it for its characteristics.⁴

THE CHARTALIST THEORY AND CHARTALIST CRITIQUES OF THE MENDERIAN THEORY

Chartalism stands in contrast to the Mengerian, market-driven view of the origins of money. Instead of defining money as the widely accepted medium of exchange, chartalism defines it (quite tendentiously) as “that

⁴ It is true that precious metals fit the widely cited list of money's characteristics (e.g., durability, portability, divisibility, recognizability, and homogeneity), but these criteria only function *through* the values of market participants and their recognition of the degrees of saleableness for various goods. If some other good becomes money—for example, if market participants consider other criteria as advantageous for a good's use as a medium of exchange—the Mengerian theory would not be falsified or otherwise called into question.

which [the state] accepts at public pay offices (mainly, in payment of taxes)” (Wray 1998, 7–8). Instead of the idea that market participants search for more saleable goods, chartalism holds that the state defines what may be used to pay taxes and citizens search for and demand the thing that will fulfill their tax obligations to the state. According to Abba P. Lerner’s 1947 *American Economic Review* article “Money as a Creature of the State” (quoted in Wray 1998, 13), “if the state is willing to accept the proposed money in payment of taxes and other obligations to itself the trick is done. Everyone who has obligations to the state will be willing to accept the pieces of paper with which he can settle the obligations, and all other people will be willing to accept these pieces of paper because they know that the taxpayers, etc., will accept them in turn.”

It is worth noting, even at this early point, that the chartalist argument for why those who already have enough “chartal money”⁵ to fulfill their tax liability, or those who do not have tax obligations, would accept the chartal money in payment is subsumed under the Mengerian theory, properly understood. The Mengerian theory claims that market participants will accept more saleable goods in exchange so that they might acquire from others the goods they value for direct use. Chartalism suggests, correctly but more narrowly, that to acquire the goods they value for direct use, nontaxpayers might find it advantageous to accept tax liability tokens to use in exchange with those who have tax liabilities. Thus, in this instance and with this motivation, chartal money becomes more saleable for market participants. But for these tokens to become a widely accepted medium of exchange, they must follow the Mengerian process.⁶

⁵ “Chartal money” is synonymous with “money” in the chartalist view. It merely emphasizes that money originates as a decision by the state to accept something in payment of taxes. In his 1924 *The State Theory of Money*, Georg Friedrich Knapp (quoted in Wray 1998, 10) chose the Latin word “charta” because it “can bear the sense of ticket or token.” Semenova (2024, 14) clarifies that its etymology goes back to ancient Greek.

⁶ Hansen (2019, 44) argues similarly: “It [the state] can try to confer use value on some goods and make them more suitable as media of exchange by making all taxes payable in these goods. It could in this way make otherwise valueless things quite valuable. But another step is needed before they can become money—they must be recognized as the most marketable goods in the free estimation of the market.” See also Watson (2023, 74–85) for an explanation of how early

It is difficult to find any theoretical argument for chartalism beyond definitions and assertions about the nature of money.⁷ Money is simply defined as “that which is necessary to pay taxes” (Semenova 2024, 14, quoting L. Randall Wray’s 1998 *Understanding Modern Money: The Key to Full Employment and Price Stability*). It is simply asserted that money’s “primary function is that of a unit of account” (Semenova 2024, 14), that money is “an abstract unit of measurement” (15), and that “the ultimate test of ‘moneyness’” is whether “that ticket or token is accepted by the state in payment of taxes” (15). The collection of chartalist assertions about what money is, whence it came, and how it works is held up as a theory of money. Historical cases of government involvement in money are then showcased as a thorough vindication of their assertions. It is an entirely presentist approach,⁸ in which the features of modern fiat money and the actions of modern states and central banks are projected onto the ancient world. The Mengerian theory, in contrast, examines the goals and expectations of individuals in a barter economy and makes the commonsense claim that those individuals found it advantageous to use more saleable goods as media of exchange.

Wray (1998, 1) attacks the economic theory of the origins of money, characterizing the theory this way: “Our homogeneous-globule-of-desire forefathers were inconvenienced by barter until they spontaneously hit upon the idea of using tobacco, furs, huge rocks, landmarks, and wives as media of exchange.” He invokes “homo economicus” and “the invisible hand of the market,” but the Mengerian theory does not assume homo economicus, homogeneity among market participants, pure spontaneity, or “the invisible hand.” It points to the purposeful behavior of fallible persons who find it advantageous to first acquire more saleable

clay tokens—even granting the chartalist assertions that they were used as money—must follow the Mengerian process to become money.

⁷ Bylund (2022, 163) also found “several leaps of logic” in the chartalist story: “Wray not only fails to make the case that government currency is money because it is ‘redeemed’ as tax payments, but leaves questions that are better answered using Mengerian monetary theory.”

⁸ In his history of economic thought, Rothbard (2006, 8) warns against the “‘presentist’ seizing upon a few obscure sentences to hail alleged but non-existent forerunners of sophisticated modern concepts.” MMT proponents err by “seizing upon a few obscure” cases of ancient state involvement in money “to hail alleged but non-existent forerunners of” modern fiat money.

goods before encountering other market participants who have the items they want for direct use. It is difficult to see how this claim is so controversial for MMT proponents and chartalists, except in view of their policy prescriptions, which focus on a powerful state's expropriation of privately owned resources through monetary and fiscal policy. Interestingly, however, MMT proponents admit that their views would hold even if the Mengerian theory were correct: "I will be brief on the historical account of the origins of money, not because this is uninteresting, but rather because it is tangential to the main concern—modern money. Even if the Samuelsonian story [in Wray's view, the same as the Mengerian account] about the origins of money were true (which it is not), all modern states operate with a fiat money" (Wray 1998, 1).

HISTORY

Menger (2009) does not say when in history media of exchange or money were developed. He refers to primitive times (19) in a generic sense and says that "no historical monument gives us trustworthy tidings of any transactions either conferring distinct recognition on media of exchange already in use, or referring to their adoption by peoples of comparatively recent culture, much less testifying to an initiation of the earliest ages of economic civilization in the use of money" (17). Thus, Menger intended his theory to be a description of what must have happened in prehistoric times or, if it is a matter of economic law (Hansen 2019), what must occur for media of exchange and money to emerge in a praxeological sense. Only after Menger (2009, 45–50) develops his timeless theory does he apply it to the historical fact that precious metals had been adopted as money virtually universally.

The remainder of this chapter will focus on the ancient Near East, discussing the following topics in particular: (1) the clay cuneiform documents that record transactions and debts in ancient Mesopotamia (located in modern-day Iraq); (2) the use of hacksilver as money in ancient Mesopotamia and the surrounding regions; (3) what chartalists and credit money theorists say about the development of money in this area

and time period; and (4) how the archeological and historical evidence validates Menger's theory and negates the chartalist and credit theories of the origins of money. We will primarily review evidence from the Sumerian Third Dynasty of Ur (sometimes denoted as "Ur III"), which existed in the late third millennium BC and provides a rich supply of artifacts for archeologists and historians to translate, analyze, and interpret. MMT proponents, while advocates of chartalism, readily embrace credit money theorists such as A. Mitchell Innes and David Graeber, who claim that money originated as a unit of account for debt. The reason for the affinity should be obvious: MMT proponents emphasize that debts to the state are of central importance in the development of chartal money. Both the chartalists and the credit money theorists think that the evidence from ancient Mesopotamia confirms their views on the origins of money, but we will show that it does quite the opposite.

Wray (1998, 13), following Mitchell Innes (1913), points to the clay tablets as a money that predated the first coins (ca. the seventh to sixth century BC) by "several thousand years."⁹ Wray (1998) claims that these tablets recorded debts in grain, circulated as money, and could be used to pay taxes. Yet Sharlach's (2004, 28) thorough investigation of the Ur III tablets regarding tax payments reveal that these payments were not "'paper' transactions . . . but rather that vast cargoes [of reeds, barley, cattle, flour, timber, etc.] were in fact transported from Umma [a taxpaying province] to the Nuppur province of Ur." Two other problems with Wray and Mitchell Innes's claims are that (1) only some of the tablets represent debt contracts, while many are receipts for realized spot exchanges and (2) the tablets refer to transactions with goods other than grain, including especially precious metals such as silver (Nies 1920). Nies's (1920) translations of the Ur dynasty tablets (ca. 2400 BC) show the following:

- "Payments in silver of temple singers" (19). Nies interprets the payment as "money paid as hire" (51).

⁹ We should remember that Menger's theory does not say or require that money originated with coinage.

- Someone borrowing 120 shekels of silver at an interest rate of 20 percent (43). This indicates that the other clay tablets do not signify debts but are simply receipts—that is, records of spot exchanges—unless otherwise noted. The following tablet translation (43), for example, refers to a debt denominated in grain. Both tablets record witnesses and a maturity date, while the others do not. Nies interprets the silver loan as follows: “Contract. Loan of *money* with rate of interest at 20%” (15, emphasis added).
- Someone receiving a precise weight of silver in a spot exchange: “60 $\frac{2}{3}$ shekels and 20 grains of silver, on the 13th day of the month” (44). There are many similar records.
- Someone in the position of “money lender” (52).¹⁰
- Soldiers paid “in money, not in kind” (69).
- The literal translation of the word for “paymaster” is “one who cuts up money” (129).
- In the index of words and phrases, under the heading “shekel,” Nies comments that “the pictograph probably represents an implement for cutting metals such as gold, silver and copper to be used as money” (136–37).

Thus, while it is true that the ancient Mesopotamian temples, bureaucrats, and rulers used clay tablets to keep track of resources, the clay tablets were not money, did not serve as a unit of account, and were not exclusively used to document debits and credits for the state. Instead, the clay tablets indicate that the private market economy used silver as money. To make an analogy to the modern United States, MMT proponents are looking at paper receipts, loan contracts, and tax documents as money while ignoring their contents, which indicate that the US dollar is the standard currency.

¹⁰ Nies was not certain of this translation, but it was his best guess, followed by “diviner.”

Other historians corroborate that these ancient Mesopotamian tablets indicate that silver was used as a widely accepted medium of exchange. Leemans (1960, 34), for example, says silver “was used as currency” in his interpretation of Larsa dynasty tablets (late third and early second millennium BC). Silver was also used as a common denominator for calculating profit and the monetary value of various goods (48, 72, 98). Leemans explains that the tablets remained in the possession of those who received them (75), which means they were not used in an ongoing way to transfer debts as Wray (1998) and Mitchell Innes (1913) claim. Leemans (1960, 130) concludes that “silver had the function of money in southern Mesopotamia in the Old Babylonian period. It had the same function at Eshnunna, at Susa, in Assyria and surrounding countries at the time of the Assyrian colonies and at Mari.”

Paoletti (2008, 128) similarly concludes that silver was used as money in Ur III: “In the Neo-Sumerian period there is constant reference to silver to determine the value of other goods, particularly barley” and “merchants’ balanced accounts from Umma represent one of the most important evidences for silver used both as a medium of exchange and payment and as an equivalent of value. Furthermore silver appears as the dominant medium of payment in the sale documents and for renting houses.”

Wray (1998) does not cite any historical research on the clay tablets—he only cites Mitchell Innes (1913). Mitchell Innes (1913, 21) does not cite any historical work on the tablets—he only assumes and makes naked claims about their use and function: “[The tablets] no doubt passed from hand to hand like tallies and bills of exchange.” Mitchell Innes says, “We know, of course, hardly anything about the commerce of those far-off days” (21). This does not stop Mitchell Innes from making broad assumptions about the nature and function of the clay tablets. We do, however, know *something* about “the commerce of those far-off days”: The tablets clearly show that silver—not the tablets themselves—was widely used as a medium of exchange. Thus, it falls to MMT proponents to demonstrate that the tablets were used as money.

HACKSILVER

If the transaction records on the clay tablets indicate that silver was the primary medium of exchange and yet the clay tablets predate coinage, then what did the silver look like? What form did it take? The archaeological evidence overwhelmingly shows that, before coinage, people in the ancient Near East used “hacksilver”—that is, “fragmented bits of silver” (Thompson 2003, 69). This accords with Nies’s (1920) translation of “paymaster” from the literal “one who cuts up money” (129) and the pictograph for “shekel” featuring “an implement for cutting metals” (136–37). Peyronel (2023, 155) notes that the Akkadian word for silver, “*kasapum*, derives from the verb *kasapum*, which means ‘to break into pieces’ and it is derived from the economic use and circulation of silver.”

Thompson (2003) documented the Cisjordan hacksilver hoards from the twelfth to the seventh century BC from thirty-four sites featuring a total of over 45,090 grams of silver. She describes the contents of these hoards:

Pieces of Hacksilber were broken off all sorts of ingots and worked objects including jewellery, amulets, cups, and so on. We have known for some time that metal in this form was balanced on scales against standardized weights for the purposes of payment before and after the development of coinages. . . . By far the most common kind of Hacksilber among the Iron Age hoards from Cisjordan is the so-called “chocolate bar” or “pre-portioned” ingot—thousands of individual portions have survived (Figs. 2–3). These are not simply pieces carelessly hacked off any sort of silver object. They were snapped or broken off larger ingots that had been deliberately portioned in much the same way that chocolate bars are today. (69–71)

The mere existence of these hoards does not prove that silver was used as money, yet the standard weights of the pieces of silver within the hoards,¹¹

¹¹ For example, Thompson (2003, 76) describes some of the pieces of jewelry as having “weights intended to approximate multiples of the shekel.”

the fact that some hoards were in cloth sacks sealed with a piece of clay to indicate the contents (78–87), and corroborating textual evidence, cited throughout Thompson’s article, make this conclusion obvious. Thompson offers an unexpected piece of evidence—the existence of a counterfeit “chocolate bar”:

The ubiquity of chocolate bar ingots might render them banal were it not for one outstanding specimen from a twelfth century hoard uncovered at Beth Shean (Mazar 1997, 71). It is a single chocolate bar portion. The surface of the ingot is completely silver in appearance, but the cross sectioning of the object for laboratory analyses revealed a hidden copper core (Fig. 6).

The presence of the core supports the idea that the object was not simply a piece of scrap destined for the melting pot. The ingot was to be valued for the purity of its composition, that is to say what its weight in silver could afford. It is the earliest counterfeit silver currency presently known. (74)

Thompson concludes that “there is much to recommend the hoards as the immediate precursors of Greek silver coinages” (93).

Archeologists have discovered precoinage hacksilver hoards in other areas. Ialongo et al. (2018, 28) performed statistical analyses on a ca. 1800–1600 BC silver hoard from Ebla, Syria, finding the pieces of hacksilver had “the same statistical properties of balance weights, and that fragmentation was probably aimed at obtaining predetermined weight values, i.e., the hacksilver from Ebla possesses the characteristics that one would expect from a bullion-currency.” Peyronel (2023, 164) considers the evidence from hacksilver hoards from twenty-one locations in modern-day Turkey, Syria, and Iraq and concludes as follows:

The 3rd millennium in Western Asia witnessed the development of long-distance exchanges, the diffusion of technologies and administrative devices, and the advent of commodification reflected by the widespread distribution of raw materials

(metals in primis), imported items, sealings, and scale weights. It was at the apogee of this “archaic globalisation,” around the middle of the 3rd millennium BC, that the economic function of silver—used as a standard of equivalence, means of exchange and storing of wealth—made its first appearance and became within a short time firmly established in the Levant, Anatolia and Mesopotamia. During the same period, weight units and metrological systems were elaborated from the Indus Valley to the Aegean, together with commensuration and equivalence systems. The distribution of weights and silver hoards highlights this process and indicates the strong interactions that led to overlapping metrological systems.

Using lead isotope analysis, Martín Hernández (2018) shows that the Cisjordan hacksilver was used in trade across the Mediterranean with the Phoenicians and as far as the Iberian Peninsula.

Hacksilver continued to be used after stamped coinage, and postcoinage hoards include both hacksilver and coins (Peyronel 2010, 931). This indicates that the items in precoinage hacksilver hoards had the same monetary functions as coins. Indeed, in his overview of the totality of archeological evidence regarding money and its precursors, Rahmstorf (2016, 35) questions whether coinage was “really such a fundamental change.”¹² He notes that “coins were still commonly checked and weighed to control their alleged value” (35). Citing Andrew Meadows’s 2008 essay “Coinage” (in *The Oxford Handbook of Engineering and Technology in the Classical World*), Rahmstorf (2016, 35) says, “In recent scholarship the appraisal of the invention of coinage has been revised, and coinage is often situated ‘within the continuum of development of

¹² Powell (1996, 226) notes that Snell (1995) made similar observations: “Daniel Snell in a recent essay has remarked on this disinterest in coinage and urged that its use was not readily embraced by Near Eastern economies because it really offered nothing particularly new. Archaeological evidence confirming this judgment is provided by the coin horde [*sic*] discovered in the last century at Babylon by H. Rassam, which contained not only Greek, Phoenician, and Persian coins, but also broken silver—obviously intended to be put in the balance pan along with coins in making money transactions.” Even Wray (1998, 3) acknowledges this: “Markets got along just fine without coins both before and after their invention.”

monetary instruments’ because it was ‘a development from an existing Near Eastern tradition rather than a fundamentally new technology.’” Citing Thompson (2003), whose research on the Cisjordan hacksilver hoards we have already discussed, Rahmstorf (2016, 35) concludes that these hoards “not only foreshadow the invention of coins around 600 BCE but in fact blur any clear differentiation between these sealed chocolate-bar ingots and coinage.”

GRAEBER ON THE ORIGINS OF MONEY

Wray and other MMT proponents cite David Graeber’s (2014) work *Debt: The First 5,000 Years* favorably,¹³ saying that Graeber’s thesis is completely consistent with the MMT story about the origins of money. Graeber’s tome argues in favor of the credit theory of money: “The standard account of monetary history is precisely backwards. We did not begin with barter, discover money, and then eventually develop credit systems. It happened precisely the other way around” (40). He explains that debt relationships pervaded primitive communities and that sometimes the vagueness of the relationships would be exploited by the creditor to extract more goods or favors from the debtor than the debtor would have explicitly agreed to. Authorities (religious, political, or both) would then establish equivalence systems and debt jubilees to prevent the community from buckling under the social and economic consequences of accumulated debt. Money is merely an outgrowth of the equivalence systems created by the authorities. Barter is merely a rare by-product of people in money-using economies who need goods from the market but happen to not have enough money on hand.

In a brief overview of ancient Mesopotamia, Graeber (2014) admits that “the basic monetary unit was the silver shekel. . . . Silver was, effectively money. And it did indeed circulate in the form of unworked chunks.”

¹³ Wray (2018): “I don’t know if any of you have read David Graeber’s book. This was just a fantastic success—an unimaginable success: *Debt: The First 5,000 Years*. Everybody bought this book. It was a runaway bestseller. It’s like 5,000 pages long. It’s the kind of book everybody buys and probably hardly anybody reads, including me. I’ve got it on my shelf. Maybe when I retire I’ll finally get the time to read it.”

He reconciles this fact with his overarching thesis by claiming that temple bureaucrats established equivalences between various goods and certain weights of silver. For example, “one shekel’s weight in silver was established as the equivalent of one gur, or bushel of barley.” He continues: “It’s easy to see that ‘money’ in this sense is in no way the product of commercial transactions. It was actually created by bureaucrats in order to keep track of resources and move things back and forth between departments” (39). Unfortunately, Graeber (like Wray and Mitchell Innes) does not cite any archeological or historical work to back up these claims about a non-market-established equivalence between silver and barley. However, Powell (1990, 88), an author cited by Graeber, shows that barley prices (in silver) fluctuated greatly over the centuries, between 90 and 300 sila (a sila is approximately one liter) per shekel of silver from ca. 2600 BC to ca. 400 BC.¹⁴ The relative value of barley against silver fluctuated over the short term as well, due to seasonal fluctuations and the timing of the barley harvest (Garfinkle 2004, 6; Widell 2005, 391–92; Cripps 2017, 4). Cripps (2017, 36) notes that “there is no apparent evidence in the Ur III texts of an explicit decree that a barley:silver price ratio was fixed at one gur [equivalent to 300 sila] per shekel,” which means that Graeber’s conclusion that there was some established equivalency is speculation.¹⁵

Graeber (2014) contradicts not only the archeologists he cites but also the chartalist MMT proponents and himself. Graeber admits that silver was money while the MMT proponents claim that the clay documents indicating grain credit contracts were money. Graeber contradicts

¹⁴ “Barley and silver are the only commodities attested in a paired value relationship throughout most of the history of the cuneiform tradition. From c. 2600 to c. 400 B.C., they occur in value relationships with one another and repeatedly as independent measures of the values of other things. Barley seems in fact to have functioned throughout most of Babylonian history as the ‘small change’ par excellence. Of course, neither silver nor barley can be assumed to have maintained absolutely stable values” (Powell 1990, 88).

¹⁵ I should note that Cripps (2017) does not rule out the possibility that there was some established barley-to-silver ratio, but there is no direct evidence. Cripps shows that the barley-to-silver exchange ratio changed from year to year based on merchant texts: “The mean value of the ratios . . . is 293 sila per shekel, while the median value is 300 sila per shekel as is the mode value. One standard deviation in the distribution is 57 sila per shekel” (20). I interpret this to mean that even if there were price controls, they were not effective. It does not bode well for the credit theory of money if such price controls are the primary way that a money develops as a unit of account for debts.

himself in the next paragraph: “In the marketplaces that cropped up in Mesopotamian cities, prices were also calculated in silver, and the prices of commodities that weren’t entirely controlled by the Temples and Palaces would tend to fluctuate according to supply and demand.”¹⁶ This seems incongruent with his earlier claim that the use of silver as money was “in no way the product of commercial transactions.” For both to be true, it must be the case that (1) temple administrators arbitrarily chose silver as a common denominator in their clay documents, (2) markets did not exist (not even barter) prior to the temple administration’s alleged equivalence system, and (3) the temple and palace receipts of goods would have been greatly affected by Gresham’s law if we take Graeber at his word that “while debts were calculated in silver, they did not have to be paid in silver—in fact, they could be paid in more or less anything one had around” (39).

MENGER IS VINDICATED

The archeological and textual evidence for the predominance of silver money in Mesopotamia and the surrounding areas contradicts the chartalist theory because states did not collect taxes in precious metals at the time.¹⁷ We can illustrate this with evidence from the Ur III dynasty. According to Sharlach (2004, 29), “silver appears with extreme rarity in the hundreds or even thousands of [Ur III dynasty] tablets that record bala [tax] payments.”¹⁸ Instead, taxes were paid in kind—Sharlach lists barley, flour, reeds, timber, and livestock as commonly taxed items (29).

¹⁶ See also Murphy (2012): “So what the historical record actually shows us is a Sumerian economy in which merchants used silver in actual spot transactions when trading in the outside marketplace and Temple authorities kept track of internal bookkeeping operations through the use of silver valuations. And Graeber thinks it so self-evident that the causality ran from the Temple bureaucrats to the merchants that he actually says of the Mengerian account, ‘rarely has an historical theory been so absolutely and systematically refuted!’”

¹⁷ Moreover, “weights were used in regions without an apparent state organization” (Rahmstorf 2016, 31). Neither taxes nor state-defined weights (which chartalists might claim as a way for the state to encourage the use of metals as money) are defensible explanations for the dominance of silver money in many regions in this period.

¹⁸ This is in review of tablets documenting taxes from Umma, but the same applies to other provinces. For example, Sharlach (2004, 100) says that silver is “another commodity generally absent from Lagash’s bala [tax] payments.”

Even Semenova (2024) assents to this fact, referring to the “in-kind payment obligations to the temple” (18). While this in-kind tax system was in place, the private market economy used silver. Paoletti (2008) corroborates this view after analyzing the records of intrastate transfers of silver (and gold). Paoletti notes that the main sources of precious metals for the king were foreign mines (149–50), foreign trade (via “royal merchants”) (130–42), and administrators whose deliveries of cattle, for example, were below quota (143–46). Regarding the latter, Paoletti makes the excellent point that for these administrators in arrears to be able to make the silver payments, there had to preexist “a market for agricultural products where the silver had to be earned.” Paoletti concludes that the presence of markets in which silver was used as money “and [their] relevance for the Mesopotamian economy in this period are thus evident” (154).

None of the texts mention that the clay tablets were used as money—or that they were exchanged at all. On the contrary, the consensus among historians of this period is that silver was used as money. Regarding this consensus, Powell (1996, 225; emphasis in original) says, “Money, of course, did exist in ancient Mesopotamia. . . . Usage of terms like ‘money,’ ‘currency,’ ‘cash,’ etc. by cuneiformists to describe *silver* is so ubiquitous in the literature of the last century and a half that, if money were not recorded in cuneiform documents, one would have to make the improbable inference that everyone who had used this term had entirely misunderstood the texts.”

Moreover, the historical record confirms Menger’s theory in a positive way, not just by negating the chartalist alternative. Given Menger’s theory, what can we expect from the historical record?

- Barter comes first, though the historical record of this will likely be scarce or nonexistent due to the necessarily primitive nature of barter economies and the unimportant (from the prehistoric person’s perspective) nature of these common exchanges.¹⁹

¹⁹ Powell (1996, 228): “Barter must have taken place everywhere and often in ancient Mesopotamia and is probably the major reason we have so little evidence for exchange of cheap commodities—especially in small amounts—in cuneiform documents.”

- Market participants trade some goods more often than others, eventually settling on one or two media of exchange.²⁰
- While not necessary, it is likely that something used as money would continue to be used for nonmonetary purposes.²¹
- When people divide the money good to pay specific prices, it results in a variety of quantities and sizes.²²
- The money good is used as a medium of exchange,²³ prices for a wide variety of goods are denominated in the money unit,²⁴ and people use the monetary unit to calculate profit and loss.²⁵

Based on these expectations and the historical evidence—including the cuneiform translations, the hacksilver hoards, and the preponderance of other archeological evidence—Menger is vindicated.

CONCLUSION: DOES IT MATTER?

Wray (1998, 1) offhandedly remarks that even if the chartalist story is false, it would not matter for *modern* monetary theory, because modern states issue fiat money. He continues: “However, some knowledge of history does provide illumination on the nature of what could be called modern, or state, money.” Given the historical evidence presented in this

²⁰ Powell (1996, 227–28) lists several other goods that were used as media of exchange. Even though silver dominated and eventually won out, Powell and other authors note that barley was often used for “small change.”

²¹ “Monies in ancient Mesopotamia were themselves all potentially useful substances” (Powell 1996, 227). In a thorough review and analysis of many metal objects from ancient Mesopotamia, Fernyhough (2022, 50, citing P. R. S. Moorey’s 1994 *Ancient Mesopotamian Materials and Industries: The Archaeological Evidence*) notes that “the repertoire of silver objects recovered includes vessels, personal adornments, small-scale statuary, pre-monetary currency and plating other materials such as wood.” As we noted earlier, Thompson (2003, 69) lists “worked objects including jewellery, amulets, cups, and so on” from the Cisjordan hoards.

²² See Ialongo et al. (2018).

²³ Paoletti (2008, 140) provides a schematic of documented trades between specific persons.

²⁴ This is overwhelmingly documented in the research on the cuneiform tablets. See Powell (1990) for an intensive look at ancient Mesopotamian prices.

²⁵ See, for example, Leemans’s (1960, 48, 72, 98) translations.

chapter, we conclude that money originated on the market in the manner explained by Menger's incontrovertible theory. Over the millennia, states co-opted and monopolized this market institution for their own ends. Thus, the nature of modern fiat money is as Wray sarcastically describes: "All would have been fine and dandy except that evil governments came along, monopolizing the mints, creating central banks that debased the currency, and interfering with the invisible hand of the market. This finally resulted in abandonment of commodity money, substitution of a fiat money, and central bank-induced inflation."

There is a reason MMT proponents are so adamant about the chartalist story and consider it foundational for the rest of their project: It justifies the broader set of MMT conclusions and policy prescriptions. If "money is a creature of the state," then it is the state's rightful plaything—monetary inflation is not the state's wrongful means of expropriating resources from private owners; currency debasement is not fraud; a monetary sovereign has no financial constraints, no duty to keep balanced budgets, and no obligation to stay within the bounds prescribed by its own ability to tax; and taxation itself is an unquestionable prerogative of the state since it is merely the means by which it stirs up demand for its own money. Thus, if chartalism "is based on false a-historical premises" (Semenova 2024, 19), then the rest of the MMT project is bunk.

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2.

THE SPENDING ILLUSION: FROM CLASSICAL MONETARY THEORY TO MODERN MONETARY THEORY



JOSEPH T. SALERNO

Economists never tire of pointing out how the public is deceived by “the money illusion,” the erroneous belief that the value of the money unit is constant and that any changes in prices, wages, and interest rates faithfully reflect changes occurring in the real economy. Among other things, they allege that the money illusion causes economic actors to neglect the impact of inflation or deflation when making wage and credit contracts, resulting in a misallocation of resources. Unfortunately, modern economists themselves have fallen victim to a fallacy that is much more insidious than the money illusion. I refer to the spending illusion, the proposition that the spending of money—what is today called “total expenditure” or “aggregate demand”—is a *causal factor* in the determination of nominal and even real economic quantities such as the price level, the inflation rate, nominal and real GDP, and the unemployment rate. There is a double irony in all of this. First, the same economist who coined the term “the money illusion,” Irving Fisher (1928), was the most influential propagator of the spending illusion in his formalization of the quantity theory of money. Second, in practice, the money illusion only causes a problem when there are significant and prolonged changes in overall prices, which have continually risen since

World War II.¹ Inflation itself, however, results from monetary policy carried out under the influence of the spending illusion.

In this essay I argue that modern monetary theory (MMT) is the culmination of the spending illusion and, as such, the unwanted stepchild of the neoclassical quantity theory. In the first section, I briefly describe the spending illusion and explain why treating the volume of spending as a causal factor in determining exchange ratios between money and the array of nonmonetary goods is illusory. I then trace the development of the spending illusion in monetary theory, beginning in the second section with classical monetary theory (CMT), which for the most part eschewed it. I attribute its absence from CMT to the fact that classical economists treated money as a commodity subject to the same laws of value as all other commodities. For the classicals, the exchange value or purchasing power of money no more depends on its “spending” than does the exchange value of other commodities. The third section discusses John Stuart Mill’s deviation from CMT with the first relatively complete statement of the quantity theory. Mill’s emphasis on the aggregate flows of money and goods as short-run determinants of the exchange value of money cracked open the door to the entry of the spending illusion into neoclassical monetary theory (NMT).

The fourth section describes the incorporation of the spending illusion into NMT by leading quantity theorists—namely, F. A. Walker, J. S. Nicholson, and Irving Fisher. Writing after the marginalist revolution, these theorists were unwilling or unable to treat money as a commodity whose purchasing power or price, like that of every other commodity, is determined by the law of marginal utility. Severing the theory of money from value and price theory, they characterized money as a mass of inherently valueless “counters” or “pieces” whose purchasing

¹ Indeed, economists such as F. A. Hayek and Gottfried Haberler have warned that the money illusion serves as a bulwark against inflationary expectations and that its steady erosion by prolonged inflation will eventually precipitate continually accelerating inflation. See Haberler ([1972] 1985, 297, 304n25); Haberler ([1976] 1985, 353); and Hayek ([1959] 1967). Ludwig von Mises ([1949] 1998, 421–22) argued that the money illusion was inevitable under all monetary regimes and, despite being embedded in conventional accounting methods, did not impair “the aims of monetary calculation” under metallic, especially gold, money during the two centuries leading up to World War II.

power derives exclusively and mechanically from their exchange against or spending on the mass of commodities offered for sale during the same time period. In the fifth section, I argue that MMT is a theory of money that involves the spending illusion writ large and, as such, is an offshoot of the quantity theory. The essay concludes with a doctrinal note.

THE SPENDING ILLUSION

The spending illusion is encapsulated in a dictum by Milton Friedman, the founder of monetarism: “The only cure for inflation is to reduce the rate at which total spending is growing” (Friedman [1979] 1983). This statement implies that changes in total spending are the direct and immediate cause of changes in the general level of money prices or, inversely, the purchasing power of money. Thus, as Friedman explains, if people find themselves in possession of “excess money balances,” they will seek to increase spending and “the attempt to spend more will raise expenditures and receipts, expressed in nominal units, which will lead to an increase in prices and perhaps also to an increase in output” (Friedman and Schwartz 1982). Note that for Friedman the driving force in the monetary adjustment process is spending, and subjective valuations have nothing to do with the matter. Friedman’s view of the importance of spending in determining the purchasing power of money is not so different from the view taken by MMT as expressed by one of its leading proponents, Stephanie Kelton (2021, 33, 59): “[I]t’s not the printing of money, *per se*, but the *spending* of money that matters. . . . The economists behind MMT recognize that there are real limits to spending, and attempting to push beyond these limits can manifest in inflation.”

In contrast to the quantity theory and MMT, Austrian monetary theory identifies subjective valuations as the very heart of the process determining the purchasing power of money and its changes. This is clearly expressed by Mises ([1952] 1971, 139) in his pathbreaking discussion of the monetary adjustment process:

For these persons [who receive the new money first], the ratio between the demand for money and the stock of it is altered; they have a relative superfluity of money and a relative shortage of other economic goods. The immediate consequence of both circumstances is that the marginal utility to them of the monetary unit diminishes. This necessarily influences their behaviour in the market. . . . They will now express in the market the demand for the objects they desire more intensively than before; they are able to offer more money for the commodities they wish to acquire. It will be the obvious result of this that the prices of the goods concerned will rise and that the objective exchange-value of money will fall in comparison.

Note that in Mises's description of the adjustment process, total spending is an incidental by-product of the determination of individual money prices. In other words, the quantity theory (and MMT) gets matters exactly backward. It is not a cascade of spending that determines the price level, given relative prices that are independently determined in a separate and compartmentalized barter process. Rather, money prices and quantities of goods exchanged are jointly and simultaneously determined in the overall market process and are the causal determinants of the spending flow.

This bears elaboration. Individuals' utility rankings of money and the various kinds of commodities give rise to schedules of monetary bids and offers in commodity markets. The interaction of these supply and demand schedules determines a system of money prices and, simultaneously, the value of the monetary unit, since the latter is nothing more than the array of exchange ratios obtained by inverting money prices. The mechanical passing of a specific sum of money from one hand to the next in exchange—that is, spending—is completely governed by the money price that has been antecedently established by the exchanging parties. Spending is hence merely an outcome of the pricing process and in no sense a causal factor. In other words, the aggregate flow of money spending is determined by the value of money and not the other way

around. Note carefully that this analysis does not mean that the quantity of money is “endogenous” or that it is irrelevant to the pricing process. To the contrary, the stock of money is one of the immediate determinants of the structure of money prices and the purchasing power of money, in conjunction with the existing stocks of goods and the distribution of ownership and the relative rankings of goods and of money among market participants. The effect of a change in the stock of money on its purchasing power is, therefore, direct and unmediated by a change in spending, because valuing and pricing are the logical and temporal antecedents of spending. Thus, referring to a specific magnitude of total spending without first having specified the value of money is completely vacuous.

This point was powerfully summarized by William H. Hutt (1963, 137; 1975, 65; emphasis in original):

I have . . . come to see that the general rate of expenditure (the movement of money) is a *consequence* of the value of the money unit and not its cause. . . . *Expenditures do not determine prices. Prices determine expenditures.* . . . Spending is incidental. If prices in general rise . . . an increased number of money units must be offered for any quantum of nonmoney. Each price established represents what must be spent if a good is to be sold and purchased. The increased spending is, then, a consequence not a cause. It is the valuing process, not the spending (which follows the valuing) that determines prices.

CLASSICAL MONETARY THEORY

Although Mises revolutionized monetary theory by formulating a complete and coherent theory of its purchasing power based on marginal utility, he was greatly inspired by CMT. Like the classical monetary theorists, he maintained that money is a commodity whose purchasing power or price is governed by the same laws of value that determine the price of every other commodity. Mises ([1932] 2016, 58) expresses this

affinity with the classical doctrine in the following passage, in which he bluntly denies that money even holds a special place among economic goods: “Roscher’s often quoted remark, ‘The wrong definitions of money can be divided into two main groups: Those which think of it as more and those which think of it as less than the most saleable good,’ applies not only to the definition of money. Even a number of those who consider the theory of money a part of catallactics go too far in emphasizing its special position.”

Classical monetary theorists from David Ricardo to John Stuart Mill treat money as a commodity, whose value is determined by the same laws that determine the value of nonmonetary commodities. As James Mill ([1808] 1965, 43) puts it, “the true idea of money is neither more nor less than that of a commodity which is bought and sold like other commodities.”

As in the case of all commodities, the classical law of supply and demand determines the purchasing power of money in the short run. Changes in the supply of the money commodity are therefore a causal factor—along with changes in the supplies of nonmoney commodities—in effecting changes in the purchasing power of money in the short run. It is important to emphasize here that classical economists do not define the exchange value of money in terms of an average of prices or a “price level.” As Jacob Viner (1937, 312) points out, “when [the classical economists] speak of the value of money or the level of prices without explicit qualification, they mean the array of prices, of both commodities and services, in all its particularity and without conscious implication of any kind of statistical average.” In other words, the classical economists recognize that the value of money consists of the “array” of alternative quantities of different goods that exchange for the monetary unit. It was their awareness that the value of money is constituted by individual elements that are heterogeneous and continually varying in relation to one another that led some classical economists to deliberately shun or explicitly criticize the use of a price index, the first of which was developed in England in 1798 (Viner 1937, 312–14).

The short run, however, is only a transitional phase in CMT. In the long run, the purchasing power *and* the quantity of money are both determined by the costs of producing the money commodity. In final monetary equilibrium, then, the purchasing power of the monetary unit—say, a gold ounce—will equal both its cost of production and the alternative quantities of goods whose cost of production also equals a gold ounce, including nonmonetary goods produced with gold input, such as jewelry and plate. The classical theory of the value of money is famously summed up in a dictum by John Stuart Mill (1899, 2:24): “Money is a commodity and its value is determined like that of any other commodity, temporarily by supply and demand, permanently and on the average by the cost of production.”

In a series of famous lectures on money, Nassau Senior ([1830] 1966; [1840] 1966) gave the most comprehensive and coherent exposition of CMT. Senior ([1840] 1966, 1–31) describes the process by which the demand, supply, and cost of production interact to produce long-run monetary equilibrium in the case of commodity money.² It is the same process that operates to adjust the prices of all other commodities to their costs of production. Thus, although the supply of money may influence its purchasing power “during comparatively short intervals,” both the supply and purchasing power of money are, in the long run, endogenous variables, which adjust to changes in the demand for money or its costs of production. In summarizing his analysis of a change in the demand for money, Senior ([1840] 1966, 23, 30) leaves no doubt that the quantity of money has no permanent influence on its purchasing power:

Though the causes which limit the supply of gold [i.e., the cost of production] are supposed to be unalterable, those which give it utility, or, in other words, which create demand for it, might be increased or diminished; and during the interval between the diminution or increase of the demand, and the increase or

² For a technical analysis of the classical monetary process of adjustment using the modern supply-and-demand apparatus, see Mason (1996, 9–25) and Havrilesky (1972).

diminution of supply in the market, the value might rise above, or sink below, the cost of production. . . . Other causes may operate for a time, but their influence wears away as the existing stock of the precious metals within the country accommodates itself to the wants of the inhabitants.

Despite his complete rejection of classical value theory, Mises ([1952] 1971, 115) describes the classical analysis of money's purchasing power as expounded by Senior as "a formally unexceptionable theory of money . . . which deduces the value of money from its cost of production" and as "a complete theory of money as far as it did at least attempt to give a full explanation of the value of commodity money." In a similar vein, the unduly neglected historian of monetary theory Will Mason (1996, 6, 9) points out that "the organic unity" of classical economic theory "is explained by the fact that money was a commodity whose value was accounted for in the same manner as anything else. . . . Monetary theory was an integral part of classical value theory."

JOHN STUART MILL'S DEVIATION

John Stuart Mill, in whose writings CMT came to take on its canonical formulation, considerably weakened the theory and opened the door to the spending illusion.³ In describing the short-run determinants of the purchasing power of money, Mill (1899) confounds the classical theory of supply and demand with the quantity theory. He likens units of money to "a sort of tickets or orders" which a person can "present for payment at any shop . . . and which entitle him to receive a certain value of any commodity that he makes choice of." Conceiving of money as a token representing goods, "a thing only wanted to buy other things with," Mill naturally conceives of the supply of money as a flow of spending,

³ The root of this deviation appears already in his father's, James Mill's, *Elements of Political Economy* (1824, 126–30), a text in which the younger Mill was well schooled. See Mill (1944, 19, 44).

while formulating the demand for money as a flow of goods (2:29). According to Mill,

the supply of money . . . is the quantity of it which people are wanting to lay out; that is all the money they have in their possession [excluding what they are hoarding or retaining for precautionary reasons]. The supply of money, in short, is all the money in circulation at the time. The demand for money consists of all goods offered for sale [which excludes goods withheld for speculative purposes] The demand for money differs from the demand for other things in this, that it is limited by the means of the purchaser. The demand for other things is so much and no more; but there is always a demand for as much money as can be got. (2:26–27)

Thus, the supply of money and the demand for money (or the supply of goods) encounter each other in perpetual flow: “The money and the goods are seeking each other for the purpose of being exchanged” (2:27). Arguing that the demand for money differs from the demand for goods because money “is desired as the means of universal purchase” and “the demand consists of everything that people have to sell,” Mill embraces the proportionality doctrine of the quantity theory: “The whole of the goods being in any case exchanged for the whole of the money which comes into the market to be laid out, they will sell for less or more of it, exactly according as less or more is brought” (2:30–31). This proposition contains two deviations from classical value theory. First, it leaves out of account the nonmonetary demand for gold, essentially denying money’s commodity character. This leads to a second error: By implicitly treating money as a counter or token, whose only function is to be spent and whose value is therefore derived solely from the quantum of goods for which it exchanges, Mill firmly implants the proportionality doctrine into CMT.

The proportionality doctrine, of course, implies the neutrality of money, which Mill (1899, 2:24) clearly and emphatically asserts: “The

relations of commodities to one another remain unaltered by money: the only new relation introduced is the relation to money itself.” For Mill, then, money is *in* but not *of* the real economy because its purchasing power is not subject to the same law that governs the value of commodities. Or as J. Laurence Laughlin (1903, 276), a leading critic of Mill and the early quantity theory, puts it, “Mr. Mill’s conception of the demand for goods . . . quite separate from other goods, but measured by the quantity of money,” is “in the air, so to speak.”

To ensure that the value of the money supply is identical with the value of the total supply of goods (demand for money), Mill is forced to distinguish between “the quantity of money laid out” and “the quantity in circulation.” He thus invokes “the rapidity of circulation” of money (and of goods). According to Mill (1899, 2:31), “as the money passes from hand to hand, the same piece of money is laid out many times, before all things on sale at one time are purchased and finally removed from the market; and each pound or dollar must be counted for as many pounds or dollars, as the number of times it changes hands in order to effect this object.” But, of course, this dodges the question of why the purchasing power of money does not adjust so that “all things on sale at one time” can be purchased by the “quantity of money laid out” at the same time. In Mill’s analysis, the rapidity of circulation, or what he prefers to call the “efficiency of money,” appears as an extraneous element in the theory.

Mill (1899, 2:31–32, 29) then proceeds to integrate the rapidity of circulation into the quantity theory: “The amount of goods and of transactions being the same, the value of money is inversely as its quantity multiplied by what is called the rapidity of circulation. And the quantity of money in circulation is equal to the money value of all goods sold divided by the number which expresses the rapidity of circulation. . . . If the whole money in circulation was doubled, prices would be doubled. If it was only increased one-fourth, prices would rise one-fourth.” Mill’s analysis of the money supply as a flow of spending and money demand as a flow of goods transmogrified the classical doctrine of supply and demand into an early formulation of the quantity theory,

thereby importing the spending illusion into CMT. This uprooting of CMT from classical value theory was attempted earlier by Mill's father, James Mill, who was sharply rebuked for his transgression by Senior ([1840] 1966, 8–9): “Mr. Mill . . . [in his section on exchange value] does not mention rapidity of circulation; or, in other words a frequent change of masters; or alteration of actual quantity, except for short periods, as among the actual elements of value. And if they are not the principles which regulate the value of other things, what reason is there for supposing that they regulate the value of money?”

Senior ([1840] 1966, 23–24) reiterates the classical position that money is a commodity and grounds its utility and demand in classical value theory. In line with the classical doctrine of metallism, he argues that the “primary cause of the utility of gold” is its nonmonetary use as “plate,” while “the secondary cause” is its use as money. Because the exchange value of gold is anchored in its cost of production, which changes only slowly, variations in the demand for gold (as plate or money) are mainly responsible for short-run fluctuations in the value and supply of money. The supply of money only operates as a causal factor in the very short run—that is, after “the interval between the diminution or increase of the demand, and the diminution or increase of the supply in the market [when] the value might rise above, or sink below, the cost of production.” In other words, in the usual case, it is only after an increased demand for gold and the resulting rise in its exchange value relative to its cost of production causes increased production from mining that the money supply will expand and drive the purchasing power of the monetary unit back down to its unchanged cost of production.

THE NEOCLASSICAL QUANTITY THEORY

Having jettisoned the classical theory of value, some (but not all) neo-classical monetary theorists seized on Mill's exposition of the quantity theory and developed it into a long-run explanation of the purchasing power of money, thus severing monetary theory from marginalist value and price theory. Money thus lost its classical character as a commodity

and was treated as a mere counter or ticket—as it is in MMT—whose purchasing power is mechanically and rigidly determined in a hypothetical and abstract spending process, unmoored from concrete exchanges between quantities of specific goods and money balances. As a result, the spending of money replaced the valuing of money as the ultimate cause of variations in its purchasing power. The transition to the neoclassical quantity theory from roughly the 1880s to World War I made the spending illusion an integral part of NMT. This is illustrated in a brief review of the writings of three of the leading quantity theorists during this period.

Joseph Shield Nicholson

We start with the British economist Joseph Shield Nicholson.⁴ To illustrate the quantity theory, Nicholson (1903, 57) assumes a “hypothetical market” wherein: (1) money “consist[s] of counters of a certain size made of the bones of the dodo”; (2) all exchanges are made in money—barter and credit do not exist; and (3) money is “of no use whatever except to effect exchanges . . . will not be withheld for hoarding [and] will be actually in circulation.”

Nicholson (1903) further assumes that “there are ten traders each with one kind of commodity and no money and one trader with all the money (100 pieces) and no commodities” (57). Under these conditions, all the money will be offered for all the goods. Assuming further that the “moneyed man places an equal estimation on all the commodities . . . the general level of prices will be ten.” From this model, Nicholson deduces the quantity theory: “It is perfectly clear that under these suppositions, that if the amount of money had been 1000 pieces the general level would have been 100 pieces per article, and if only ten pieces the price per article would have been one piece only. Under these rigid assumptions, then, it is obvious that the value of money varies exactly and inversely with the quantity put in circulation” (58).

⁴ A prize pupil—although later a critic—of Alfred Marshall, Nicholson toiled in his master’s shadow, although he was quite prolific. See Mai (1975, under “J[oseph] Shield Nicholson”); and History of Economic Thought Website (n.d.).

Nicholson (1903) illustrates the concept of “rapidity of circulation” by altering the assumptions of his hypothetical market. He starts with the trader endowed with the “100 dodo counters” but now assumes that “instead of the merchant with the money wishing for all the counters equally . . . he only wants the whole of number one, whilst number one requires that of number two, and so on up to the ninth merchant who wants the commodity of number ten, who wants the dodos” (63). In this case, the price of each article will be one hundred instead of ten because the same quantity of money will change hands ten times instead of once, as in the first market. Nicholson sums up the “whole argument . . . in a sentence”: “*The effect on prices must be the same when, in effecting transaction, one piece of money is used ten times, as when ten pieces of money is used once*” (64; emphasis in original).

Despite presenting the theory under “an unreal state of things such as was assumed,” Nicholson (1903) insists that he has “in this way isolated a cause which is in the actual world of commerce . . . always present, and of greatest consequence.” This *cause* is “the quantity of money in circulation”—that is, *spending*—and it is a “most important factor in determining the general level of prices in a country” (58). Seeking to banish the last vestiges of value theory from the quantity theory, Nicholson reproaches J. S. Mill for the “error of over-estimating the effects” of the cost of production of gold on the purchasing power of money. To the contrary, asserts Nicholson, “*the cost of production of gold only operates on general prices by increasing or diminishing the annual supply, and thus affecting the quantity in use*” (70; emphasis in original).

Francis Amasa Walker

Francis Amasa Walker was one of the most influential American economists of the last quarter of the nineteenth century⁵ and “the leading American quantity theorist” (Girton and Roper 1977, 4–5). His treatise

⁵ For accounts of Walker’s career and work, see Dorfman (1949, 101–10); Newton (1968); and Mai (1975, under “Francis Amasa Walker”).

on money (Walker [1878] 1968), “was regarded as the most authoritative statement of the QT by an American economist” when it appeared and, alongside W. Stanley Jevons’s *Money and the Mechanism of Exchange*, became one of the standard works on money in the English-speaking world “for at least the next quarter of a century,” according to Girton and Roper (1977, 5n1; see also Newton 1968, 11).

Walker’s exposition of the quantity theory, like Nicholson’s, contains all the elements that invite the spending illusion. Money is not a commodity. It is an exchange token and “the need for money arises solely out of the fact of exchange, and the economic efficiency of money is limited strictly to the occasion for exchange” (Walker 1896, 121). As such, “conceivably . . . money . . . might be an article which held no appreciable cost of production . . . but naturally limited in quantity; or it might be an article owing its use to authority or to convention” (Walker 1893, 64). Not surprisingly, Walker (1896, 128) brusquely dismisses classical value theory from consideration as an explanation of the purchasing power of money: “The value of money like the value of anything else is purely a question of demand and supply. The cost of producing money is only important as affecting supply. Limit the supply and it does not matter whether there be any cost of production or not.”

For Walker (1893, 62–64), “the demand for and the supply of money” determines the “value of money” or “general prices.” The demand for money consists of “the effective occasions for its use in exchange.” In other words, it consists of total transactions involving goods minus transactions effected by barter or credit. Goods bartered or exchanged by means of credit “do not constitute a factor in the demand for money” (Walker 1895, 373). Likewise, any product withheld from the market and “consumed at home is entirely out of all relation to the value of money.” On the other hand, multiple exchanges of the same good against money are included in the demand for money.

The supply of money, according to Walker (1893, 64), refers to “the number of money-pieces . . . and conjointly with this, to the rapidity of their circulation.” The supply of money and the demand for money, therefore, are flows in which the same piece of money and the same unit

of goods, respectively, may appear more than once. For Walker (1895, 373), then, “the demand for money and the supply of money are both quantities of two dimensions”—in each case, a quantity multiplied by its respective rapidity of circulation. The interaction of these two flows in the market determines the purchasing power of money, or as Walker expresses it, “prices are determined by the amount of goods offered for money, and the amount of money offered for goods.” Walker (1896, 131) sums up the quantity theory as follows: “At any given time a decrease of the supply of money will enhance its value—that is, will lower prices; and an increase of that supply will reduce its value—that is, will raise prices.”

Although Walker did not articulate the proportionality doctrine, his conception of money as merely an exchange token and of the money supply as a flow whose aggregate value is determined by and equal to the total flow of goods certainly implies that a change in the quantity of money, *ceteris paribus*, changes general prices not only in the same direction but in the same proportion. Spending is therefore a main causal force in determining the purchasing power of money in Walker’s rendering of the theory.

Irving Fisher

Irving Fisher integrates all the elements of the quantity theory into a mathematical model that he famously dubbed “the equation of exchange.” Although he was not the first to provide an algebraic statement of the theory, his formulation was the most influential.⁶ We briefly touch on Fisher just to show that in the canonical exposition of the neoclassical quantity theory, the purchasing power of money derives from aggregate spending rather than from the subjective value rankings of money and other economic goods by individual buyers and sellers. Fisher ([1913] 1985, 32) recognizes more clearly than his predecessors that this is the central point of the theory: “The quantity theory of money thus rests,

⁶ Fisher ([1913] 1985, 25n2) himself mentions Simon Newcomb, Arthur T. Hadley, and Edwin W. Kemmerer as predecessors in this endeavor.

ultimately, upon the fundamental peculiarity which money alone of all goods possesses,—the fact that it has no power to satisfy human wants except the power *to purchase* things which do have such power.” In other words, “it is the number, and not the weight [of coins], that is essential. The fact needs great emphasis. It is a fact which differentiates money from all other goods and explains the peculiar manner in which its purchasing power is related to other goods.”

From this “fundamental peculiarity” of money it is a short step to deducing the equivalence between a sum of money and the goods it purchases, which serves as the foundation for the equation of exchange. As Fisher ([1913] 1985, 16–17, 18) expresses it,

in each sale and purchase, the goods and money exchanged are ipso facto equivalent; for instance, the money paid for sugar is equivalent to the sugar bought. And in the grand total of all exchanges for a year, the total money paid is equal in value to the total value of the goods bought. The equation thus has a money side and a good side. . . . Because this equation must be fulfilled, the prices must bear a relation to the three other sets of magnitudes,—quantity of money, rapidity of circulation, and quantity of goods exchanged. Consequently, these prices must, as a whole, vary proportionally with the quantity of money and with its velocity of circulation, and inversely with the quantity of the goods exchanged.

Now, it is true that Fisher ([1913] 1985, 151–59) denies that the equation of exchange, per se, generates causal propositions about the economic aggregates associated with the quantity theory. But this is beside the point. The very essence of money and its relation to goods as conceived in the equation of exchange imply that spending is a causal factor in the economic process. Thus, for Fisher ([1913] 1985, 13), money’s existence can only be actualized in spending because its purchasing power is determined not by prior valuations but only in the later instant when

it is physically exchanged against goods—that is, by “the aggregate amount of its transfer against goods.”

MODERN MONETARY THEORY

There are three theoretical pillars of MMT. The first is that money is not a commodity. For proponents of MMT, the primary function of money is its role as a unit of account. As Randall Wray (2015, 44) argues, money “is a unit of account, a measuring unit like a ‘foot,’ ‘inch,’ and ‘yard.’ It does not even exist even as an electronic entry. . . . It is purely abstract and representational.” A “money token” or “currency” is issued by the sovereign or private entities, is separate from but denominated in the money of account, and takes the form of coin, paper notes, and electronic entries. All money tokens, public or private, “are records of debt” (58). Thus, money tokens issued by the sovereign are IOUs because they are, in effect, “tax credits” that “can be used to pay taxes to avoid jail. . . . Currency is a ‘get out of jail free card.’”

This brings us to the relationship between money and the medium of exchange. Although money tokens or IOUs generally function as a medium of exchange, it is not this function which endows them with moneyness. Rather, the causation is the other way around: IOUs circulate as media of exchange because they are denominated in money. Wray (2015, 58–59) sums up the relationship between money of account, money tokens (currency), debt, and the medium of exchange as follows: “Money of account is the measure . . . medium of exchange is the thing being measured. Domestic currency is the government’s IOU and demand deposits are bank IOUs, but both of these are measured in the money of account (Dollar, yen, euro). An IOU is a debt, so government IOUs are debts, just as demand deposits are debts of banks. We denominate these debts in the money of account, and both of these types of debts can be used as media of exchange.”

The second conceptual pillar of MMT is that taxing and spending by government precedes and causes the development of a general medium of exchange and the creation of the money economy and economic

calculation. The MMT story of the origin of money attributes to government spending creative powers never imagined in the fevered dreams of monetary cranks or the most extreme early Keynesians. Wray (2015, 50) outlines the process by which government spending of IOUs denominated in the money of account generates subsidiary private spending of these money tokens and the blossoming of a money economy. “Taxes drive money. A government first creates a money of account . . . and then imposes tax obligations in the national money of account. In all modern nations, this is sufficient to ensure that many (indeed, most) debts, assets, and prices will also be denominated in the national money of account.” Note what is being asserted here: The mere government proclamation of a money of account in conjunction with the imposition of tax obligations denominated in this money suffices to induce people still engaged in barter to adopt this abstract monetary unit for pricing and accounting purposes without yet knowing its purchasing power. It is only after this fantastical transformation of the barter economy has taken place, according to Wray, that the medium of exchange can be introduced: “The government is then able to issue a currency that is also denominated in the same money of account, so long as it accepts that currency in tax payment. . . . If a sovereign has the power to impose and enforce a tax liability, it can ensure a demand for its currency. This is a transaction for which the government can easily ensure its ‘fiat currency’ is used: in payments made to itself” (51). With records of transactions now denominated in the money of account and tax liabilities in place, the subject population is primed to willingly receive the government’s money tokens in payment for sales of goods and services. The stage is now set for the spending of fiat currency into existence and the wholesale monetization of the economy. As Wray explains, “imposing and enforcing a tax liability ensures that at least those subject to taxes will want the domestic currency in an amount at least equal to the tax liability that will be enforced. In the developed nations the population is willing to accept more domestic currency than is needed for tax payments—typically the government does not find sellers unwilling to sell for its currency. The

normal case . . . is that anything for sale domestically is for sale in the domestic currency” (52).

The third pillar of MMT involves the spending illusion. The money of account is a pure numéraire and does not have purchasing power, but, in order to circulate, money tokens or currency denominated in the numéraire must have an exchange value. The key question, then, is, How are the price level and the purchasing power of the currency unit determined? According to Mosler (2023, 4, 6), it is exogenously imposed on the economy by the arbitrary sums of money tokens the state chooses to offer for the resources it seeks to acquire:

With the state the sole supplier of that which it demands for payment of taxes, the economy needs the state’s currency and therefore state spending sets the terms of exchange; the price level is a function of prices paid by the state when it spends. The introduction of the absolute value of the state’s numéraire . . . takes place by the prices the state pays when it spends. . . . The state has set the value of its numéraire exogenously, providing that information of absolute value that market forces then utilize to allocate by price with exchange values of other goods and services determined in the marketplace.⁷

It is total spending, therefore, that transforms the abstract numéraire prices of the preexisting quasi-barter economy into the concrete money prices that involve the exchange of actual sums of money tokens for goods. For MMT, the purchasing power of money is thus determined by a primordial and transformative act of government spending and

⁷ Given the total tax liabilities imposed on its subjects, the prices that the state chooses to offer for resources are not entirely arbitrary but are constrained by the amount of resources it aims to acquire. Higher prices will elicit fewer resources from the private sector because fewer sales will generate the currency required to discharge a given amount of tax obligations. Conversely, lower prices will increase the sales of resources to the state. As Wray (2015, 53) puts it, “Surprisingly, by lowering its prices, government can move more real resources to the public sector with the same tax liability.” On this point, see also Mosler (2023, 3).

will change only if, in succeeding periods, the state raises or lowers the total tax liability or alters its total spending.

There is no need to closely analyze MMT's position on the role of fiscal and monetary policy in stabilizing the economy. We have demonstrated that the spending illusion is central to MMT and that, at its core, MMT is not so different from the neoclassical quantity theory and its modern offshoots. The entire cluster of contemporary aggregate-demand theories—from monetarism to MMT—maintains that the variability of total spending is the main cause of economic instability and inadequate economic growth. These theories identify different market failures as causing the unruly behavior of spending and imply different procedures and mechanisms for managing it. Unfortunately, their advocates all overlook the fact that aggregate spending is an incidental outcome of market processes, and any attempt to manipulate it will only impede the functioning of these processes. The real driver of the economy is the structure of prices that emerges from voluntary exchange. No matter what policy or "rule" for centrally planning money, interest rates, or deficit spending is followed, it will inevitably distort prices and interest rates, divert resources from those uses that best serve consumer preferences, precipitate inflationary booms and asset bubbles, and generate financial crises and economic depressions.

CONCLUSION

In evaluating the quantity theory, contemporary Austrian economists generally temper their criticism with a famous caveat from Hayek ([1935] 2008, 199) "that, from a practical point of view, it would be one of the worst things which would befall us if the general public should ever again cease to believe in the elementary propositions of the quantity theory." Unfortunately, many Austrians fail to heed the two sentences that immediately follow this passage, in which Hayek issues a prescient warning about the pernicious effect of the quantity theory on the future development of monetary theory: "What I complain of is not only that this theory in its various forms has unduly usurped the central place

in monetary theory, but that the point of view from which it springs is a positive hindrance to further progress. Not the least harmful effect of this particular theory is the present isolation of the theory of money from the main body of general economic theory.”

Little did Hayek suspect that a year after he wrote this, Keynes’s *General Theory* (1936) would formalize the uprooting of the theory of money from value and price theory in the new discipline of macroeconomics. By the end of World War II, the spending illusion was in full bloom in economic theory, coming into its own among policymakers in the 1960s with the Keynesian “new economics” of the Kennedy and Johnson administrations. The so-called monetarist counterrevolution only strengthened the hold of the spending paradigm on economists and policymakers. Milton Friedman and Anna Schwartz’s *Monetary History* (1963) offers a profusion of statistical correlations to establish that the money supply (M) was the most important policy lever in stabilizing variations in spending ($M \times V$), which are the direct cause of variations in the price level (P) and, to a lesser extent, real income (Y).⁸ More recent developments and movements—such as rational expectations, DSGE models, and new classical, New Keynesian, and neo-Wicksellian macroeconomics—are just iterations of the spending paradigm, which specify alternative policy instruments and transmission mechanisms for altering total spending. By conceiving spending as the antecedent and cause of money and the monetary economy, MMT has simply taken the spending illusion born of the neoclassical quantity theory to its absurd conclusion.

It is worth closing on a doctrinal note to elucidate an avenue for further research in this area. During the two decades prior to World War I, there raged a fierce controversy over the neoclassical quantity theory, having grown out of the policy debate over bimetallism. While much has been written about the sociopolitical aspects of the debate,

⁸ Despite offering a mountain of statistical correlations extending over ninety-three years, Friedman and Schwartz resorted to three “crucial experiments”—in 1920, 1931, and 1937–38—to identify money as the main causal factor in producing fluctuations in total spending. For an Austrian critique of their method, see Salerno (2023, 269–78).

historians of economic thought have given short shrift to the purely economic criticisms of the quantity theory that the controversy evoked, dismissing the critics as unreconstructed defenders of CMT. However, although a few critics still espoused the cost-of-production theory of value, most were subjective-value theorists who attempted to integrate the explanation of the purchasing power of money with the marginal-utility theory of value and price.⁹ The failure of the marginalist faction, except perhaps for William Amasa Scott, to cleanly extricate themselves from CMT and to formulate a coherent theory of money based solely on marginal utility led to the complete triumph of the quantity theory.¹⁰ Nonetheless, the now forgotten writings of these subjective-value theorists contain a rich vein of critical insights into the quantity theory that still remains to be mined.

Almost all contemporary monetary theories are offshoots of the neoclassical quantity theory in their misplaced emphasis on aggregate spending. Given this situation, it may not be inappropriate to conclude with what is in retrospect a prophetic warning by Scott (1916, 65; 1903, 67–68) that the spending illusion inherent in the quantity theory is an inexhaustible source of policy errors:

Its statement of the relation of the quantity of money to its value is incorrect and misleading. Its explanation of the sources of the value of money being incorrect . . . it has given support to a widespread belief in the efficacy and importance of changes in the volume of the circulating medium [$M \times V = \text{total spending}$] which is erroneous and dangerous.

⁹ The latter group of antiquantity theorists included leading marginalists such as Philip Wicksteed, Thomas Nixon Carver, Herbert J. Davenport, and William Amasa Scott, among others. The eminent Chicago economist Laurence Laughlin led the orthodox classical reaction against the quantity theory.

¹⁰ Scott was an eminent historian of thought with a strong Austrian orientation as well as a leading monetary theorist who “today is largely forgotten.” See McCann (2021); Scott ([1915] 1967); and Scott (1933). Notably, Scott (1910, 54–55) was the first to resolve the vexed “Austrian circle” that had impeded the application of the principle of marginal utility to explain the demand for money and its purchasing power. Working independently, Mises ([1952] 1971, 108–14) published the definitive solution in the form of his famous “regression theorem” a few years later.

It reverses the true relations of cause and effect in the explanation of the connection between the volume of the currency and prices. It has been a most fruitful source of false doctrines regarding monetary matters, and is constantly and successfully employed in defence of harmful legislation and as a means of preventing needed monetary reforms.

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3.

MMT ADVOCACY USING FINANCIAL ACCOUNTING: A CRITIQUE

ROBERT P. MURPHY*

T*he modern monetary theory (MMT) movement*—consisting of academics, members of the financial sector, policy wonks, politicians, and the general public—is arguably today’s chief foil to the Austrian School. Unlike traditional Keynesians, the MMTers present a new challenge through their reliance on accounting tautologies that seemingly overturn the conventional wisdom about government debt.

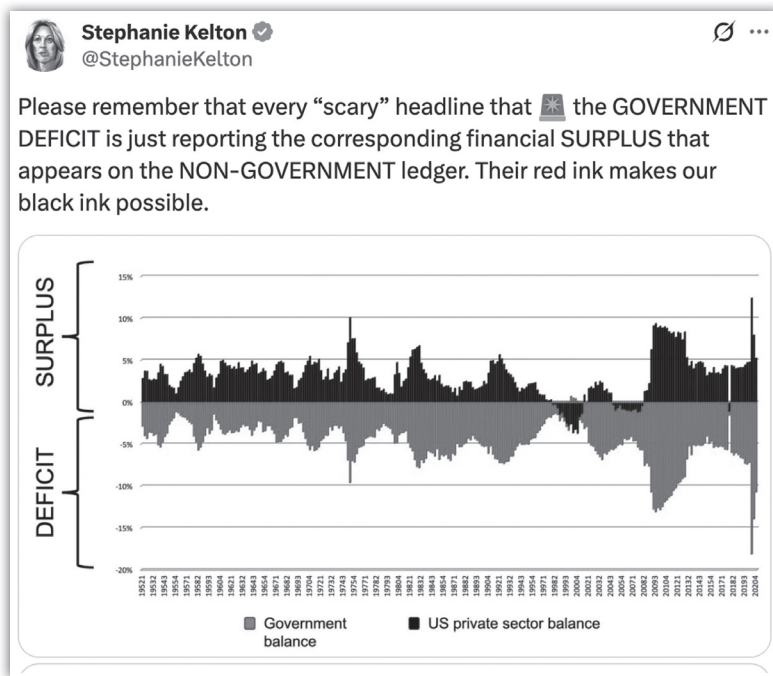
The present essay will first explain and then strongly criticize this “sectoral balance” element of MMT advocacy. We will show that the accounting tautologies are true but that the MMT advocates use these results in misleading ways. Properly understood, the Austrian has nothing to fear from such demonstrations.

Because this essay caters to both lay and academic audiences, the first and second sections are written to be accessible to the businessperson. The third section then compares our discussion with the neoclassical economics literature.

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“THEIR RED INK IS OUR BLACK INK”: GOVERNMENT DEBT AS NET FINANCIAL ASSETS FOR THE PRIVATE SECTOR

One of the most rhetorically effective moves from leading MMT proponent Stephanie Kelton (a Stony Brook economics professor who was a senior advisor to Bernie Sanders’s presidential campaigns) is to argue that the dreaded public debt is simply the accounting flip side of a private sector asset. For our purposes in this chapter, we can illustrate Kelton’s (2023) perspective by reproducing her post on Twitter (now X) below.



For a statement of the national accounting identities underlying such charts, we can turn to Bill Mitchell, a PhD economist, director of the Centre of Full Employment and Equity at Newcastle University, and coauthor with Warren Mosler of the 2024 book *Modern Monetary Theory: Bill and Warren’s Excellent Adventure*. (As the subtitle suggests,

Mitchell is considered an academic cofounder of MMT along with the bond-trading Mosler.)

In a blog post entitled “Deficits Are Here to Stay . . . Get Used to It,” Mitchell (2010) wrote the following:

The national accounts concept underpin the basic income-expenditure model. . . . We can view this model in two ways: (a) from the perspective of the sources of spending; and (b) from the perspective of the uses of the income produced. Bringing these two perspectives . . . together generates the sectoral balances. So from the sources perspective we write:

$$\text{GDP} = C + I + G + (X - M)$$

which says that total national income (GDP) is the sum of total final consumption spending (C), total private investment (I), total government spending (G) and net exports (X – M).

From the uses perspective, national income (GDP) can be used for:

$$\text{GDP} = C + S + T$$

which says that GDP (income) ultimately comes back to households who consume (C), save (S) or pay taxes (T) with it once all the distributions are made.

So if we equate these two perspectives of GDP, we get:

$$C + S + T = C + I + G + (X - M)$$

This can be simplified . . . into what we call the sectoral balances view of the national accounts.

$$(I - S) + (G - T) + (X - M) = 0$$

. . . The sectoral balances derived are:

The private domestic balance ($I - S$) . . .

The Budget Deficit ($G - T$) . . .

The Current Account balance ($X - M$) . . .

. . . A simplification is to add $(I - S) + (X - M)$ and call it the nongovernment sector. Then you get the basic result that the government balance equals exactly \$-for-\$. . . the nongovernment balance. . . .

. . . The only way to get income growth going in [the post-2008 crisis] context and to allow the private sector surpluses to build was to increase the deficits beyond the impact of the automatic stabilisers.

Strictly speaking, the “sectoral balance” approach doesn’t say that growth in the private sector *requires* government budget deficits. As Mitchell concedes (following the quoted excerpt above), any particular country could have a “private domestic balance” surplus coupled with a surplus in the government’s finances, *so long as that country also had sufficiently high net exports*. But, alas, the total trade balance on planet Earth must sum to zero, and so—the standard MMTer concludes—the only generalizable strategy to achieve sustained private sector surpluses is to run perpetual government budget deficits.

Here we see the accounting justification for Kelton’s provocative chart. To see it even more clearly, if we exclude foreign trade we can write $G - T = S - I$. In MMT parlance, this relationship can be summarized as *the government budget deficit equals net private saving*, which underpins Kelton’s view that the stock of government debt equals the net financial assets held by the private sector.¹

How should the Austrian economist respond to these popular MMT claims? Constituting an accounting tautology, the underlying sectoral

¹ When Nathan Tankus debated the present author on ZeroHedge (on Austrian versus MMT economics), he clarified that he preferred to use the term “financial net worth” rather than “net financial assets” to describe what is boosted in the private sector when the Treasury issues debt (Tankus 2025, 1:06:25).

equations aren't *wrong*, but in the hands of the MMTers they can be extremely *misleading*. Specifically, Kelton and Mitchell make it sound as if—putting aside net exports—the private sector can *only* enjoy increased investment and asset accumulation if the government accommodates it by running a budget deficit. Yet this is obviously not true. Alone on his island, Robinson Crusoe can live below his means and accumulate capital goods. Rather than consuming every coconut he harvests on the day he obtains it, Crusoe can save some of his current output to build up a stockpile of consumption goods that will eventually allow him time to invest in the production of, say, a net for fishing or a spear for hunting. The absence of a deficit-spending public sector certainly doesn't hold Crusoe back from saving and investing to augment his standard of living.

What is true for the isolated Crusoe is likewise true for a large bustling economy. Each household has a certain income and can decide whether to consume more or less. If aggregate saving exceeds aggregate dissaving, then the society as a whole lives below its means and can invest in the production of capital goods. Nothing in this process relies on the existence of government debt—and certainly no such requirement would flow from accounting principles.

History backs up our commonsense reasoning. In a book chapter titled “Saving and Growth,” Angus Deaton (1999, 33) reports that “the empirical evidence using cross-country regressions . . . show a significant positive and robust relationship across countries between saving rates and growth.” Furthermore, the European Central Bank (2010, 83–85) outlined in a monthly bulletin several case studies of countries that had engaged in “expansionary austerity”—that is, shrinking the public debt while maintaining economic growth.

If the MMT verbal claims are not borne out by economic theory or history, how do we relate them to the accounting tautologies? The specific trick in the sectoral balance demonstration is to lead the reader to believe that net saving (in symbols, $S - I$) is the same as saving or investment, period. But to be clear, a balanced government budget doesn't restrict growth in private sector saving, nor does it restrict growth in private sector investment. Rather, the sectoral equations merely show

that—setting aside international trade—a balanced government budget means that private saving must *equal* private investment. The levels of the two variables can be high or low; the lack of a government deficit simply rules out private saving *exceeding* private investment.

In the case of Crusoe's one-man barter economy, the accounting works like this: Suppose Crusoe harvests ten coconuts a day; that is his "real income." Further suppose Crusoe only eats eight of the coconuts during each day and sets two aside in a stockpile. We can say that Crusoe has saved two coconuts and invested in two additional coconuts that are added to his stockpile. The lack of a deficit-spending government on the island hasn't constrained Crusoe's ability to save. All it means is that his saving in a particular time period will necessarily correspond to an *equal* amount of investment. Crusoe cannot engage in *net* saving, if we define this to mean saving that exceeds the level of investment.

In a modern economy with an advanced financial sector, we can see the MMT trick in the following way: It is common in financial economics to define terms such that private sector financial assets sum to zero.² This is easy enough to see in the case of corporate bonds. If private households hold \$10 million worth of bonds issued by the Acme Corp., those bonds are assets on the balance sheets of the households. But of course these same bonds are *liabilities* on the balance sheet of Acme, and hence their existence does not constitute *net* wealth for the private sector as a whole.

Even in the case of corporate stock, it is standard to define terms to yield a similar result. If households possess twenty million shares of Acme stock and its current share price is ten dollars, then the households have \$200 million in financial assets. But because the stock makes these households residual claimants on any net income earned by Acme in the future, the standard approach views the outstanding shares as liabilities to Acme as well (though not the same type of liability as a bond). One

² For example, Claudio Borio (formerly of the BIS) and his coauthor write, "By construction, those changes [in financial assets and liabilities] net out to zero: what is issued by one sector must be held by another" (Borio and Disyatat 2011, 7–8).

of the justifications for this approach is that it avoids “double counting” corporate assets: If Acme Corp. is the legal owner of \$210 million worth of various factories, land, equipment, and warehouse inventory (juxtaposed with the \$10 million in outstanding Acme bonds), it would be double counting to say the private sector collectively owned both the Acme real assets *and* the household shares of Acme stock.

In this standard framework, the net financial assets of the private sector always sum to zero. But to repeat, this doesn’t mean that net *assets* of the private sector are always zero. Clearly, nothing is preventing the households from living below their means and financially investing (through the purchase of newly issued shares or bonds) in Acme such that it can engage in real investment by hiring workers and other inputs to produce more factories, equipment, and inventory. Over time, the aggregate wealth of the community can increase, even though at any moment the private sector financial assets always sum to zero.

With this context, we can now see how misleading the typical MMT sectoral balance claims are. To say the existence of government debt allows for an equivalent dollar amount of net private financial assets is due entirely to the convention of putting government in one category and households and firms in another. If instead of taking G to equal government spending, we took it to mean spending by Google, we could derive an analogous sectoral balance approach in which we conclude that the-world-minus-Google can only gain net financial assets when Google in that same period decides to issue more corporate debt.³ Going the other way, if the people running Google decided to engage in austerity and use earnings to retire some of its outstanding bonds, this would necessarily force a reduction in the financial net worth of the-world-minus-Google. But does anybody care about these accounting tautologies?

³ Purists may object that it would actually be Alphabet Inc.—the parent company of Google—that issues its corporate bonds. But the whole point of the thought experiment is that Google starts with a G .

IS THE PRIVATE SECTOR ENRICHED WHEN THE GOVERNMENT OWES IT MONEY?

Our Google analogy runs the risk of understating the non sequitur of MMT's sectoral balance approach. In the Google version of the sectoral balance, there is a legitimate sense in which the more debt Google issues, the wealthier the-world-minus-Google becomes. This is because the only way Google can pay its bondholders is to produce valuable goods and services for the community in a profitable manner or sell off its existing assets. In this sense, the-world-minus-Google is glad that Google exists as an outside entity serving as a fountain of net wealth. To drive home the point, if somehow all \$125 billion of the outstanding Google corporate bonds were destroyed in a fire, then Google (i.e., its owners) would be that much richer, while the-world-minus-Google would be that much poorer.

Yet these principles do *not* carry over when we banish Google and restore government to its standard position in the sectoral balances. If the-world-minus-the US government (which for simplicity we will hereafter call "the private sector") owns \$30 trillion of Treasury debt, in what sense is the private sector \$30 trillion wealthier? After all, the only ways the Treasury can pay this debt are through taxation (either up front or over time by rolling over the debt) or inflation.⁴ Either way, the private sector fundamentally pays for the redemption of the Treasury's debt. And if a fire suddenly destroyed all legal evidence of the Treasury's \$30 trillion in debt held by the public, the private sector as a whole would be unaffected, because the loss of a stream of coupon and principal payments would be matched by less taxation or inflation.

We can distill the essence of the sectoral balance confusion down to simple scenarios. Suppose Paul and Gary are neighbors and Gary borrows \$1,000 from Paul, issuing him a formal IOU. So long as Paul believes Gary has the means and desire to honor his obligations, Paul will treat

⁴ Even if (consumer price) inflation isn't a problem, monetary inflation nonetheless makes prices higher than they would otherwise be and hence still dilutes the real wealth of those holding money and assets denominated in the currency.

the IOU from Gary as an asset. To be sure, if Gary intends to honor it, then he has to treat the IOU as a liability, such that the financial assets of the neighborhood still sum to zero. Even so, if we focus only on Paul, we can say the existence of the IOU gives him a net financial asset.

But suppose that instead of lending \$1,000 to Gary, Paul instead lends it to the local gangster. It is well known that the gangster will—when the time comes—go through the motions of “paying back” the \$1,000 plus interest, but in practice he will stick a gun in Paul’s belly, take the cash from him, and then hand it right back, along with the ripped-up IOU. In this scenario, it’s not simply that the total neighborhood financial assets sum to zero. We can go further and say that even considering Paul in isolation, the IOU isn’t an asset at all.

Let us present one final tweak to the story. Suppose as before that Paul lends \$1,000 to the gangster, who owes Paul \$1,050 in one year. When the maturity date arrives, suppose that the gangster robs some other guy—let’s call him Peter—to pay back Paul. In this new scenario, it does make sense for Paul to view his IOU as a genuine asset. But for Paul and Peter together, the IOU does *not* constitute a net asset—it’s an asset to Paul but a liability to Peter. In this final version of the story, Paul and Peter constitute the private sector, while the gangster is the government. There is no legitimate sense in which government bonds should be construed as net financial assets to the entire private sector since it is the private sector that ultimately provides the means to service or redeem them.

IS GOVERNMENT DEBT A UNIQUELY “SAFE ASSET”?

In the first section, we criticized the popular MMT reliance on the sectoral balance approach, arguing (a) that it is misleading because it obscures the difference between saving and net saving; (b) that it is arbitrary because it could just as well be deployed to Google debt rather than government debt; and (c) that, if anything, government debt is the worst example of an asset that could be construed as a net financial asset to the private sector.

However, the sophisticated MMTer could object that our glib arguments omit a fundamental virtue of government debt—namely, that so long as we have in mind a powerful government that has a robust tax collection system and issues a widely desired currency, the debt issued by *this* entity is a much safer asset than bonds issued by any private sector analog. On this score, this MMT position overlaps with the more mainstream New Keynesians (e.g., Krugman 2010), who vociferously argued in the wake of the 2008 crisis that major governments had a duty to run massive budget deficits because of the private sector’s heightened insecurity and desire to bolster its balance sheets with safe and liquid assets. We can also relate this sophisticated variant of the standard MMT sectoral balance approach to the post-Keynesian followers of Hyman Minsky, who could acknowledge that private commercial banks could fulfill the role of providing net financial assets to the-private-sector-minus-the-commercial-banks but that the growth in such (gross) private financial debt drives the business cycle. Eric Tymoigne (2021, 57), in a paper dedicated to defending MMT against its critics, provides a succinct statement of this perspective:

Put in Minskian terms, a monetarily sovereign government is always in a hedge-finance position regardless of its fiscal balance or the size of its public debt. In addition to stabilizing national income, fiscal deficits also have beneficial portfolio effects for other sectors of the economy. Deficits translate into the public debt and treasuries are credit-risk-free (the nominal debt service can always be paid on time in full), highly liquid financial instruments that are a core staple of the financial system. Treasury securities provide the nonfederal sector with a way to allocate its financial net wealth in a safe way; they are also safe collateral and are a core means of meeting the requirements of financial regulations. In the United States, US Treasuries represented a high proportion [of] the balance sheet of banks after World War II, which helps explain why the war was followed by decades of financial stability.

Specifically, the alleged superior safety of government debt rests on the idea that bondholders can be more confident that their nominal obligations will be honored, since the government, if it's a monetary sovereign, can tax and issue new money. In contrast, even the most blue-chip corporation must return to the market each day and *convince* others to voluntarily hand over their money.

How can the Austrian respond to this enhanced version of the MMT sectoral balance argument? In the first place, the argument suggests that the government might promote financial stability by resurrecting debtors' prisons. Additionally, private lending institutions could insist that borrowers who lack existing collateral but still want to qualify for low rates agree to have their future wages garnished in the event of default.⁵ With these two changes—and the government's allowing individuals to forfeit the option to declare bankruptcy—private sector lending institutions could mimic the government's ability to tax, reassuring the creditors of these institutions that they would be paid back. But would MMTers welcome these policy changes?

Less facetiously, we can respond to the safe asset argument by pointing out all of the existing voluntary, private sector mechanisms that can approximate the government's power to redistribute income in certain contexts. If the economy grows less than expected, such that conventional corporations have trouble honoring their bonds, the holders of US Treasuries can be confident that they will still be paid, because the IRS can tighten the screws on American taxpayers or the Fed can print more dollars. But as we explained in the first section, these mechanisms don't enrich the private sector *as a whole*. Prima facie, whatever private sector uncertainty is resolved by the existence of a stock of "safe" Treasury debt is exactly counterbalanced by increased private sector uncertainty over the future burden of taxation or monetary inflation.

⁵ In the real world, creditors can already use lawsuits to obtain court orders imposing wage garnishment on debtors, though the process is cumbersome and has limits because of various regulations. The argument in the text is that this current ability is evidently not equivalent to the government's power to tax, because otherwise that authority wouldn't explain the superior "safety" of government bonds.

In contrast, the private sector as a whole already has in place voluntary mechanisms to divvy up future income flows as various types of uncertainty (due to “real” economic factors) are resolved. Obvious examples are the various types of life insurance and annuities, but less obvious is the existence of corporate equity versus debt. It will be useful to walk through a fanciful thought experiment illustrating the profound difference between a society that relies on coercive government and one that relies on consensual agreements to navigate an uncertain future.

First consider a society like our own, where a central government has the biggest footprint in financial markets. Now suppose new information comes to light that causes a massive and widespread increase in fear, uncertainty, and doubt concerning the future. In this scenario, the policy recommendation from a typical MMTer (and various flavors of Keynesians) would be for the government to ramp up its deficit spending (assisted by the central bank, if necessary, to avoid rising yields on government debt). This would allow households and firms to rearrange their portfolios in a way that doesn’t reduce aggregate demand. The quick and possibly large response by the government’s central bank would nip any recession in the bud, leaving workers employed, just as they were before the alarming news broke.

In contrast, imagine a society that has at most a limited night-watchman state (funded by a modest head tax), where money and banking services are produced in the private sector just as surely as pizzas and smartphones. In this setting, what happens when fear, uncertainty, and doubt set in? The typical investor will seek to dump stocks, particularly if they are in riskier sectors, and buy bonds, particularly if they are issued by AAA-rated companies. As stock prices fall and bond prices rise, the *expected* return on stocks, particularly the riskier ones, will increase while the yield to maturity on outstanding bonds, particularly the safer ones, will plummet.

In this environment, eventually it will become profitable for corporations to begin issuing more debt to buy back some of their outstanding shares of stock. (Whatever the corporations’ mix of debt and equity was before the news broke, it is now cheaper for them to raise funds via

new debt and cheaper to buy back some of their stock, and so they will naturally seek to adjust their mix in favor of more debt and less equity.) Thus, the prevailing structure of corporate financing will respond to the change in investor preferences just as farmers might shift out of tobacco and into avocados if there were a surge in health fears.

But we can't stop the analysis here. Given its new financial balance—relying on fixed debt obligations more than open-ended equity claims—the typical corporation will now revise its operations, to the extent possible, to provide a more reliable baseline of future performance, even if it means a lower expected return. (For a baseball analogy, the typical firm might focus on getting on base rather than swinging for the fences.) Although such tweaking might not apply in all cases, the broader economy's structure of production would change in light of the news.

Yes, some workers might be laid off temporarily, but this is exactly what we should want to happen. If the community learns new information that genuinely casts doubt on the future, business decision-makers should adjust accordingly by producing a flow of goods and services that is more robust, even if it may in practice be less desirable than a different flow of output more finely tailored to the expected future situation. Intuitively, when new information makes the future more uncertain, the economy might shift away from building steak houses and into building more grocery stores, or it might build fewer mansions but more apartment complexes. Likewise, rather than funding exploratory drilling for new deposits that would have a much lower cost of extraction per barrel, the major oil companies might instead focus on extracting more from their existing fields, even if the marginal costs are rising.

As this thought experiment has demonstrated, the alleged safety of government bonds may in fact be a source of *insecurity* when we consider the economy as a whole. Yes, private sector claims are "riskier" than US Treasury bonds from the perspective of any individual investor, but this is because private sector entities aren't allowed to violate property rights. This fact isn't a weakness but a source of strength for the community as a whole: It leads to a desirable adaptation in the structure of production when risk appetites change.

RELATING THE DISCUSSION TO TWO LANDMARK NEOCLASSICAL PAPERS

In the second section, we criticized the standard (New / post-)Keynesian and MMT claim that the public's desire for "safe assets" provides a justification for the issuance of additional government debt. Specifically, we performed a thought experiment involving an exogenous change in investor risk tolerance under a regime of government bond issuance, on the one hand, versus corporate bond issuance, on the other. The discussion was formulated to facilitate dialogue between the Austrian and MMT camps.

But informed readers will wonder how our analysis relates to two celebrated papers in the neoclassical tradition—namely, Modigliani and Miller's (1958) case for the irrelevance of corporate capital structure and Robert Barro's (1974) modern restatement of Ricardian equivalence. We handle each paper in turn.

Modigliani and Miller (1958): The (Alleged) Irrelevance of Corporate Capital Structure

In responding to the safe assets argument, our thought experiment involved corporations finding it advantageous to alter their capital structure in the stipulated event of a widespread reduction in the public's appetite for risk. Specifically, we argued that if the public suddenly wanted to hold portfolios with more dependable, even if lower, returns, then investors would attempt to sell corporate equities and buy corporate bonds—in particular, *highly rated* corporate bonds. To restore equilibrium, bond yields, especially for blue-chip corporations, would fall, while expected returns on share prices, especially for the riskier companies, would rise.

But we further argued that this relatively immediate adjustment in expected bond-versus-equity returns wouldn't be the end of the story. If

consumers suddenly switched from Coke to Diet Coke, the price of Coke would fall and the price of Diet Coke would rise, but eventually there would be a change in the relative quantities of the two products brought to market. The same thing would happen with corporate finance: With the stipulated drop in corporate bond yields and rise in the expected return on corporate stock, companies needing to raise funds would shift toward debt issuance and away from issuing new shares. And in the extreme case, some corporations might even issue debt solely for the purpose of stock buybacks.

In this context, the famous Modigliani and Miller (1958) paper seems to throw cold water on our thought experiment. M&M proved that under certain conditions, the market value of a firm is independent of its capital structure (i.e., its debt-to-equity ratio). Now, if this conclusion were to hold true in our thought experiment, it would no longer follow that firms would adjust their mix of debt and equity in response to changing investor risk appetites. It is important, therefore, to identify where in their argument M&M use an assumption that does not hold up in our own thought experiment.

A critical assumption in the Modigliani and Miller (1958, 268; emphasis added) argument is that “all bonds (*including any debts issued by households for the purpose of carrying shares*) are assumed to yield a constant income per unit of time, and this income is regarded as certain by all traders regardless of the issuer.” They invoke this assumption when making their arbitrage argument later on. Specifically, they posit two otherwise identical companies, 1 and 2, but suppose that company 1 is financed entirely by common stock, while company 2 has issued some debt (i.e., is levered). M&M demonstrate that if the share price of company 2 were higher than that of company 1, a shareholder in company 2 could first sell his shares, borrow some additional funds by issuing household bonds, and then use the total funds to buy shares of company 1. M&M show that under their assumptions, this investor will necessarily earn a higher return through this approach than if he had retained his original

holdings of company 2. Hence, to eliminate arbitrage opportunities, it must be the case (so M&M conclude) that the share price of company 2 cannot be higher than the share price of company 1.⁶

If one attempts to transfer and apply the M&M result to our thought experiment, it fails, specifically because of the false assumption italicized in the preceding quote. An investor could not create a synthetic portfolio mimicking a levered firm in the way they describe: The constructed portfolio would not perform identically to shares of the levered firm, because the household would not be able to issue debt on the same terms as, say, a blue-chip corporation. Specifically, for a given bond maturity, the household would have to pay a higher interest rate on the borrowed funds than the corporation would on its own debt. And this isn't a mere quibble: The whole point of our thought experiment is to explore a scenario in which the general public wants to rush into "safe assets"—that is, debt issued by powerful governments (in the Keynesian and MMT approach) or large corporations (in a free-market approach). If we follow M&M and assume that corporations and households can issue bonds on the same terms, then we have assumed away the very issue under discussion. Therefore, we conclude that our thought experiment involving changing debt-to-equity ratios in corporate finance survives the demonstration in the famous 1958 paper from Modigliani and Miller.

Barro (1974): Are Government Bonds Net Wealth?

Especially in the wake of James Buchanan's (1976) assessment, most of today's economists—if they are familiar with the paper at all—would probably say that Robert Barro's (1974) celebrated article deals with the question of whether the *way* a government finances an expenditure has a long-run macroeconomic impact. Further, most would probably say that Barro's overall point is that, to a first approximation, it doesn't

⁶ After this demonstration, they use a similar argument—where an initial shareholder in company 1 sells his shares and uses some of the proceeds to buy bonds along with shares of company 2—to argue that the shares of company 1 cannot have a higher market price than the shares of company 2.

matter whether the government finances a program with taxes or deficit spending. Going the other way, if the government gives a tax cut but maintains its original level of spending, then—according to Ricardian equivalence—the tax cut won't have any effect on real macroeconomic outcomes, because citizens will, in the aggregate, save the tax cuts only to lend them right back to the government. Indeed, when Barro (1974) comes up in modern policy debates, it is typically in the context of chiding right-leaning, supply-side partisans that it is shortsighted to agitate for tax cuts without corresponding spending cuts.

In this context, it is ironic that the original motivation of Barro's paper was far more relevant to the left-leaning, demand-side partisans, who argue that government bonds per se add to the net wealth of society. This dispute is obviously relevant to the present paper. Here is the key issue as Barro (1974, 1095; emphasis added) frames it: "The assumption that government bonds are perceived as net wealth by the private sector is crucial in demonstrating real effects of shifts in the stock of public debt. In particular, the standard effects of "expansionary" fiscal policy on aggregate demand hinge on this assumption. *Government bonds will be perceived as net wealth only if their value exceeds the capitalized value of the implied stream of future tax liabilities.*"

Although Barro never cites David Ricardo in this paper, he does review the literature to show that the central question had been considered extensively even before Barro took up his pen. For example, Barro (1974, 1096) quotes James Tobin (1971, 91), who asked in 1952, "How is it possible that society merely by the device of incurring a debt to itself can deceive itself into believing that it is wealthier? Do not the additional taxes which are necessary to carry the interest charges reduce the value of other components of private wealth?"

In the same vein, Barro (1974, 1096) quotes from Martin Bailey (1962, 75–77), who had observed the following: "It is possible that households regard deficit financing as equivalent to taxation. The issue of a bond by the government to finance expenditures involves a liability for future interest payments and possible ultimate repayment of principal, and thus implies future taxes that would not be necessary if the

expenditures were financed by current taxation. . . . If future tax liabilities implicit in deficit financing are accurately foreseen, the level at which total tax receipts are set is immaterial; the behavior of the community will be exactly the same as if the budget were continuously balanced.”

As these quotations demonstrate, the “Ricardian equivalence” doctrine of Barro (1974) not only restated what had been anticipated by the famous classical economist but it merely analyzed with more rigor issues that had been openly discussed in the mainstream literature for more than a decade prior to Barro’s contribution. In fact, Barro (1974) was not so much a novel pronouncement of Ricardian equivalence as it was a methodical critique of the various explanations given by earlier economists as to why Ricardian equivalence does *not* hold.

Barro first turns his attention to finite taxpayer lifespans. To repeat, the question under scrutiny is, Why might the typical household view a government bond as net wealth when the existence of that bond implies future tax liabilities necessary to finance its coupon and principal payments? In this context, one answer economists had offered was that the government’s debt will outlast today’s bondholders, and so today’s market value of a government bond is supported by a stream of tax payments that extends beyond the death of today’s owner of the bond.

Barro replies by constructing a simple “overlapping generations” (OLG) model, in which each agent lives two periods and every time period consists of an old and a young generation. As long as the old generation in a given period has at least some concern for the consumption or utility of the young generation, under reasonable assumptions there will be an interior solution by which the old generation bequeaths a positive amount of assets to the young generation. Against such a baseline, the introduction of government-debt-fueled spending, financed by future taxes, will alter how much of an inheritance the older generation gives the next generation. Again, so long as the new amount is still positive (i.e., an interior solution), the new government debt won’t change any important macroeconomic variables. Furthermore, once this result has been established, we can reverse the logic and show that it applies in the

opposite direction if the typical outcome is for the young to subsidize the old in a given time period.

Although this result is probably what most of today's economists would indicate as the chief takeaway from Barro's classic paper, it is largely a red herring vis-à-vis the MMT claims about government debt. Even if we assume that the old and young generations in the first period of Barro's model do not engage in sufficiently large transfers that could be scaled back to offset government deficit spending, we still haven't shown that such spending confers net wealth on society as a whole—particularly if we include unborn future generations.

The issue here is whether a taxpayer's finite lifespan can make government bonds appear to confer net wealth. Even in a situation where this does occur, it is because today's beneficiary of government deficit spending will enjoy higher consumption during his lifetime while leaving the responsibility of paying for it to future—even unborn—generations of taxpayers.⁷ This hardly demonstrates that government deficit spending can make society richer, and it would be particularly ironic for MMTers—who often chastise Austrians for their alleged indifference to climate change—to justify their fiscal framework by claiming that it enriches society today at the expense of future generations.⁸

⁷ It is important to recognize that even aside from its impact on physical capital accumulation, government debt can enable a genuine transfer of consumption from future generations to the present—notwithstanding claims by Paul Krugman (echoing Abba Lerner) that if “we owe it to ourselves,” then government debt must be a wash for future generations collectively. In a rigorous neoclassical model of a pure endowment economy (i.e., one with no capital accumulation) using an OLG framework, it can be shown that the old generation in a given period can consume at the expense of the then-young generation, which in turn does the same in the next period, with government deficit spending facilitating the transfers. This process can continue for many generations, until the debt stops growing and all subsequent generations are poorer than they would have been in the absence of prior government debt accumulation. The trick is that each old generation sells its stockpile of government debt to the young, rather than bequeathing it. Unborn generations do “owe the debt to themselves,” but it enters their possession only when they are young and must give up present consumption to acquire it. Even though their purchase of government securities is voluntary, their lifetime utility is nonetheless lower than it would have been had earlier generations refrained from deficit spending. This subtle but crucial mechanism is intuitively explained in Murphy (2017).

⁸ Paul Samuelson (1967) infamously argues that the “beauty of social insurance is that it is *actuarially* unsound” such that “a growing nation is the greatest Ponzi game ever contrived.” His result relies on a particular set of demographic and economic assumptions, and, as we showed in the main text, Barro's analysis puts even more restrictions on the outcomes—namely, that the older generations don't want to bequeath anything to the younger ones. Although logically

Besides the finite lifespans of today's taxpayers, another common argument (e.g., Mundell 1971) is that imperfect capital markets can explain why government bonds constitute net wealth. To explore this possibility, Barro constructs a simple model of an economy with low- and high-discount-rate individuals, where the high-discount-rate individuals have bad collateral and can borrow only at relatively high rates. These two groups can either conduct credit transactions via the private loan market or interact with the government via deficit-financed lump-sum transfer payments (or tax rebates). After some algebra, Barro (1974, 1112) concludes that "the government-induced transfer implied by its bond issue can raise net wealth only if the government is more efficient than the private capital market in carrying out this sort of lending and borrowing operation."

Besides the general issue of efficiency in credit intermediation, what is particularly relevant for the present paper is Barro's (1974, 1113–14) handling of a specific rationale that Tobin (1971, 2) gives for why government bonds do constitute net wealth for society: "The calculus of total wealth is less important than the change in the composition of private balance sheets that the government engineers by borrowing from the public—forcing on taxpayers a long-term debt of some uncertainty while providing bond-holders highly liquid and safe assets. Since no one else can perform the same intermediation, the government's debt issues probably do, within limits, augment private wealth. Another way to make the point is to observe that future tax liabilities are likely to be capitalized at a higher discount rate than claims against the government." Especially in light of contemporary "rush to safe assets" claims, Tobin's framing of the issue in terms of the riskiness of the relevant assets is instructive. Barro's response is useful because he shows that the type of tax system affects the validity of the argument.

First, Barro supposes that the future relative burden of individual taxpayers is known with certainty and that lump-sum levies are only

possible, this is a tight corner into which MMT proponents have been painted, and it hardly justifies their sweeping claims that, "Their red ink makes our black ink possible."

affected by general economic conditions. (In other words, how much total tax revenue the government will raise in, say, three years is not known, but how much of that total will be levied in a lump-sum fashion on a given individual is known.) In this case, Barro (1974, 1114) observes that “the variability in the tax liabilities would reflect the variability in price and interest rates—that is, the same factors which lead to variability in real bond values.” In such a setting, an appropriate portfolio of government bonds is a perfect hedge against uncertain future tax levies due to the existence of government debt, but it doesn’t add any *extra* hedging for the household.

Barro then turns to the more relevant scenario in which the relative tax burden of future individuals is unknown because it depends on their relative incomes—in other words, a tax system based on income rather than lump-sum assessments. In this case, when a household adds government bonds to its portfolio, it is smoothing out future (after-tax) income, because the household’s share of future taxes necessary to finance the fixed payments on government bonds is higher when the household is doing well and lower when it is experiencing financial difficulty. In this situation, “the income tax works, in part, like a public program of income insurance” (Barro 1974, 1115). To this possibility, Barro replies that an income tax brings “costs associated with administration and with individual reporting effort, as well as ‘moral hazard’ costs associated with incentives for earning income. A full analysis of the wealth effect of government bonds under different tax systems would have to involve a comparison of these types of public transaction costs against the transaction costs associated with the pooling of income risks under private insurance arrangements.”

To drive home Barro’s important conclusion, government bonds can reduce the riskiness of household balance sheets only if the tax system extracts more from households during periods of higher income; a lump-sum tax system would not produce Tobin’s outcome. Yet an income tax system entails deadweight losses that at least partially offset any gross gains in aggregate wealth arising from the risk-sharing it might facilitate among households.

In summary, as our review shows, Barro's (1974) classic paper on Ricardian equivalence dovetails nicely with our Austrian analysis. In a neoclassical framework, government bonds constitute net wealth to society only under implausible assumptions. Broadly speaking, this occurs only if we assume that (a) the older generation perpetually transfers resources to itself from the younger generation (to prevent Ricardian equivalence from neutralizing the effects of the government's deficit spending); (b) this "Ponzi game" can be maintained indefinitely under favorable demographic and economic conditions; and (c) government bonds, in conjunction with an income tax, function as a limited and efficiently administered insurance program in which the deadweight losses of an income tax don't outweigh the benefits of income insurance. Absent assumptions (a) and (b) and/or (c), neoclassical models cannot support the MMT claim that government debt constitutes net wealth to the private sector.

CONCLUSION

From an Austrian perspective, the policy prescriptions advanced by today's MMT proponents sound similar to those of traditional (New) Keynesians. But MMT analysis relies less on economic models and more on national income and flow-of-funds tautologies. As such, the MMTers may initially seem more formidable since they rely on accounting rather than multipliers.

As I have demonstrated, however, MMT accounting demonstrations rely on misleading maneuvers to reach their desired conclusions. In particular, the popular MMT claim that government debt is a net asset to the private sector—and that, therefore, the public should welcome deficit spending as a means of promoting private growth—is riddled with problems. To the extent that it is true, the same logic would apply to Google's debt or George's debt; yet no one laments that when George saves money, he is thereby stifling the net financial wealth of everyone except George.

Even worse, when we consider that the government can honor its debts only by transferring purchasing power away from the private sector

(via explicit taxation or the implicit tax of inflation), then it is even more absurd for MMTers to argue that the stock of government debt should be construed as a net financial asset to the private sector. (This commonsense Austrian insight is borne out by the mathematically rigorous neoclassical literature as well.)

When the budget hawk policy wonk, or even the man on the street, frets about the government's growing debt, the concern is entirely justified. The glib arguments to the contrary from MMTers such as Stephanie Kelton, though they may be offered in earnest, rest on sleight of hand.

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4.

THE EFFECTS OF MODERN MONETARY THEORY ON THE STRUCTURE OF PRODUCTION



PATRICK NEWMAN

“*The more things change*, the more they stay the same.” This statement by the nineteenth-century French novelist and critic Jean-Baptiste Alphonse Karr (1862, 278) applies to the current state of macroeconomic thinking. The 2008 financial crisis and the 2020 covid pandemic led to a resurgence in debate over countercyclical policies and the causes of business cycles. After prices rose markedly around the world in 2021 and 2022 (most noticeably, the year-over-year increase in the Consumer Price Index for the United States peaked at 9 percent in June 2022, a level not seen since the early 1980s), the discussion shifted to the causes of price increases and their relationship to monetary and fiscal policies.

Perhaps no other heterodox school of thought in the twenty-first century, aside from Austrian economics, has attracted as much renewed interest and criticism as modern monetary theory (MMT). Among other things, MMT argues that the government can never go insolvent, because it can always print money; taxes are used not to raise revenue but to control private spending; and monetary policy should play a secondary role to fiscal policy by monetizing government deficits (Mitchell, Wray,

and Watts 2019, 13–16, 317–26). Though MMT uses new definitions and equations, its core tenets essentially repackage 1940s Keynesian theories that stressed the need for governments to prime the pump and engage in large-scale deficit spending (Hansen 1941, 71–72, 82, 261–88; Lerner 1944, 314–16). But MMTers are different from the New Keynesians dominant in current macroeconomic circles who advocate the use of monetary policy over fiscal policy (Snowdon and Vane 2005, 357–450). This is why I previously wrote that MMT was a “recrudescence of old school Keynesianism [that] provides the ‘open sesame’ for modern day politicians and policy advisors to propose enormous increases in fiscal intervention and government spending” (Newman 2020, 28). MMT, in a sense, brings economics back to the days of the Keynesian revolution. Some things really don’t change.

This chapter analyzes the debt monetization proposals of MMT from an Austrian structure-of-production perspective. It shows that debt monetization raises societal time preferences and reduces the number of higher-order stages in the economy, leading to a higher interest rate, lower economic growth, and increased prices of consumer goods. To demonstrate this, I go back to the basics and investigate the nature of government spending and how it differs from investment. I argue that Murray Rothbard, a staunch critic of Keynesian economics, who would have also fiercely opposed MMT had he lived to see its rise, was correct to classify government expenditures as unproductive consumption that detracts from genuine marketplace economic output. I then defend Rothbard’s position by explaining the very serious concerns some economists had in the 1930s and 1940s about how to measure the government’s contribution to aggregate production statistics. Armed with a proper understanding of why government spending is antithetical to investment, it then becomes possible to explain why MMT’s proposal to expand the money supply to finance government spending shortens the production structure.

WHY GOVERNMENT SPENDING IS UNPRODUCTIVE CONSUMPTION SPENDING

Most economists consider the government an indispensable institution. Businesses produce food, clothing, cars, and other private goods, while governments produce public goods, such as roads, police, and education, and develop policies to ensure macroeconomic stability. Modern monetary theorists, like the Keynesians before them, are exemplars of this camp. Although they state that their theories could be used to finance the small government preferred by Austrian economists, they generally favor significant state intervention (Wray 2015, 244–47). For example, MMTers William Mitchell and Thomas Fazi envision “a drastic expansion of the state’s role—and an equally drastic downsizing of the private sector’s role—in the investment, production and distribution system. . . . [Producing] public goods should not be expected to earn commercial returns . . . but should rather focus first and foremost on the *social return*” (Mitchell and Fazi 2017, 252–53). Overall, “there is no scientific basis for the claim that ‘free markets’ are best . . . and [there is a] role played by governments in trying to align private interests with socially progressive goals” (Mitchell et al. 2019, 9).

Rothbard was not in this camp. He considered governments anti-thetical to the well-being of society. Governments are fundamentally different from businesses: They exercise a monopoly on coercion and can extract payments from the public in the form of taxes. Governments originate in conquest, and though rulers spend a significant amount of time convincing the public to think otherwise, they continue to coerce citizens through taxation, regulations, and other restrictions (Rothbard 2006, 55–86). Rothbard (2009, 1259) classifies all forms of government spending, “whatever their intention or physical result,” as nonproductive consumption. His classification has been criticized by other Austrians on the grounds that government activities, though inefficient, can still constitute investment if they are indirectly useful to government officials

(Barnett and Block 2009; McCaffrey 2011). For this reason, it is worth clarifying Rothbard's argument.

In praxeology, the broader science of human action, goods and services are classified as consumption if they are “*directly serviceable* in the satisfaction of [an] actor's wants” (Rothbard 2009, 8). They are considered investment if they lead to the “formation of capital goods” that satisfy ends only indirectly (48). For example, someone purchases eggs, flour, chocolate, and sugar at the grocery store today so he can make a cake to eat for dessert tonight. From the perspective of the individual, the groceries are an investment—they must be transformed into a cake. Only the finished cake is a consumer good, since eating it directly satiates the individual's sweet tooth. The classifications, however, are different “from the point of view of that subdivision of praxeology that covers traditional economics—that of *catallactics*, the science of monetary exchanges.” Goods and services are considered consumer goods if they are purchased and no longer sold for money, for they are exchanged in “the last stage . . . [in] the monetary nexus” (299). Investment is now defined as when “producers' goods are bought by entrepreneurs, not at all for their own use or satisfaction, but merely to reshape and resell them to others—ultimately the consumers” (1259). In catallactics, the groceries are all consumer goods because the produced cake will not be sold for money, while the goods that are transformed into the groceries in the various stages of the structure of production (e.g., the chickens, unrefined sugar, and cocoa beans) are capital goods.

During the process of investment, capital goods are produced in expectation of a surplus of monetary revenue over the costs incurred. A capitalist-entrepreneur calculates the various monetary returns that he estimates could be earned in different production processes and chooses the most remunerative one, *ceteris paribus*. After restricting his consumption, he uses his savings to purchase factors of production, which are then used to construct capital goods that will be sold to a capitalist-entrepreneur at a later stage in the production structure. The investment process continues until the capital goods are transformed into consumer goods for enjoyment by the consumers. The revenue earned at

each stage generates interest that compensates the capitalist-entrepreneurs for postponing their consumption. If a capitalist-entrepreneur is better at forecasting consumer desires than others, he will earn a profit (defined as a rate of return greater than the average return—known as the interest rate). If he is worse, he will suffer a loss (a return less than the interest rate). Thus, profits indicate “ever more efficient servicing of the desires of the consumers [because] resources [are allocated] to the most value-productive areas and away from the least value-productive,” value being demonstrated by how much consumers are willing to spend on goods and services (Rothbard 2009, 625). An inefficient allocation of scarce factors results in losses.¹

It is impossible for governments to produce goods with the expectation of earning interest or profits, which means it is impossible for them to invest in the *catallactic sense*.² Governments receive funds, “not by users on the basis of their voluntary purchases, but by a coerced levy on the taxpayers” (Rothbard 2009, 1259–60). Unlike in the market, payment from taxpayers is severed from government services so that the government cannot calculate an interest or profit return. All estimates of a social rate of return are meaningless because the “only way of knowing the content of preference scales is to see them revealed in concrete choices”—that is, what consumers choose to buy and not buy on the market (1040). Government officials may try to “operate on a business basis” by attempting to invest and charge prices for whatever they are providing (such as tolls for traveling on a road), and thereby estimate a surplus of revenue over costs, but they cannot really do so (1263). Their ability to compel money from the taxpayer means that “a fatally arbitrary element has been ‘built into’ the very vitals” of any government endeavor, which prevents governments from allocating scarce resources

¹ Nonprofits are run in a similar way. The donors are the consumers who decide to patronize the nonprofits according to how effectively they satisfy their ends (cultural, educational, etc.). Successful nonprofits earn a surplus of donor revenue over costs expended and therefore still earn profits. The main difference is that the government restricts how nonprofits can spend their profits. Unsuccessful nonprofits, of course, suffer losses.

² Although Rothbard did not explicitly state it, this is what I believe he was getting at: Regardless of investment in the praxeological sense, governments cannot invest in the catallactic sense.

according to how value productive they are to consumers (949). The monetary return cannot genuinely be calculated, meaning that factors of production will tend to be inefficiently used.

MMTers may counter with the argument that taxes do not fund government expenditures. Their main purposes are to create demand for the state's money (so the public can pay those taxes) and to combat excessive price increases (by reducing private sector spending). Modern governments can instead finance their expenditures by increasing the money supply (Mitchell and Fazi 2017, 190; Mitchell et al. 2019, 323–25). But, as Rothbard points out, when the government increases the money supply, this amounts to a hidden and “more dangerous form of taxation” (Rothbard 2005, 64). The government compels the public to accept the new money—through legal-tender laws, requirements that taxes be paid in that money, and other interventions—and uses the new money to acquire more goods by bidding up their prices at the public's expense. The public must pay the higher prices without enjoying an increase in income, and when their incomes finally do rise, the increases are not enough to counteract the higher prices. Purchasing power gets redistributed from the public to the government, which is no different from an ordinary tax. Thus, the power to collect revenue through coerced levy, whether by visible or invisible taxation, makes governments radically different from businesses.

The ability to tax means that government spending—whether in the form of constructing a road, building a military base, running a nationalized public utility company, transferring money to a business, and so on—must be classified as consumption from the perspective of catallactics. The “government is redirect[ing] the resources of society to *its* ends, chosen by it and backed by the use of force.” This redirection cannot produce goods and services that are sold for interest or profit. Government officials' ends could take the form of prestige (from building a monument), winning an election (by building a military base), or greater power over society (by administering subsidies and regulations). Officials may spend taxpayer funds on projects that only indirectly satisfy their own ends, such as building a new power plant that businesses

use to generate more commerce, which in turn encourages citizens to reelect the politicians. While this may be investment in the praxeological sense and is “not *regarded* as consumption expenditures by government officials,” it is not investment in the catallactic sense. Therefore, it must be classified as consumption from the vantage point of studying the marketplace because the government purchases goods without selling them for money (Rothbard 2009, 1259).³

This does not imply that any money received which originated from government expenditures must remain classified as consumption. As government money changes hands, it may be saved and invested—for example, the government consumes by hiring construction workers to repair a road and one of the workers invests his income in a new restaurant; or the government subsidizes a steel manufacturer and the firm invests its money in a new steel plant. In these and other cases, interests and profits can be earned; however, because they were established with taxpayer money, these investments do not “represent the voluntary desires of consumers, but [are] rather investments in fields of production *not* desired by the producing consumers” (Rothbard 2009, 1168). The new investments are nothing more than bad investments—known as malinvestments—because they misallocate and squander resources throughout the stages of production.⁴ Furthermore, if the money is spent through a transfer payment, as in the second case, the malinvestment will be amplified. The firm will be less incentivized to cater to consumer desires because it will devote more of its “energies to the political struggles, to the scramble for loot” and try to get additional subsidies (1256). It will

³ Government officials might spend taxpayer funds to earn money for themselves to then spend on consumer goods—for example, by subsidizing a business they partially own and using some of the company’s new funds to buy a mansion. Though the official enriches himself at the taxpayer’s expense, the government expenditure still doesn’t qualify as investment because the government itself cannot earn a profit.

⁴ For example, suppose the US government hires more bureaucrats in the Washington, DC, area. This qualifies as consumption spending. If the bureaucrats save and invest their money in nearby property development, these expenditures are malinvestments. They misallocate scarce concrete, construction workers, and other factors because consumers would have preferred to spend their money elsewhere and stimulated property development in other parts of the country.

not be held accountable by the test of profit and loss, because part of its revenue comes from successfully lobbying government officials.

In those cases where the government sells a good or service to businesses—such as water, a pass on a toll road, or steel from a nationalized plant—it is only after the good is bought that it “*then . . . become[s] a capital good.*” The capitalist-entrepreneur will use it to produce a consumer good and can figure out whether this expenditure helped generate a profit. But because the government cannot earn an interest or profit return from the money it puts into these activities, “this potential does not make the good capital while used by the government” (Rothbard 2009, 941). The government spending per se is still consumption.

If government spending is consumption—whatever its shape or form—this does not mean it is the same as consumption in the marketplace. Given that the “government confiscates resources” through taxation, “it is precisely defying the wishes of the consumers on the market.” Consumers are forced to pay taxes—they do not agree to pay like they do when purchasing goods and services from businesses. Whatever governments produce comes at the expense of what capitalist-entrepreneurs would have produced by calculating what consumers value based on how much they are willing to spend. As government consumption is “necessarily *at the expense* of the private consumption of producers,” it is “antiproducer consumption” spending and has a negative productivity (Rothbard 2009, 941).

The antiproducer nature of government spending means that any “national product statistics” used to measure changes in overall output in the US, such as gross national product (GNP), need to be drastically revised.⁵ Rothbard criticizes GNP for multiple reasons, most importantly because it fails to include all forms of intermediate investment spending and assumes an objectively measurable price level that does not exist. But GNP “may [still] be useful to the economic historian in describing

⁵ GNP measures production by US citizens in the United States and abroad. Gross domestic product (GDP) measures production in the US regardless of who produced it and became the government’s preferred macroeconomic statistic in 1991 (Marcuss and Kane 2007, 32). For the purposes of this chapter I will treat the two as identical and refer to GNP unless otherwise noted.

or analyzing a current historical period” because it can roughly measure economic growth or contraction (Rothbard 2009, 1292). Even so, to serve this purpose, Rothbard argued that GNP needed to be corrected because it measured the government’s value productivity by how much it spent on goods and services rather than how much consumers and investors chose to spend on what it provided. He advocated removing government expenditures (or tax revenue—whichever is higher) from GNP to obtain what he called private product remaining (PPR).⁶ Though this deletion may sound extreme, anyone who thinks “that waste in government exceeds 50 percent of its expenditures would have to agree” that PPR is more accurate than the government’s estimate of 100 percent productivity for its own spending in GNP (940).

Government investment in the structure of production, then, is impossible. Governments do not add to the productive contribution of the marketplace—they consume and waste it. They divert factors of production away from allocation based on profit and loss and into avenues where returns cannot be estimated, resulting in a misallocation of scarce resources.

HOW THE *G* GOT INTO GNP⁷

Rothbard’s classification of government spending as wasteful consumption, and his argument for removing it from GNP figures, may come across as crankish libertarianism—especially to macroeconomists who use such statistics to measure economic performance.⁸ But in the 1930s and 1940s, economists debated fiercely how to value government production in national output data. In particular, Simon Kuznets, who was awarded

⁶ For more on Rothbard’s private product remaining (PPR) statistic and the precise way to calculate it, see Rothbard (2009, 1292–95). For empirical studies that calculate PPR or similar statistics, see Batemarco (1987), Geloso and Reilly (2025), Gundapaneni (2022), Higgs (2006, 83–101), and Rothbard (2008a, 253–56, 339–48).

⁷ The title of this section borrows from O’Brien (1992).

⁸ This is not to say that MMT wholeheartedly advocates national output statistics. Mitchell and Fazi (2017, 31, 236–37) criticize GDP for ignoring environmental pollution, income inequality, and other problems. But they do not criticize GDP for overvaluing government’s productivity—if anything, they say GDP undervalues the government’s role.

the Nobel Prize in 1971 for his work on measuring economic growth, envisioned government spending accounting for a smaller share of total output than what was decided by the Department of Commerce (Marcuss and Kane 2007, 34). Though Rothbard (2009, 939–40, 1292–93) only briefly alluded to the debate, it is directly relevant to his own position and to the MMT proposal to finance large-scale government expenditures through expansionary monetary policy.

In 1934, Kuznets, a scholar at the private National Bureau of Economic Research (NBER), produced macroeconomic statistics as a onetime service for the Department of Commerce to summarize the decline in economic activity during the Great Depression (Carson 1975, 156–59; Marcuss and Kane 2007, 32–34). Kuznets strove to construct a series he called “national income” to measure production geared toward people’s well-being, with production measured by market value (price times quantity). When the revenue received by businesses exceeded their costs, “national income produced” would rise, while revenue falling short of costs would cause it to decline (Bureau of Foreign and Domestic Commerce 1934, 1). Importantly, Kuznets wrote that government revenues and costs are different, and “there may [even] be some doubt as to the propriety of classifying government . . . as a branch of the country’s economic system.” First and foremost was that “the motive of immediate profit, which characterizes private industry, is conspicuously absent from the activity of the government.” Then, there is the related problem that while the “charges for the services rendered by industry to consumers . . . are established on a comparatively free market. . . . the charges by the government to business units and to individuals are not established on the free market, since the government has the right to and does tax, not in accordance with services rendered but in accordance with ability to pay” (125). Thus, like Rothbard, Kuznets recognized that the government is not guided by profit and loss considerations and its revenue is divorced from its provision of goods and services.

Unlike Rothbard, however, Kuznets decided to measure the government’s contribution based on payments to employees and interest on the debt, reasoning that services like the post office “are of real value”

and cannot “be left to the operation of the free market forces” (Bureau of Foreign and Domestic Commerce 1934, 125). Rothbard exposed the error in Kuznets’s position: “Even if it be objected that governmental services are worth *something*, it would have to be noted that we are again suffering from . . . a sole emphasis on what is *seen*, to the neglect of what is *not* seen.” We see whatever the government built; we do not see what “private individuals would have done with the money . . . they were compelled to forgo,” which would have been to purchase consumer goods or invest in the production of goods—such as those provided by the government—on an efficient for-profit basis (Rothbard 2009, 940). Kuznets described the basics of Rothbard’s position but declined to pursue it to its logical conclusion—private product remaining—because of his assertion that only the government could efficiently produce so-called public goods and services.

Almost a decade later, in 1941, when Kuznets published new national income statistics for the NBER covering the period 1919 to 1938, he revised his method of measuring the government’s contribution. He defined the two approaches to measuring the government’s productive output as the cost principle (how much the government spends) and the payment price principle (how much revenue the government earns). “The choice between the two principles,” Kuznets concluded, “is largely between two evils, for neither is adequate” (Kuznets 1941, 32). He now viewed the cost principle used in his earlier study as problematic because he realized the government could spend beyond its revenue and “sustain large deficits” (33)—which the US government had been doing since 1932 (Wallis 2006, 81). Kuznets thought that this extra spending should be excluded because “the piling up of deficits during depressions, which allows the market value of governmental services to fall below the cost value . . . may be interpreted as reflecting a lower current valuation placed by society on governmental services” (Kuznets 1941, 34). But the alternative—the payment price principle—was faulty for the same reasons mentioned in 1934: the lack of profit and loss and the separation of revenue from services rendered. Governments “have the power to fix an obligatory payment (in the form of taxes, fees, assessments, etc.)”

and their production is “hardly characterized by the same spirit of calculation and economic rationality that prevails in private markets” (Kuznets 1941, 32–33). This is very similar to Rothbard’s (2009, 939–40, 953) arguments that “taxes, being compulsory, cannot be used as a productive gauge” and that governments cannot “allocate factors or funds in a rational, welfare-maximizing manner.” But Kuznets still decided to value the government’s role by the payment price principle, largely because the cost principle was plagued by the deficit problem.

When the US entered World War II, the Department of Commerce introduced a new measure of aggregate output, explicitly motivated by the belief that national income statistics overestimated the burden of mobilization on the American economy. The department released GNP figures shortly after President Roosevelt announced a massive increase in military spending in January 1942 (Marcuss and Kane 2007, 37–40). In this new statistic, the government’s value was measured not by the payment price principle but by the cost principle—in particular, how much the government spent on goods and services.

Milton Gilbert, a student of Kuznets’s and a former speechwriter for Roosevelt, was the new chief of the National Income Division of the Department of Commerce and was responsible for GNP.⁹ Gilbert (1942, 186) admitted that while “there are theoretical issues concerning the meaning of national income in wartime as either a production or welfare measure,” the department passed over this debate “in favor of a problem of more immediate and practical interest”—that is, analyzing the impact of military expenditures on the nation’s economy. Gilbert was close friends with his cousin Richard Gilbert, a staunch Keynesian and director of the Defense Economic Section of the Office of Price Administration and Civilian Supply. Richard, who had previously failed to get approval to mobilize for war because national income data said it would be too costly, convinced his cousin of Keynesianism and the

⁹ When Kuznets produced national income statistics for the Department of Commerce in 1934, the National Income Division (of the Bureau of Foreign and Domestic Commerce) was called the Economic Research Division. It was renamed the Bureau of Economic Analysis in 1971 (Carson 1975, 156, 168; Marcuss and Kane 2007, 32, 37).

need for a statistic that valued the government's contribution more highly (Lepenies 2016, 76–77). Richard succeeded, and since GNP showed that economic output was larger than previously thought—due to the increase in the measure of the government's contribution—the burden of war mobilization and additional increases in government spending appeared less severe! Wartime mobilization commenced.¹⁰

Kuznets accepted the change—but only for the immediate term since the war was a life-and-death struggle. “For the short period associated with a major war . . . economic activity has two purposes: provision of goods to consumers and for the armed conflict,” meaning that all government spending on goods and services related to the war should be included (Kuznets 1945, 24). Significantly, like Rothbard (2009, 939), Kuznets recognized that this change meant that GNP, by definition, would increase if the government spent more. In his words, “the implicit assumption of government outlay as an independent variable that can be modified directly by public policy” means that it “is then conceived to be of telling effect on national product as a dependent variable” (Kuznets 1945, 30). An increase in the independent variable must increase the dependent variable. This differed from a business whose spending exceeded the value consumers placed on its product, because such a loss would be recorded as a decrease in GNP. In Richard Kane's (2012, 10) words, “Kuznets expressed cynicism toward the [Department of] Commerce method. . . . He argued that Commerce's method tautologically ensured that fiscal spending would increase measured economic growth regardless of whether it actually benefited individuals' economic welfare.”

After the war ended, the Department of Commerce continued the practice of counting all government purchases of goods and services in GNP statistics. Kuznets (1948, 156) reacted angrily to the decision. If “the final goal of economic activity is provision of goods to consumers,” then the department's classification could be taken to imply that “the

¹⁰ According to Lepenies (2016, 83), “calculation of gross national product not only demonstrated that implementing the armaments plans would have less dramatic consequences than was feared but also made it clear that this spending could be increased. . . . This information was of enormous importance for politicians.”

government is somehow conceived as an ultimate consumer itself, given a corporeal entity the satisfaction of whose needs is raised to the same status of finality as the satisfaction of the needs of the men and women who comprise the community.” Such an “interpretation represents fetishism, with dangerous implications that should be obvious.” For one, “the huge amount of resources employed under government auspices and the tremendous visible flow of tangible commodities . . . may be quite limited” in relation to services to actual consumers. What matters “is that of *product*, of the end-result of activity—not of the volume of *activity* itself” (156–57). Just because the government was producing a large volume of goods did not necessarily mean those goods were valued by society—unless one took society to include the government itself.¹¹

Rothbard clearly sympathized with Kuznets’s criticism that national output figures elevated the government to a final consumer on par with actual consumers, but he argued that while the government is indeed an independent consumer, it is a malignant and unproductive one. When the government spends, it is “serv[ing] the whims of government officials, not the desires of consumers” (Rothbard 2009, 941). The government’s spending redirects resources from private sector consumption to government consumption, resulting in a misallocation because it diverts resources away from satisfying the consumer ends that are revealed through profit and loss.

Thus, Rothbard was on solid ground when he criticized the standard method of measuring government productivity and advocated the use of an alternative statistic—PPR. He echoed Kuznets’s concerns about how the government valued its own contribution to the economy. Both recognized that government sector spending is categorically different from private sector spending and that government productivity cannot

¹¹ For Gilbert’s response, see Gilbert et al. (1948). Ellen O’Brien (1992, 252) suggests that the shift from national income to GNP stemmed from government officials’ self-interest in increasing the value of government output: “It seems as if the government bureaucrats were determined to emphasize the importance of government’s role in the economy by enlarging the share of government expenditure in the national income.” The implication, of course, is that more resources could be directed to the government (such as bigger budgets for the Department of Commerce) if the government was made to look more productive.

be measured by how much it spends because that spending is divorced from revenue earned by satisfying consumer preferences. MMTers, Keynesians, and other advocates of large-scale government spending should take note of these facts.

THE CONSEQUENCES OF DEBT MONETIZATION

To spur economic growth, MMTers advocate financing government spending by increasing the money supply. The central bank can accomplish this by purchasing debt directly from the Treasury (Mitchell and Fazi 2017, 184; Mitchell et al. 2019, 321–26). This has been called “monetizing the debt,” or debt monetization (Rothbard 2008b, 172). With the knowledge that government spending is equivalent to unproductive consumption spending, it becomes possible to describe the effects of debt monetization on the production structure. In particular, it can be shown that debt monetization raises interest rates and reduces the economy’s productive capacity.

The structure of production refers to the temporal step-by-step process by which capital goods are transformed into consumer goods. At each stage, capitalist-entrepreneurs purchase labor, land, and capital goods that they use to produce goods to sell in the future. Farmers, for instance, use tractors to harvest wheat, millers thresh the wheat to create flour, bakers produce bread in ovens, grocery stores package the bread, and consumers purchase the finished bread. If the consumer goods may be called goods of the first order, factors of production used in the previous stages are goods of the second, third, fourth, and higher orders. The goods involved in the earlier stages are known as higher-order goods, while those used in the later stages are the lower-order goods. These classifications are relative and depend on the specifics of each production pipeline. In our example, the wheat, tractors, flour, and milling plants may be considered higher-order goods while the ovens, baked bread, physical grocery stores, and packaged bread are lower-order goods. For this reason, the stages of production that produce capital goods which become consumer goods only in the distant future are known as the higher-order stages, while

those that produce output which will be turned into consumer goods in the nearer future are the lower-order stages (Rothbard 2009, 345–48, 367–74; Skousen 2007, 143–53).

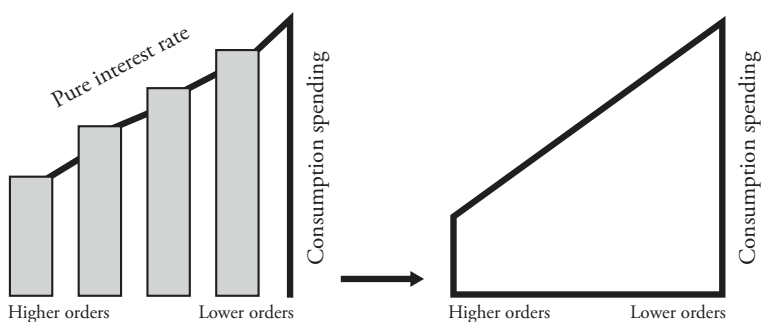
In each stage, capitalist-entrepreneurs earn a rate of return. The average rate of return, or the underlying return abstracting from profits and losses, is known as the pure interest rate (Rothbard 2009, 353). In the real world, the returns are different at each stage, but the shifting of investment funds by capitalist-entrepreneurs between the stages always creates a tendency toward eliminating profits and losses and establishing a uniform rate. This pure rate is equal to the societal rate of time preference—that is, the premium individuals place on using money for present consumption rather than investing it for future consumption. The pure interest rate is directly related to the proportion of total consumer spending to total investment spending—for example, when time preferences decrease and individuals reduce their consumption in favor of more investment, the pure rate of interest decreases. This interest rate is not determined in the loanable funds market: In reality, the loan rate earned in financial markets only reflects the pure rate found in the production structure (Newman 2014; Rothbard 2009, 399–401, 420–26).

The structure of production for the entire economy is depicted in the simplifying figure that follows (figure 1). Here, the temporal stages of production are on the horizontal axis, the shaded bars represent the total amount of money invested at each stage until the finished goods are sold to consumers, and the diagonal lines connecting each stage represent the pure interest rate.¹² The structure of production can be further simplified by the trapezoid on the right, with its area representing total spending.

Importantly, government expenditures are completely external to the production structure and are instead grafted onto the consumption

¹² The diagonal lines do not connect to the top of each bar, because capitalist-entrepreneurs only sell capital goods to the next stage. The capitalist-entrepreneurs in the next stage also need to hire land and labor factors.

FIGURE 1. The structure of production



spending line. As argued in the second section, the government does not buy factors of production and sell goods and services later for a monetary return; rather, it removes factors from the production of goods consumers willingly choose to buy. To reiterate, government spending is nonproductive consumption spending.

Austrians have written extensively about the effects of lower time preferences on the structure of production (Hayek 2008, 223–41; Rothbard 2009, 517–43; Skousen 2007, 215–64; Garrison 2001, 61–67; Huerta de Soto 2009, 313–46). A decrease in time preferences leads to a decrease in the pure interest rate, higher economic growth, lower prices of consumer goods, and a rise in living standards. The decrease in consumption spending reverberates through the lower-order stages in the form of capitalist-entrepreneurs decreasing their demand for factors in those stages and decreasing production in them. Concomitantly, capitalist-entrepreneurs invest their saved funds in the higher orders, increasing the demand for the relevant workers, land, and capital goods and thereby stimulating production in those stages. Investment in the higher orders creates new stages as capitalist-entrepreneurs embark upon more long-term production processes to produce capital goods at lower costs. In the case of bread production, for instance, the reduction in consumer spending manifests itself as a decline in purchases of finished bread, causing a decrease in the demand for and production of baked

bread, ovens, and so on. The increase in investment spending shows up as an increase in the demand for and production of wheat, tractors, flour, and milling plants and the creation of an additional stage—the development of more nutrient-dense soil.

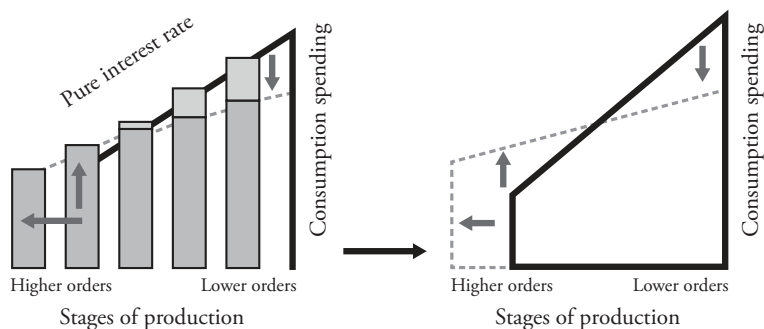
The reconfiguration in spending patterns lowers the rate of return in the lower orders and raises it in the higher orders, and the overall effect is to decrease the pure interest rate and lengthen the structure of production. As time progresses, overall production grows at a faster rate because the greater quantity of higher-order capital goods turns into a higher quantity of lower-order capital goods, which in turn results in a greater amount and quality of consumer goods available for purchase. As the increased supplies of goods move through the pipeline, their prices—especially those of consumer goods—fall. Nutrient-dense soil, increased production of tractors and milling facilities, and the eventual increase of oven capacity all enable the production of more bread at lower cost. Thus, even though total consumption spending has fallen, people are able to consume more because prices have decreased, which leads to higher living standards. Production, as measured by PPR, rises to reflect societal progress.

Figure 2 shows the consequences of a decrease in societal time preferences. The decrease in consumption and increase in investment, with total spending remaining constant, reduce the size of the investment bars in the lower orders and increase them in the higher orders. The result is a lengthening and flattening of the production structure trapezoid and a lower pure rate of interest.

Despite the claims of MMT, financing government spending by increasing the money supply cannot serve as a useful policy tool for improving economic activity, because its effects are drastically different from those described earlier. In fact, they resemble the opposite scenario—an increase in time preferences and a higher proportion of consumption spending to investment spending—which results in a shortened production structure, a higher pure rate of interest, and reduced economic growth.

Suppose government officials want to permanently increase the state's expenditures on public education, environmentally friendly energy

FIGURE 2. The effects of a decrease in time preferences on the structure of production



production, and roads. MMT advocates increased government spending on these and other similar sectors, excluding the military (Mitchell and Fazi 2017, 30–31, 77, 233–38, 248, 252, 264).¹³ The central bank provides the funds by purchasing the government's new bond issues with new money, thereby monetizing the debt. In addition, following MMT principles, the government pursues two additional policies to make sure total spending only goes up by the amount the government spends. First, to prevent government expenditures from directly raising private sector spending, the government raises taxes. Second, to prevent an indirect increase in private sector spending from the public depositing the new money in banks, the central bank sells the government debt to the banking system (Mitchell and Fazi 2017, 183–84, 189–90; Mitchell et al. 2019, 317–26).

The effects of increasing government spending are a higher pure rate of interest and a shrinkage of the production structure (Rothbard 2008a, 20; Salerno 2019; Skousen 2007, 347–51). The government increases its demand for teachers, school buildings, engineers, solar panels, construction workers, and construction equipment, drawing them away from the private sector by offering higher prices. With government

¹³ Most MMTers are on the left of the political spectrum, which means they support spending programs traditionally favored by the left—such as environmentalism, education, public works, and healthcare—rather than spending favored by the right—namely, the military. But there is no reason why MMT policy proposals cannot be used to increase military spending.

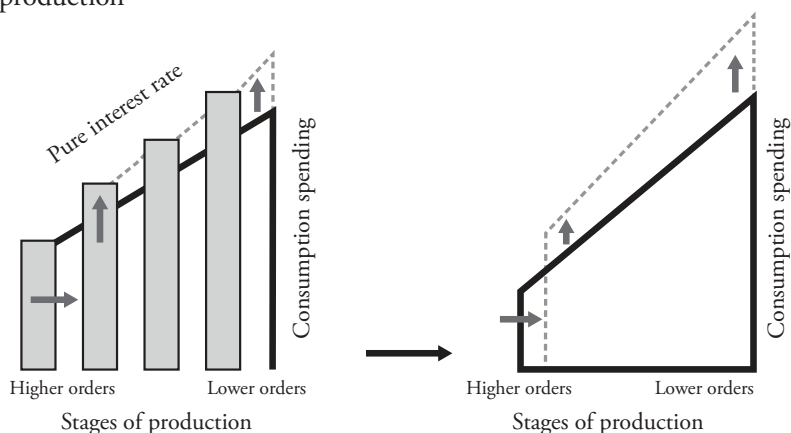
officials removing factors from the production of goods that are sold for money, instead directing them to create goods for their own purposes, the government consumes them and thus increases total consumption spending. Because total spending increases, prices across the economy start to rise, but they rise relatively more in those industries that produce goods for the government. Capitalist-entrepreneurs respond to the changed profitability by altering their spending patterns. They abandon investment in higher-order production aimed at long-term private consumption and shift expenditures to lower orders—for example, by reducing investment in durable steel frames, fracking equipment for oil extraction, and automated digging machines while favoring classroom whiteboards, solar panel frames, and roadside cones and construction signs. The production structure shortens. The reshuffling of investment funds continues until the pure rate of interest is restored at each stage, now at a higher rate because the proportion of consumption to investment has increased.

The result of the shorter and steeper structure is a reduction in the amount of capital goods created in the higher orders, which translates into fewer capital goods in the lower orders and eventually a decrease in consumer goods. The reduction of supplies of consumer goods decreases living standards and drives prices higher. It may be argued that the government can counteract this by increasing the supply of schools, alternative energy sources, and transportation networks, but the government has no way of producing these goods efficiently. This production may please swing voters and advance the goals of certain politicians and bureaucrats, but it comes at the expense of goods that consumers would have chosen through voluntary spending—including private sector education, energy, and infrastructure. GNP may rise, but this is only because the statistic measures the government's contribution by how much it spends. The far more accurate statistic, PPR, would show the economy shrinking due to the decline in private sector production.

Figure 3 depicts the effects of debt monetization on the structure of production. Higher government spending increases the consumption bar, while the malinvestments of capitalist-entrepreneurs raise

the investment bars in lower orders and reduce them in higher orders. Overall, increased spending enlarges the production structure trapezoid. The higher proportion of consumption to investment makes it steeper and shorter, with an increased pure interest rate at each stage.

FIGURE 3. The effects of an increase in government spending on the structure of production



Thus, debt monetization as advocated by MMT will not improve economic prosperity. Increased government expenditures constitute consumption regardless of what they fund, leading to a decrease in economic growth. Even if taxes and contractionary monetary policy limit the effects of debt monetization on total spending, the result still raises the prices of consumer goods by diverting capital goods from marketplace production and wasting them in the government sector.

CONCLUSION

This chapter has shown that modern monetary theory's preferred policy tool of debt monetization will not improve economic performance. To prove this, it was necessary to explain the fundamentals of government spending and how it differs from business investment. Government spending can never be investment because governments do not earn

revenue like businesses. Capitalist-entrepreneurs earn profit according to how well they satisfy consumer desires, while governments earn money by forcing people to pay taxes or to accept their currency. Governments cannot invest, because they cannot allocate scarce factors of production by calculating the monetary rate of return of various production processes. In fact, they can only waste resources in nonproductive channels because they deprive consumers of the ability to spend money on what they value most. Simon Kuznets understood the difficulty of measuring the government's contribution to national income statistics, but Keynesian officials at the Department of Commerce dismissed his concerns. They decided to value the government in gross national product according to how much it spends, regardless of how much society values the output.

Austrians have shown that a lower premium on present consumption over future consumption is a key ingredient of economic growth. When people save more, they spend less on consumption in the present, but their investment in capital goods allows them to enjoy more consumer goods in the future. When governments increase the money supply to fund their spending, the opposite occurs. Consumption rises as the government wastes factors of production and businesses malinvest to produce the goods and services the government demands. The result is inescapable: retrogression.

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5.

MODERN MONETARY THEORY AND INFLATION CONTROL FROM AN AUSTRIAN PERSPECTIVE



KARL-FRIEDRICH ISRAEL

*I*n recent years, modern monetary theory (MMT) has gained considerable attention in academic and policy circles alike. Its central tenet, that a government issuing its own fiat currency faces no inherent financial constraints, is true on a superficial level but stands in stark contrast to classical economics and, notably, the modern Austrian School—which is in many ways an updated version of classical economics. According to MMT, a sovereign state issuing its own currency cannot “run out of money” in the same way a household or firm might, because it creates the very currency in which it spends and taxes. Budget deficits, therefore, are not inherently problematic; rather, they are policy tools to ensure full employment and mobilization of idle resources.

To proponents of MMT, the true constraint on public spending is not financial solvency but inflation. As Stephanie Kelton (2020, 42) puts it—criticizing as too conservative the US fiscal policy that reduced the government deficit to 2.4 percent of GDP in 2015 after it had reached its highest level since World War II in 2009 at 9.8 percent of GDP—“a deficit is only evidence of overspending if it sparks inflation. Since prices weren’t accelerating, the deficit couldn’t possibly be too big.” Indeed, official price inflation was relatively low, which was subsequently

taken to justify expanding the deficit to a new postwar record level of 14.9 percent of GDP in 2020, during the covid pandemic.

If there is slack in the economy—unemployed labor, underutilized capital and other resources—proponents of MMT argue that governments can and should expand fiscal policy without fear of destabilizing consequences and accelerating inflation. Once full productive capacity is approached, however, MMT acknowledges the risk of demand-pull inflation and insists that price stability must then become the guiding concern of both fiscal and monetary policy. Taxation, regulation, and targeted spending reductions are all seen as potential levers for controlling inflationary pressures, rather than money supply management and interest rates, which MMT views as relatively blunt instruments.

In this sense, MMT does not appear to advocate, as some critics argue it does, limitless spending. It does not deny the risks of inflation, nor does it assume that governments can ignore prices altogether. Instead, it posits a reorientation of policy priorities, from arbitrary deficit targets to what its proponents often call real resource constraints. And, on the surface, it seems that many policymakers around the world at least implicitly agree with the MMT view.

Arbitrary deficit targets can be seen, for example, in the European Union (EU), where countries are supposed to keep annual deficits below 3 percent of GDP and total government debt below 60 percent of GDP. Hardly anyone takes these targets seriously. Even Germany, the poster child of fiscal prudence in the EU, has violated the deficit target in nine out of twenty-four years between 2000 and 2023 and is currently indebted at more than 60 percent of GDP. This may indicate that the MMT position has become increasingly prevalent in public policy, even in countries seen as fiscally conservative. But rising price inflation in 2022 gave fiscal and monetary policymakers around the world at least some pause. According to MMT, rising price inflation indicates that the real resource constraint has been hit. Real resources become scarcer relative to spending, and prices must rise to bring economic activities in line with the availability of real resources. When price inflation accelerates, public policy must slow down expansion.

From the vantage point of Austrian monetary theory (AMT), however, the MMT framework rests on a deeply problematic premise—namely, that price inflation can be reliably observed, measured, and controlled in real time. MMT’s acceptance of inflation as the binding constraint is not sufficient unless that constraint can be clearly identified and meaningfully quantified. We will focus on this crucial element of the Austrian critique in this chapter.

For Austrians, the very concept of an aggregate price level is fraught with methodological and epistemological difficulties. Prices of heterogeneous goods cannot be averaged or indexed without significant loss of information. They are exchange ratios and individual expressions of subjective valuations, constantly in flux, and embedded in local and temporal conditions and the contextual knowledge of the exchange partners. Efforts to track an overall “rate of inflation” through composite indices such as the Consumer Price Index (CPI) are thus prone to distortion. Changes in quality, substitution effects, new goods, and heterogeneous and changing consumption patterns among various households render such indices as much an artifact of statistical convention as one of economic reality.

Moreover, AMT contends that inflation does not manifest uniformly across sectors. While consumer prices may remain stable, inflation may erupt in asset markets, capital goods, or specific sectors. These types of inflation are often invisible to headline inflation figures. They are, however, profoundly consequential for the structure of the economy as well as household finances.

In what follows, we will examine the problem of inflation measurement, beginning with a critique of index-based inflation statistics that originated with Gottfried Haberler. We will then argue that conventional consumer price indices are prone to bias and cannot reliably fulfill the function that MMT ascribes to them. Evidence of this can be seen in persistent disproportionate asset price inflation that is systematically excluded in conventional inflation measures. Finally, we will question whether MMT’s reliance on inflation as a policy anchor is compatible with its own stated goals and whether, in the end, the perceived control over inflation might be more illusory than real.

EPISTEMOLOGICAL LIMITS AND STATISTICAL ILLUSIONS

If inflation is to function as the key constraint in the MMT framework—serving as the boundary between responsible fiscal expansion and reckless overspending—then it must be something statisticians can reliably detect and that policymakers can effectively respond to. But from an Austrian perspective, this confidence in the measurability of inflation is fundamentally misplaced.

Almost one hundred years ago, Gottfried Haberler (1927) made pathbreaking contributions to the theory of index numbers in his habilitation thesis, showing that, even under the most heroic assumptions, we cannot determine an exact rate of price inflation. Where MMT sees inflation as a quantifiable macroeconomic aggregate, Haberler and many other proponents of the Austrian School insist that there is no such thing as an objectively true and measurable rate of inflation. Many modern Austrians perceive the granular complexity of economic life and interpret it as a process rooted in dispersed knowledge (see, for example, Kirzner 1973). And they are right to do so. But the problem of measuring inflation goes beyond this element of complexity: Haberler shows that even in a reasonably simple world, we could not measure inflation accurately.

Gottfried Haberler's Contributions to the Theory of Inflation Measurement: There Is No Such Thing as an Objective Rate of Price Inflation

There are two simple standard indices commonly discussed in the literature on inflation measurement: the Paasche and the Laspeyres indices, which typically give different measures of inflation. It is a well-known result of index number theory that these two indices provide the lower and upper bounds of some allegedly “true” rate of price inflation. But few people know that this result originated in the early work of the Austrian economist Gottfried Haberler.¹ Haberler was the first to explain why and under what assumptions the Paasche index provides the lower

¹ For a detailed discussion of Haberler's contributions in this area, see Israel (2024).

bound and the Laspeyres index provides the upper bound of the “true” rate of price inflation, thereby giving some limited theoretical justification for settling on some value between the two. Irving Fisher’s (1922) “ideal formula,” for example, corresponds to the geometric average of the Paasche and Laspeyres indices. Fisher himself had justified his index on purely formal and mathematical grounds, but he gave no economic rationale for it.

In contrast, Haberler presented an economic argument based on subjective value theory that turned out to be inspirational even beyond Austrian economics.² Since few are aware of his contribution in this area, it is no surprise that few know how limited the underlying argument is in its applications to the real world. While it sounds promising that an upper and lower bound of some “true” rate of inflation can be determined in theory, Haberler’s exposition makes it very clear that there are almost no real-world situations in which we can confidently rely on them. The necessary assumptions are far too unrealistic for any price index to serve as a guiding variable in public policy—as proponents of MMT, and many mainstream economists, would have it.

To understand Haberler’s argument, it is helpful to imagine a relatively simple situation in which we have one individual at two different points in time making consumption decisions. We want to determine the change in the price level between these two points in time for that individual. The first step is to formulate the right question. Haberler suggests that a change in the price level has no meaning if it is detached from the subjective valuations of the actor. The price level must be conceptualized in terms of subjective value: One could meaningfully speak of a constant price level if the actor obtains the same overall degree of subjective want satisfaction with the same amount of money at both points in time. Let us say the actor spends \$1,000 during the first period on a certain bundle of goods and services that generates a certain degree of want satisfaction. If the actor can obtain the same degree of want

² Paul Samuelson, who was among the first students of Haberler at Harvard in the 1930s, has built his theory of revealed preference on Haberler’s index number theory without explicitly referencing him. See Israel (2024).

satisfaction with the same amount of money in the second period, the subjective price level for that person has remained constant. If the same amount of money no longer suffices to buy the same degree of want satisfaction, the subjective price level has increased. The same standard of living, so to speak, has become more expensive—hence, there was price inflation. The fundamental question of inflation measurement, according to Haberler, can then be formulated as follows: How much more or less money—that is, nominal income—do we need to obtain the same overall standard of living—that is, the same real income?

Given this, to say that the price level has increased by 10 percent simply means that one would need 10 percent more money to achieve the same standard of living. Now, since values are subjective, there is no way of objectively measuring the standard of living and, by implication, no way of objectively determining changes in the price level. But Haberler argues that we can still derive certain conclusions about the change in the relevant price level for a particular individual between two points in time by observing the individual's chosen consumption bundles and comparing them to the potential bundles that would have been affordable but were not chosen.

The basic premise here is that choices reveal or demonstrate underlying preferences.³ If any conclusions are drawn based on underlying preferences between two points in time, it is relatively easy to see that preferences must be assumed constant. If preferences change, we could not even say, for example, that the same bundle of goods generates the same overall want satisfaction at two different points in time. Haberler discusses further assumptions, which can be summarized as follows:

- (1) Preferences and needs are held constant.
- (2) The degree to which needs are satisfied (prior to consumption) is held constant.

³ The notion of “demonstrated preference,” as opposed to Samuelson’s “revealed preference,” has been applied to welfare economics by Rothbard ([1956] 1997). For a recent discussion and defense of Rothbardian welfare economics, see Fegley and Israel (2024).

- (3) A range of other conditions—climatic, social, cultural, and political—is held constant.
- (4) The entire nominal income is consumed.
- (5) All goods are available at both points in time.
- (6) All goods can be bought freely on markets.

It would go beyond the scope of this chapter to explore all points in detail, but most—if not all—of these assumptions are never fully met in the real world. If they were, we could easily argue that the Laspeyres index provides the upper bound for the true change in the price level.⁴ The Laspeyres index measures the overall price of the initially chosen consumption bundle over time. Let us say our actor in period 1 chooses the bundle of goods X_1 , which costs the overall monetary amount I_1 , given the market prices of period 1. If in period 2, the same bundle of goods costs an overall amount I_2 , given the prices of period 2, the Laspeyres index could be expressed as the following ratio:

$$L = \frac{I_2}{I_1}$$

For example, if the chosen bundle X_1 costs $I_1 = \$1,000$ at the market prices of period 1, but costs $I_2 = \$1,050$ at the market prices of period 2, then the Laspeyres index would have the value $L = 1.05$, suggesting a price level increase of 5 percent. In other words, one would need 5 percent more money, or nominal income, in period 2 to buy the same bundle of goods as in period 1. It is obvious that, under the assumptions enumerated above, the actor would be at least as well off with 5 percent more nominal income in period 2 as in period 1, because the same bundle X_1 could still be bought. But an even better bundle might be bought with 5 percent more nominal income if relative prices change accordingly. It is possible that, at period 2 prices, a bundle costing \$1,050—one that could not be purchased for \$1,000 in period 1—is now available and

⁴ In the following we keep the formal notation to a minimum. The interested reader is again referred to Israel (2024), where the formal argument is spelled out in much more detail.

preferred over X_1 given that the needs and preferences of the consumer remained constant. In that case, a 5 percent increase in nominal income would generate a higher degree of want satisfaction. In other words, the price level has increased by less than 5 percent. The Laspeyres index thus provides only the upper bound of the rate of price inflation. If indeed the consumer has 5 percent more income in period 2 and the same bundle costs 5 percent more money but the consumer chooses another consumption bundle X_2 , then it is demonstrated under the above assumptions that X_2 generates a higher want satisfaction than X_1 —or it is at least expected to do so.

The lower bound is given by the Paasche index, and a very similar—albeit less intuitive—justification can be given for this. We will not reproduce it here, but it is important to understand that the Paasche index and the Laspeyres index coincide in cases where the consumption bundle of the consumer does not change at all over time. In these exceptional cases, the two indices are identical and determine a unique rate of price inflation. If consumers were to consume the very same bundle of goods repeatedly over time without any deviations, it would be easier to measure inflation. The fact that consumption patterns shift over time makes things much more complicated, and the question of which bundle will be chosen—as a benchmark for assessing inflation—is impossible to answer objectively.

The important takeaway from Haberler's analysis is that we cannot calculate a precise inflation rate when consumption patterns shift. Even in the simplest scenario where we focus on just one individual at two different points in time, making all the above assumptions, we can at best provide upper and lower bounds between which the true value lies. These bounds refer to a subjective rate of price inflation that is contingent on the valuations and preferences of the individual actor and other conditions under which choices are made. There is no such thing as an objective price level and an objective rate of price inflation (see also Mises [1949] 1998, chap. 12, sec. 4).

Practical Problems of Inflation Measurement: Income Effects, Substitution Effects, Quality Changes, New Products, and Market Interventionism

Haberler also points out that even for one and the same individual, the evolution of the purchasing power of money may differ with different nominal income streams under otherwise identical conditions. This is because of income effects. Very different bundles of goods may become relevant at different levels of nominal income. Individuals with high income streams consume high-quality products with rates of price inflation that often differ from those of inferior goods consumed by low-income people. So, even if subjective evaluations happen to be the same, differences in material well-being may change consumption patterns and complicate inflation measurements at the societal level. In practice, if one wants to calculate an overall rate of price inflation across different social groups, some more or less arbitrary decisions must be made to settle on an average index. A whole range of further practical problems emerges from the fact that the underlying assumptions made in Haberler's argument are almost never met.

For one thing, if preferences, needs, or side constraints are not held constant—assumptions (1), (2), and (3)—the entire basis of the argument vanishes. The true rate of price inflation could be far above the value suggested by the Laspeyres index or even below the value suggested by the Paasche index. Indeed, the Paasche index could lead to a higher value than that of the Laspeyres index, contradicting the argument's proposition.⁵ But even if we assume constant preferences and side constraints, there is an endless list of further problems—some rather obvious, others relatively subtle. Let us go over some of them.

It is helpful to take another look at Haberler's argument. An intuitive way of understanding the Laspeyres index as the upper bound is to think about substitution effects in consumption behavior. Consumers will always

⁵ Haberler (1927, 92–96) also discusses such cases in his habilitation thesis.

pick the consumption bundle that seems the best to them under the given circumstances, including current market prices. The best combination of goods is determined, however, not only by the overall price level but also by the structure of relative prices—that is, how expensive certain goods are relative to others. The consumer will tend to substitute relatively cheap goods for relatively expensive ones. Between any two points in time, there will be certain goods that become relatively less expensive—their prices increase less than those of other goods. There will be a natural tendency to adjust the consumption bundle so that the consumer ends up buying more of those goods and less of others. Consumers do so only because they expect to benefit from it. They demonstrate their preferences in their purchase decisions through these substitutions. If we were to ignore these changes in consumption patterns, as the basic Laspeyres index does, we would tend to overestimate inflation, because we would simply follow the price of one fixed basket over time, ignoring the opportunities that emerge from changes in relative prices and that are in fact exploited by consumers through substitution effects.

In practice, both in the US and in Europe, this has been taken as a justification to update the weights in the consumption basket more frequently. The CPI in the US and the Harmonised Index of Consumer Prices (HICP) in Europe formally remain Laspeyres-type chain indices, but instead of being kept fixed for an extended period, the consumption basket has been updated annually since the US Boskin Commission of the 1990s argued that the American CPI overestimates inflation because of substitution effects.⁶ The consequence is that inflation estimates today are lower than they used to be under the old calculation methods. This is not entirely unjustified, given Haberler's argument, but some crucial aspects are ignored.

Consumers substitute certain goods for others because of relative price changes. This goes hand in hand with changes in the overall quality—that is, the subjective value—of the consumption bundle from the point of view of the consumer. Haberler's argument implicitly assumes that substitutions in the consumption pattern always improve the

⁶ For more details on this, see Israel and Schnabl (2024).

situation of the consumer and hence the quality of the basket, and in some basic sense this is correct. But this does not mean that the actual consumption bundle chosen is necessarily of higher subjective value than the one chosen before. In the above notation, it does not imply that X_2 , the bundle chosen in period 2, is preferred over X_1 , the bundle chosen in period 1, in any real-world scenario. This could be true only in cases where the previously chosen bundle remains affordable—that is, in cases where nominal income increases at least as much as the Laspeyres index indicates. If this is not the case, the consumer is likely to be forced to buy a bundle of lower quality overall—that is, of lower subjective value from the consumer's perspective. The Laspeyres index shows how much more money is necessary to preserve at least the same standard of living, but if the consumer does not receive at least that amount of money, then the index's bound will not reliably show how much real income has deteriorated. Again, the loss is fundamentally subjective.

Take a consumer who usually buys organic foods from the farmers' market around the corner. If market prices for organic foods increase significantly, but nominal income stays put, the consumer might decide to buy food from a budget-friendly supermarket instead. He may not like it, but it is all he can afford. Given the circumstances, this is his best option, but clearly he is worse off. His standard of living has diminished, which is not necessarily reflected adequately in any price index. If the Laspeyres index that considers organic foods in the basket (the initially chosen bundle) shows a price increase of 20 percent, this does not mean that the real income or subjective want satisfaction of the consumer has decreased by no more than 20 percent. The subjectively felt loss could be higher or lower. Strictly speaking, from the vantage point of subjective value theory, it makes no sense to attach any quantitative measure to the loss. The overall quality of the consumption bundle has decreased, and the consumer is worse off—that is all we can say.

This problem is relevant in all real-world cases where nominal incomes do not keep pace with general price increases. Substitutions in consumption behavior primarily become a defense mechanism against higher costs. They reduce the damage, but the people affected still lose. In many

developed countries, median labor incomes hardly keep up with official price inflation. Working-class households lose as they switch to lower-quality consumption baskets to keep expenditures within their budgets.

This opens a Pandora's box of practical problems. The overall quality of the basket is of importance, given what price indices are supposed to do. However, no statistical office calculating price indices has ever attempted to correct for changes in overall quality—and with good reason: There is no way of objectively doing it. But this has not stopped statistical offices from attempting to resolve another equally fundamental problem of inflation measurement: quality adjustments for individual goods (as opposed to the entire basket). Everybody knows that the quality of goods changes over time. Quality changes can be interpreted as implicit price changes. An improvement in quality is like an implicit reduction in price because the consumer obtains a higher want satisfaction for his money, and a deterioration is like an implicit price increase. Hence, quality changes distort inflation statistics and need to be corrected for. This is done in various ways by statistical offices in charge of calculating price indices—so-called hedonic price adjustments being the most well-known approach.⁷

In hedonic price adjustments, the monetary value of the quality change is estimated and subtracted from the observed market price. If a computer that costs \$1,000 is replaced by a next-generation model that costs \$1,200 but has a processor that is faster by 0.6 GHz and a hard drive with 200 GB more storage, statisticians could estimate the average monetary value of that technical improvement across a whole range of similar products through a regression analysis. If they find that on average the technical improvement is worth \$180, then they would use the adjusted price of \$1,020 (instead of \$1,200) so that the price increase that enters the index corresponds to merely 2 percent instead of 20 percent. This is common practice in official inflation measurement and highly problematic on multiple grounds.

First and foremost, quality is fundamentally unmeasurable. There is no objectively correct way of adjusting for quality changes. If one

⁷ For more details, see Israel and Schnabl (2024).

attempts to do it nonetheless, one is prone to structural biases. Producers of goods and services have clear incentives to openly advertise quality improvements such as increases in computational power, but they typically try to hide quality deterioration from potential buyers. Quality deteriorations tend to emerge in less objective and less visible features of the product. Computers, for example, now fabricated out of more plastic and less metal, may be less durable than they used to be, even though they have faster processors. The faster computational power is typically considered and adjusted for in inflation statistics, but potential quality deteriorations are not. This may create a downward bias in the index since prices are corrected downward if quality improves but not upward if it deteriorates.

Moreover, even if the monetary value of quality changes were quantified accurately, such adjustments may still create a downward bias in the price index because quality improvements change consumption patterns. If there truly is a quality improvement in some product, consumer demand will be redirected toward it and away from its substitutes. The prices of the substitutes will thus tend to fall. Hence, a quality improvement in some good, without any statistical adjustments, exercises a deflationary effect on the prices of its substitutes and is therefore already reflected in the price index to the extent that the substitutes enter the overall basket.

This becomes obvious when one considers the extreme case of an entirely new and innovative product entering the market. When, for example, the first smartphone entered the market, prices for conventional phones dropped dramatically. The new product that represents massive quality improvements attracts consumer demand and pushes the prices of the outperformed products down. This reduces the rate of measured price inflation without any explicit quality adjustments in observed market prices by the statistical offices. If market demand is allowed to express itself freely, both quantitative and qualitative economic growth will result in a downward pressure on prices and price deflation, or at least lower price inflation. Changes in quality and new products are common in a dynamic market economy. They undermine assumption (5) in the above list and are unsolvable problems for inflation measurement. The

methods employed to cope with them are highly opaque to the critical observer⁸ and may introduce more bias than they eliminate.

Another problem that is commonly underappreciated is related to assumption (6). Haberler emphasizes that the premise of his argument—namely, that consumer choices demonstrate underlying preferences—is a valid analytical starting point only if choices are made freely and goods and services are traded freely on markets. If consumers are forced to buy certain products, and are hindered from buying others—or if product prices are regulated, controlled, taxed, or subsidized—then the basis for meaningful index number construction and price inflation measurement, however thin it might be in the first place, is further undermined. For Haberler, the institutional prerequisite for meaningful price inflation measurement is the free market. In an interventionist system, price inflation statistics become even shakier. To take an extreme illustration, what would an officially stable price level indicate if there were ceilings on most market prices? Interventionism distorts economic calculation for both firms and macroeconomic statistics. MMT thus advocates an economic system that undermines the validity of its own criterion of demarcation between allegedly helpful fiscal expansion and reckless overspending. Any price index is arbitrary to some extent, but it becomes even more so in an interventionist economy. It will not provide the objective guideline that MMT proponents claim it does and is likely to have harmful economic consequences.

DISPROPORTIONATE INFLATION OUTSIDE CONSUMER GOODS MARKETS: SHORT-TERM FLUCTUATIONS AND UNDERMINED LONG-TERM GROWTH

Our discussion so far has questioned the validity of all the listed assumptions, except for assumption (4) on the available income of the consumer.

⁸ Israel and Schnabl (2024, 623n16) point out that not even the statistical offices in charge of calculating the price index know the overall impact of explicit quality adjustments in observed price data. The raw data is not available for public use; only the quality-adjusted data can generally be consulted.

Haberler points out that his argument only holds if all the available income is actually spent for consumption purposes. In other words, there is no saving and no wealth formation. The argument considers a pure consumer, so to speak. Haberler makes this assumption because he believes that income and wealth in the real world cannot be properly disentangled for the purposes of index number calculation. To facilitate his analysis, he assumes that wealth formation plays no role in the consumer's overall well-being. This assumption has far-reaching implications and reveals one of the biggest gaps in conventional inflation measurement. The standard inflation measures that MMT and other branches of macroeconomics regard as guidelines for monetary and fiscal policy consider only consumer goods markets and leave out all other areas where inflation can and does materialize, often in disproportionate waves.⁹

MMT's reliance on general consumer price indices fails to account for sector-specific inflation and, above all, asset price inflation—for example, in stock and real estate markets. Austrian theorists have long pointed out that monetary expansion does not affect all parts of the economy equally or simultaneously (see, for example, Mises 1953; Rothbard 2009, chap. 11; and Hayek 2008). The Cantillon effect, articulated by Richard Cantillon (1755) and revived by modern Austrians (Hayek 1985), explains how newly created money enters the economy unevenly, benefiting early recipients (e.g., banks, governments, and asset holders) before prices adjust elsewhere.

Thus, while consumer prices may remain stable according to the official index, the effects of expansionary policy may be felt in financial, real estate, or capital goods markets, fueling bubbles and distorting investment decisions. This kind of inflation does not register in the CPI, but it fundamentally alters the structure of the economy, leading to malinvestments and unsustainable growth—hallmarks of the Austrian business cycle theory (see, for example, Rothbard 2000).

⁹ Take for example Cochrane (2023), who uncritically bases his entire theory on official inflation statistics and argues for reforms in fiscal policy in order to control CPI inflation. Cochrane's theory on the surface provides some counterweight to MMT, but he fundamentally shares the view that official inflation statistics are a reliable benchmark.

If inflation is the only check on sovereign spending in the MMT framework, but inflation is only recognized when it shows up in consumer price indices, then policy can be expansionary well past the point of economic distortion. The MMT framework, by making full employment and resource mobilization the primary goals of fiscal policy, downplays the importance of price signals in the capital structure. Yet it is precisely these signals—most importantly, interest rates, intertemporal prices, and investment returns—that coordinate long-term economic growth in a market economy.

Austrians often emphasize that inflationary distortions can occur without corresponding increases in consumer price indices. When this occurs, the relative prices between consumer goods, where inflation rates often remain relatively low, and assets, where price inflation is often higher, are distorted. The explanation of disproportionate asset price inflation is straightforward. As monetary policy expands the money stock, it reduces the loan rate of interest below the natural rate. This causes expected investment returns from real assets to be discounted at lower interest rates and thereby pushes their prices up directly. Eventually, as consumer price inflation takes hold, expected investment returns increase, which further stimulates asset price inflation. Even if official consumer price inflation stays relatively moderate—around the target of 2 percent per year—savers will be incentivized to redirect their savings into asset markets that promise to protect against the devaluation of their savings. Demand for stocks, real estate, and other real assets increases more than proportionately as a shift of savings from nominal to real assets emerges. The result is disproportionate asset price inflation, which can become self-reinforcing and often leads to speculative bubbles as it attracts even more financial capital.

There are several recent historical examples in which headline inflation remained low while asset prices soared, with profound effects on wealth inequality and overall market stability:

- Dot-com bubble (late 1990s): Easy credit conditions and speculative fervor drove tech stock prices to unsustainable levels. While

CPI inflation remained modest, asset price inflation was rampant, diverting capital toward ventures with no long-term viability.

- Housing bubble (early 2000s): Encouraged by low interest rates and government-sponsored enterprises, capital flowed disproportionately into real estate. Again, CPI remained stable for much of the boom, while housing prices soared—masking the severity of misallocation until the crash in 2008.
- Post-2008 monetary expansion: Following the global financial crisis, central banks pursued quantitative easing while governments ran sustained deficits. Although CPI inflation remained below targets, equity markets and real estate surged, driving wealth inequality and creating moral hazard through expectations of perpetual stimulus.

MMT adherents might argue that these examples reflect monetary, not fiscal, mismanagement. But in practice, the lines blur: Monetary and fiscal expansion have increasingly occurred in tandem, especially as governments have come to rely on central banks to monetize debt. Indeed, the basic premise of MMT is that sovereign governments can and should monetize their deficits. If the inflation constraint is operationalized only through the CPI, then policy can continue expanding even as speculative bubbles grow and the capital structure becomes increasingly fragile. This, in turn, amplifies cyclical fluctuations of booms and busts.

Another important consequence of the inflationary economic system advocated by MMT is that it triggers a structural change in investment behavior. An inflationary economic environment that naturally leads to disproportionate asset price inflation encourages speculative investments at the expense of productive investments.

Productive investments lead to new capital formation and improvements in the overall capital stock of the economy, making the production of new goods and assets possible and more efficient. By contrast, speculative investments target already existing assets and their derivatives. Several important aspects of this shift have been discussed in the

literature under the complex phenomenon of financialization (see, for example, Foroohar 2017; and Blakeley 2019). The basic problem, however, is easy to grasp. In an inflationary economy with relatively high cyclical volatility, productive investments in the capital structure are perceived as riskier than they would otherwise be. As a result, speculative investment becomes relatively more attractive, with investors buying existing assets and relying on rising asset prices to reap future profits. Nothing real is produced in the process: Profits arise purely from the inflationary process that stimulates disproportionate asset price inflation.

This crowding out of productive investments undermines long-term economic growth and productivity gains, eroding the basis for improvements in real wages. Real wage growth is of particular importance for low-income households, which typically lack additional income sources. In that sense, inflationary policies tend to harm the most vulnerable strata of the population over the long run while benefiting households that already own assets through capital gains. As a result, such policies tend to amplify economic inequalities.¹⁰

Economic growth has been surprisingly low in many developed countries. In some, such as Germany, median real wages have been stagnant for two decades, even when measured against the official consumer price inflation rate. When a broader measure of price inflation—including asset prices and government-provided goods and services—is used as a benchmark, real wages have fallen significantly.¹¹ One driver of this development is the policy-induced inflationary process that hampers productive investments.

THE POLITICAL ECONOMY OF INFLATION CONTROL: A USEFUL ILLUSION

From an Austrian perspective, even if inflation could be measured perfectly, it would still be a lagging indicator. Monetary interventions take

¹⁰ This has been shown empirically, for example, for Japan in Israel and Latsos (2020), Israel et al. (2022), and Israel et al. (2023).

¹¹ For a case study of Germany, see Israel and Schnabl (2024).

time to work through the economy. By the time inflation becomes visible in aggregate data, the monetary damage is typically already done. This makes it nearly impossible to use inflation as a real-time constraint on fiscal policy, as MMT envisions it, especially given the political difficulty of cutting spending or raising taxes in response to inflationary signals.

MMT proponents often argue that governments can respond nimbly through taxation or spending adjustments (see, for example, Wray 2015). But in practice, fiscal policy is slow, politicized, and highly resistant to rapid reversal. Unlike interest rate changes, which can be implemented relatively quickly by central banks that officially enjoy independence, tax hikes and spending cuts are subject to legislative processes, political bargaining, and public backlash (see, for example, Friedman 1961). The very instruments that MMT designates for inflation control are among the most politically sensitive and difficult to wield precisely when they would be needed most within the MMT framework.

The assumption that governments can and will restrain themselves once inflationary pressures emerge may be too optimistic. Political agents are subject to the same self-interest as market participants, but without the direct discipline of profit and loss. They are incentivized to deliver short-term visible benefits to their constituents—such as public works, welfare programs, and tax cuts—while deferring or disguising the associated long-term costs. Inflation, as a relatively obscure phenomenon, offers an ideal means of obfuscating these costs.

The MMT framework presupposes a benevolent and farsighted government capable of timely and effective counterinflationary action. However, from both Austrian and public choice perspectives, governments are better understood as groups of individuals who respond to electoral pressures, lobbying interests, and bureaucratic inertia (see Hayek 1944 and Buchanan and Tullock 1962). Cutting spending or raising taxes in the midst of an inflationary episode imposes concentrated and highly visible pain on the electorate, which is politically costly and often career-ending for elected officials. Consequently, even when inflation becomes apparent, the default political response is more likely to involve denial, blame-shifting, or superficial and ineffective measures rather than the

deep fiscal adjustments required under MMT. In this context, the public announcements of European Central Bank officials in 2022 that rising inflation rates would be only “transitory” suggest that fundamental reforms were considered unnecessary.

There is more historical evidence that confirms this pattern. In the 1970s, US policymakers delayed monetary and fiscal tightening for years despite mounting inflation, instead pursuing wage and price controls and other interventions that only worsened economic distortions (see, for example, Gordon et al. 1980). Latin American countries repeatedly postponed fiscal adjustments during episodes of high inflation, opting for currency devaluations and inflationary government finance until hyperinflation forced crisis responses. Even in more recent cases, such as Turkey during the late 2010s and early 2020s, the political goal of maintaining public sector largesse outweighed concerns about accelerating inflation and currency collapse. These historical examples illustrate that political incentives often diverge from the policy responses that MMT prescribes in theory as optimal for controlling inflation.

The political economy of inflation control thus reveals a fundamental flaw in MMT’s reliance on inflation as a constraint: It is not a binding operational limit but a discretionary, politically managed variable, and therefore unreliable. The ability to control inflation is treated as if it were a matter of technocratic adjustment, when in fact it is hostage to deeply entrenched political interests and perverse incentives.

Inflation control under MMT thus becomes a useful illusion. It provides rhetorical cover for expansive fiscal policies by maintaining the pretense that spending will be reined in if inflation appears. This illusion is necessary to maintain public confidence and allay fears of fiscal irresponsibility. It reassures voters and investors that deficits are safe because corrective measures will be taken if needed—even though, in practice, such measures are unlikely to be implemented until a full-blown crisis emerges.

In this light, MMT’s emphasis on inflation as the only meaningful constraint on government spending functions not as an effective policy anchor but as a political expedient. It legitimizes current policy

interventions while deferring the burden of adjustment to an uncertain future. It substitutes vague promises of future restraint for the hard institutional disciplines—such as balanced budgets, market interest rates on public debt, sound money, the classical gold standard, and external currency competition—that have historically constrained fiscal excess.

From an Austrian perspective, real economic stability requires hard constraints that operate automatically and independently of political discretion. By contrast, the MMT framework relies on soft constraints—discretionary, manipulable, and ultimately ineffective under political pressure. What is presented as a safeguard against inflationary excess is better understood as a mechanism for expanding government influence, financed through the hidden and insidious tax of inflation.

In sum, inflation control within the MMT framework is a political myth—essential to the maintenance of expansive fiscal policy but doomed to fail as a credible or effective constraint. Recognizing this reality is crucial for understanding the deeper dangers of MMT-inspired policies and for appreciating the enduring relevance of Austrian insights into money, markets, and political behavior.

CONCLUSION

The Austrian critique of modern monetary theory thus reveals a series of fatal flaws. Inflation—far from being a measurable, controllable constraint on sovereign spending—is an elusive and politically manipulable variable. The reliance on consumer price indices to restrain fiscal and monetary policy is methodologically unsound. The expectation that political actors will voluntarily impose painful adjustments is historically naïve. By treating inflation control as a credible operational limit, MMT masks the inherent instability of its policy prescriptions and grants governments a dangerous license to expand their interventions in the economy. What remains is not a sustainable framework for economic stability and progress, but a politically expedient illusion that ultimately undermines sound money, distorts capital allocation, erodes real incomes, and weakens the foundations of long-term economic growth.

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6.

“COMING UP WITH THE MONEY IS THE EASY PART”: MMT AND THE ECONOMY



PER L. BYLUND*

Modern monetary theory (MMT) is a set of ideas that claims to provide a simple solution to many of modern society’s social problems: more money. Its basic assumption is that because the government creates its own money (by which MMT proponents mean fiat currency, not economic money),¹ it cannot run out of it. This is then taken as evidence that a new approach to government and public finance can solve problems economists have long wrestled with, such as the scarcity of economic goods. To quote Stephanie Kelton (2021), author of the 2020 bestselling MMT policy primer *The Deficit Myth*, “Finding the money to pay for the things we need is never an issue for countries like the US or the UK. If we’re going to fix what’s broken in our economy, we have to fix the way we think about the limits on government spending.”

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¹ In economics, money is defined as the commonly used medium of exchange. This does not mean that money in an economy must be government-controlled or that fiat currencies are necessarily money, but MMT typically assumes that this is the case.

Indeed, for MMT, “coming up with the money is the easy part” (Kelton 2020, 34). On the surface, this is correct: Coming up with the money (currency) is not a relevant limitation on public finance when the government can create its own currency at will. But this does not provide much insight into the economics of public finance. Rather, the statement amounts to a “deepity,” which this term’s inventor, Daniel Dennett (2009), defined as “a proposition that seems to be profound because it is actually logically ill-formed. It has (at least) two readings and balances precariously between them. On one reading it is true but trivial, and on another reading it is false, but would be earth-shattering if true.”

Moving beyond the MMT claim’s trivial truth, it is in fact false, because a currency will lose its purchasing power if it is created too liberally and voluminously—that is, it will lose its “moneyiness.” In other words, while the government’s access to currency may be unlimited, its spending has real economic limits. The economic issue is not merely the ability to create new currency but the effects this has on the overall economy: the allocation of scarce resources, the production of valuable (consumer-satisfying) goods and services, how we deal with inescapable trade-offs, and, more generally, the nature and causes of wealth, both social and personal (see Smith 1776).

At some level, proponents of MMT recognize this fact but tell their own story of how it applies. For example, Kelton (2020, 34) notes that “the real challenge lies in managing your available resources—labor, equipment, technology, natural resources, and so on—so that inflation does not accelerate.”² According to MMT, the government’s “otherwise worthless” (Kelton 2022) currency has value because the government requires citizens to pay taxes using it. This “chartalism,” which I have addressed elsewhere (Bylund 2022b), claims that the limits to government spending are ultimately, as Kelton also suggests, a balancing act between taxation—which determines the currency’s value by creating

² By inflation, she means the general rise in prices—that is, price inflation.

demand for it—and inflation, since prices go up as a result of falling demand for the money in circulation.

Viewing the policy problem—how to formulate effective and good policy—through this lens makes it seem like a simple problem of arithmetic and pulling the appropriate government levers at the right time. But there is more to consider than government accounting, as Kelton’s comment about the “real challenge” suggests. This is also implied in comments such as, “When the government spends more than it taxes away from us, it makes a financial contribution to some other part of the economy” (Kelton 2021). More generally, “their red ink is our black ink.”

This is a peculiar choice of words. Economics does not traditionally refer to or even distinguish between an “us” and a “them.” What matters in economics are the nature, causes, and interactions of economic phenomena and mechanisms—and what these imply for the allocation and use of resources. Whether some actors may, for whatever purposes, be considered “us” or “them” is not relevant to the analysis. What matters is their distinct and traceable impact on the economy, especially its structure and outcomes. In contrast, proponents of MMT, exemplified by Kelton, liberally refer to “us” and “them” as fundamental economic categories without elaborating on their distinguishing characteristics or economic implications. There is a reason for this: MMT employs a so-called sectoral analysis, which focuses on the relationship between sectors and only rarely goes beyond these abstractions.

SECTORAL ANALYSIS INSTEAD OF ECONOMICS

MMT’s primary interest beyond policymaking, as well as its recognition of policy’s limitations, lies in the relationship between two aggregate sectors of the economy: the government (what Kelton calls “them”) and the private sector (“us”). As Wray (2024, 4) puts it, “it is often useful to distinguish among different types of sectors in the economy. The most basic distinction is between the public sector (including all levels of government) and the private sector (including households and firms).”

This distinction may be appropriate for studying the government's effects on the private sector in toto (and perhaps vice versa), but it is insufficient for analyzing the workings of the economy. To trace the effects of government action, one would need to analyze the private sector to identify specific effects and causal processes. After all, the private sector constitutes the lion's share of what economists have traditionally referred to as the economy. The real economy—meaning the production, distribution, and consumption of tangible goods and services, which has long been the main focus of economics—is largely absent from MMT theorizing. Instead, MMT focuses on net financial assets for the totality of the private sector, making it appear dependent on the government: “We insist that in a closed economy, the only source of net financial assets is the government; in an open economy, claims on the rest of the world are another source. However, the domestic private sector—by itself—cannot create net financial assets since every financial asset created and held within that sector is offset by a liability within the sector” (Wray 2024, 4).

The problem, of course, is that any economic activity within the private sector must, due to the nature of exchange, net to zero in money terms (Baumol 1977, 1999). If business A sells goods to business B for \$100,000, the goods have changed hands from A to B and the \$100,000 from B to A—but there are neither more goods nor more money in the economy. This may therefore appear to be an equal exchange with no value outcome, but that would be a mistaken conclusion. The exchange happened for a reason: Both parties agreed to it because they expected to be better off as a result. This means (unless the parties were mistaken or subject to fraud) that both the goods and the money are now in the hands where they are more valuable—that is, where they have greater subjective utility.

This is easy to see if we consider, for example, a hardware store with an inventory of hammers and a carpenter who needs more hammers to improve or expand his business. The carpenter's purchase of hammers—and the hardware store's reciprocal purchase of dollars through the sale—nets out only in terms of what changes hands: Nothing is added

or subtracted by exchanging hammers for money. What matters about the exchange is not the exchange itself but the reason for it—namely, that it brings about an improved allocation of resources in value terms. The hardware store acquired the inventory of hammers to sell them for money, which the store owner values more highly, while the carpenter preferred to forgo the money to acquire hammers. Similarly, the hardware store may have borrowed money from some other party to stock the shelves, which also has no effect on net financial assets.³ Borrowing money does not create more money or goods, yet both borrower and lender are better off as a result, even though no change occurs in net financial assets within the private market economy as a whole.

In contrast, MMT considers only what is directly observable—the surface-level exchange, without regard for its meaning or implications—and therefore sees only the net change in money, which is zero, since the money merely changed hands. MMT considers only abstractions and consequently looks at money flows for the private sector (which includes all economic actors except “them,” the government) as a whole, which again net to zero. For MMT, there are just as many hammers and just as much money in the private sector after the exchange as before.

The error in MMT’s approach is easier to see with a more elaborate example. Suppose a business invests in R&D, builds the infrastructure needed to support large-scale production, signs contracts and purchases inputs from suppliers, produces the goods it intends to offer in the market, and finally sells them to consumers. Every transaction in this chain is necessarily net zero in money terms and the whole production process is, from this perspective, “netted out” as revenue minus expenses plus the remainder (either profit or loss). The same is true if each stage of the process is financed through loans that are later repaid. In money terms, nothing much has happened—money has merely changed hands and there is neither more nor less of it. But this does not mean that every transaction is valueless or has no effect on the economy. On the

³ We assume in this example that the loan was not provided by a bank or other actor with the ability to create new currency at will.

contrary, each transaction takes place because both parties expect to be better off with what they acquire than with what they forgo. Moreover, such production undertakings are needed to generate the goods that consumers acquire to satisfy their wants. This is the core of the economy: economizing resources to produce goods that contribute to consumer well-being.

It is curious and—from an economics perspective—conspicuous that proponents of MMT consider it sufficient to disregard the real economy, which has been the primary concern of economists for three centuries.⁴ After all, the real economy is where the bulk of economic activity—production, resource allocations, trade-offs, and so on—occurs and where we must find answers to questions such as Adam Smith’s inquiry into the “nature and causes” of societal prosperity. The true economic problem lies in the accumulation of productive capital (not currency) under scarcity—and thus, improved productivity and greater overall output, which raises the standard of living. The problem is not net money flows. In fact, as the preceding examples show, what economists have traditionally understood as economic growth cannot be understood in money terms. An economy does not need more money to increase its valued production—it needs more, or more valuable, *production*. Economists have known this since they began to discover how economies work—economic theory proves it, and economic history confirms it. The great enrichment of the West over the past few centuries is not a result of creating more money but of increased value-productive capacity.⁵

While markets certainly depend on money—the function provided by a commonly accepted medium of exchange—and its purchasing power, any specific quantity of money can provide this service. In fact,

⁴ The first treatise dedicated to analyzing the economy was Richard Cantillon’s (2010) *Essai sur la nature du commerce en général*, published posthumously in 1755 but estimated to have been written in 1730.

⁵ This well-known and long-established fact is why economists have turned to studying which institutions best support increased value production, such as private property rights, to explain the causes of growth and therefore also the differences in prosperity between countries (see, for example, North and Thomas 1970; Acemoglu and Robinson 2012).

as a medium of exchange facilitating trade in goods and resources, the actual quantity of money has little to no relevance to its function. As Ludwig von Mises puts it, “the quantity of money available in the whole economy is always sufficient to secure for everybody all that money does and can do” (Mises 1998, 418). This is because prices are denominated in money and therefore the quantity of money in the economy—its scarcity—is baked into the price: If the number of goods increases, their money prices fall; if it decreases, prices rise. But this applies to the use of money *within the real economy*—that is, in exchanges between economic actors and within production processes in the private sector, where prices (exchange ratios in money terms) are determined.

MMT all but disregards this traditional focus of economics, instead focusing almost exclusively on the economy’s—or rather, the private sector’s—“net financial assets” (how much money is available to private actors).

SECTORAL CONFUSIONS

By focusing on two aggregate sectors and, specifically, on the transactions (primarily, money flows) between them, MMT proponents abstract from and all but ignore the economic processes *within* the private sector (“the economy”), drawing conclusions that they present as novel insights. For example, by asserting that money must come from the government and applying simple accounting identities, it appears to follow that without government creation of currency, the market would lack money and thus revert to barter, unable to earn money profits. While this may appear plausible given their assumptions, which are not always stated explicitly, it disregards most of monetary theory (see Menger 1892; Mises 1953) and history (see Radford 1945 and Jonathan Newman’s chapter in this volume), which demonstrate that government is not necessary for money to emerge. If anything, the government has often meddled with, manipulated,⁶ and attempted to control money for its own benefit,

⁶ See, e.g., Jones’s (1953) analysis of inflation in the Roman Empire as a result of constant debasements of the denarius.

leading to price inflation and undermining money's function in the economy (see Rothbard 1990).

Following MMT reasoning, for any money to be accessible to and used in the private sector, the government must first “spend it into existence” (in the preferred MMT vernacular). In other words, government spending is a prerequisite for any private sector finance and private profits. Government deficits—meaning the government spends more money into existence than it collects in taxes (which remove money from the economy)—are the private sector's “financial surplus” or, in Wray's (2024) terms, “net financial assets.” According to Kelton (2020, 107), “the government's fiscal deficit is mirrored by an equal and opposite financial surplus in the nongovernment part of our economy. Uncle Sam's red ink is our black ink! His deficit is our financial surplus. Just follow the money: \$100 goes into our bucket; \$90 goes back out to pay taxes; \$10 is left in our bucket. Every fiscal deficit makes a financial contribution to the nongovernment bucket.” Kelton (2020, 111) thus concludes that “every fiscal deficit is good for someone. That's because government deficits are always matched—penny for penny—by a financial surplus in the nongovernment bucket. At the macro (big picture) level, Uncle Sam's red ink is always our black ink. When he spends more dollars into our bucket than he taxes away, we get to accumulate those dollars as part of our financial wealth.”

The simple logic of the sectoral analysis stands out and appears unassailable. After all, one cannot argue with the simple accounting identities that it presents. Surely, no one would question that adding \$100 to the private sector “bucket” and removing only \$90 leaves \$10 in currency—that is, financial assets—in the private sector. And if this is true, it should also be true that all financial assets in the private sector originate with the government, specifically through its deficit spending.

The limit to creating such “financial wealth” is not the government's ability to create more currency, which is essentially without production cost, but rather how to spend it into existence, or, as Kelton puts it, how to “resource” preferred public projects. In other words, the real constraint is whether the private sector can provide the resources and production

capability needed for public investments without causing inflation. Kelton (2021) clarifies this in her TED Talk: "Can we build affordable housing and fix crumbling infrastructure? Can we expand Medicare to include dental, vision and hearing? Can we tackle our climate crisis? As Congress debates these questions, everyone is back to asking, how will you pay for it? It's the wrong question. In fact, the right questions don't involve money at all. Instead of worrying about where the financing will come from, we should be asking, are these things worth doing and do we have the real resources, the people, the equipment, the raw materials and the technology to do them?"

She answers her own question of whether such projects are "worth doing" in the affirmative: "Well, they make society better off." If they have value and there are sufficient resources and productive capacity available, then the government should carry them out. But this answer is fundamentally unsatisfactory. Even assuming that Kelton is correct—that there is indeed net value (the value exceeds the money spent) in "fix[ing] crumbling infrastructure," for example—this does not make it an *economic* use of resources. That something *can* be done and has value does not mean it *should* be done, because that depends on what else of value those resources could be used to create. The proper analysis involves looking at the trade-offs—economizing—and not simply the net value of the specific project. MMT, however, appears uninterested in this economic question.

Instead of trying to keep the deficit in check, Congress should be focused on keeping inflation in check. That's the real limit on spending and it's the thing to watch out for if you're thinking about spending trillions on things like infrastructure, healthcare and free college. Instead of asking, "How will we pay for it?," Congress should be asking, "How will we resource it?" To answer that question, think of people, factories, equipment and raw materials like wood and iron. If we're going to build high-speed rail, fix crumbling infrastructure and green our economy, then we'll need concrete, steel and lumber. We'll need construction

workers, architects and engineers. We'll need companies that can fill thousands of orders for solar panels, EV charging stations and electric school buses. If our economy has the productive capacity to quickly supply all of those things, then we can easily resource it. (Kelton 2021)

In essence, Kelton is saying that as long as the government can spend new money into the private sector—meaning there are willing sellers of resources, goods, and services—without causing excessive price inflation, then the economy has the “productive capacity” to support those public sector projects. Therefore, the government should proceed with the “investment” (currency expenditure). What’s missing from her analysis, however, is the trade-off: Resources can be used for many other purposes, which means they are not free. Society must forgo whatever those resources could otherwise produce in order to pursue the public sector projects. The economic question, which MMT seems to ignore, is whether the public sector projects provide *more* value than those resources would in their other uses—the opportunity cost of the project. The question then becomes, How can we tell if the government-provided value is higher than the private-sector-provided value?

In the market economy, this question is answered through factor prices and, specifically, the ability of producers to afford to acquire the factors needed. The producers’ ability to procure the necessary resources ultimately depends on the market value they expect to create—the expected revenue from selling their product—which justifies taking on the cost in money terms: Value justifies cost (see Bylund 2025). It is because private businesses must generate value—and, based on this promise, competitively secure the necessary investments—that the market economizes on production. As I have explained elsewhere, entrepreneurs—and therefore businesses—must seek to create as much value as possible for the consumer, whose valuation is subjective, and discover what price the consumer is willing to pay (Bylund 2025). Only the cost (choices of inputs, product design, production technologies, location, logistics, etc.) is within their control.

The entrepreneur or producer can appraise the market value (in money terms) of the goods produced and compare it with the cost of production (factor prices, also denominated in money) to estimate the expected profit or loss of the undertaking. Businesses economize on resources based on this ability to calculate and compare costs and revenues—both before (to estimate the profit or loss of the undertaking) and after the fact (to determine the actual profits earned). But this depends on money functioning as a commonly accepted medium of exchange in the market. It would be quite different if every business could simply create the currency needed to acquire whatever resources they needed for their projects. It is the competition between production projects, judged in terms of anticipated value, that enables society to economize scarce resources (see Bylund 2018).

In contrast, in the case of the government providing public goods, there is no consumer to assess the value of the final product—and therefore, no basis for estimating its value (Mises 1935). Moreover, under MMT assumptions, the government is not limited to the financial assets it can acquire through market means (savings, investments, or loans); it can simply create new currency and “spend it into existence.” As a result, the government is always, in principle, able to outbid any private sector actor for resources. In other words, the government outcompetes private sector providers of goods and services because it does not need to economize. The government’s bottomless pocketbook, therefore, crowds out private buyers of scarce resources.

But proponents of MMT cannot accept that economizing applies to the government, because doing so would fundamentally undermine their argument. To defend their position, many lean on the “idle resources” doctrine (see Engelhardt’s chapter in this volume), claiming that government projects incur no opportunity cost because private actors will only sell underutilized resources to the government. This claim is problematic for many reasons. There may, for example, be value-based reasons for not using a resource in the present. A resource may be acquired for the purpose of future production but not yet deployed, making it appear underutilized when it is in fact part of the production process. Similarly,

a trained engineer who turns down the first job available and instead remains unemployed to search for more productive employment is also “underutilized” for the time being. In both cases, temporary underutilization is not a loss or a problem but an investment—a means to increase productivity. This highlights the difficulty in identifying and measuring underutilization. There is, in other words, good reason to consider the “idle resources” doctrine a fallacy (Hutt 1939).

Kelton does not appear to fully adopt the idle-resources fallacy, but she does argue, in line with it, that during recessions idle resources exist that the government can—and should—put to work. With a federal jobs guarantee, she argues, no one would need to suffer from being unemployed or underemployed, while society would benefit from “the production of goods, services, and income” as well as “on-the-job training and skill development; poverty alleviation; community building and social networking; social, political, and economic stability; and social multipliers (positive feedback loops and reinforcing dynamics that create a virtuous cycle of socioeconomic benefits)” (Kelton 2020, 137).

Warren Mosler (2023) similarly offers a “Job Guarantee” as a solution to the problem of idle resources. He offers it as “a proposal for the US Government to use an employed buffer stock policy by funding a full time job for anyone willing and able to work at a fixed rate of pay.” Like Kelton and other MMT proponents, Mosler completely overlooks the issue of value—the subjective satisfaction that production is intended to facilitate—and, therefore, has no issue with letting the government make interpersonal utility comparisons.⁷

Mosler also anachronistically suggests that a job guarantee will impose a labor theory of value on the economy because the government’s “wage becomes the numeraire for the currency—the price set by the monopolist [government] that defines the value of the currency while allowing other prices to express relative value as further influenced by

⁷ The impossibility of interpersonal utility comparisons is a core problem recognized in economics. It arises from the fact that value is subjective and has no common unit of measurement. Markets deal with and largely overcome this through actors’ decentralized bidding for resources and consequent determination of market prices.

the institutional structure.” This, he claims, “works to promote price stability more effectively than the current policy of using unemployment.” The latter policy is presumably a nod to the Phillips curve (Israel 2017), which claims an inverse relationship between inflation and unemployment (see Dorn 2020). A labor theory of value—at least for the purpose of establishing the currency’s purchasing power—apparently offers the needed solution.

Economic fallacies aside,⁸ sectoral analysis allows MMT not only to suggest that problems arising in the private sector must be solved by the government but also—and more fundamentally—that everything important in the economy originates with the government. According to MMT, the government creates the money that private sector actors need for exchanges, provides the financial assets they desire, and can guarantee full resource utilization (including full employment) and stabilize prices. All of these things appear to follow from MMT’s very narrow framework and the assumptions on which it hinges—especially that money “must be” provided by the government. However, their sectoral analysis is fundamentally flawed, because it treats the private sector as an abstract aggregate that lacks internal structure, or in which the internal structure does not matter (as we already saw, exchanges within the private sector have no effect on its net financial assets). But this is very far from the truth: The “marvel” of the market—as Hayek (1945) described the price mechanism and its ability to direct production—is hidden in that very abstraction. So too is most of what economists, past and present, study. Proponents of MMT appear all too willing to overlook this.

THE PROBLEM OF PRICES

It would be easy to dismiss MMT as simply not being economics. After all, its proponents focus almost entirely on financial aggregates and policy,

⁸ Among them, the idle resources fallacy, the failure to recognize opportunity costs, and the lack of economizing in government “resourcing” of public projects. Not to mention that MMT focuses on the production of “output” without any reference to its value to consumers. The Phillips curve would arguably also fit on this list.

showing little or no interest in economizing, production, or anything that economists have traditionally focused on and tried to explain. Yet many of MMT's claims are economic in nature, and its arguments and policy proposals often lean on simple economic fallacies. Since one of the economist's roles is to identify when—and explain why—proposed means cannot attain stated ends, economists have a duty to assess MMT just as they would any other policy proposal or program of economic relevance. It does not need to be a field in economics to be assessed by economists.

As mentioned earlier, the workings of the real economy constitute a glaring omission in MMT. Rather than examining how goods and services are produced, which ones producers choose to pursue and on what basis, how and why resources are allocated among production processes, or the mechanisms and processes that underlie and direct production, MMT assumes that production simply happens and that valued goods “automagically” appear and are available for sale. When production is addressed, it is framed in terms of the private sector's capacity—that is, the total output its actors could generate in the present moment—as in Kelton's (2020, 47) claim that firms during recessions “operate far under their productive capacity.” Leaving the idle-resources fallacy and measurement problems aside, MMT shows little interest in questions about where productive capacity comes from, how it changes over time, and why. This leads MMT to assert that the value of goods produced is both known and objective—perhaps even fixed over time—and consequently fail to recognize the problems of uncertainty that an economy must deal with and solve. As I put it in *How to Think About the Economy: A Primer*, “the economy is about *using means to attain ends*. To put it differently, it is how we act to satisfy our wants, to make us better off. Simply put, the economy is about creating value” (Bylund 2022a, 15–16; emphasis in original). And further, “value is never automatic. One can use a lot of resources to produce something that turns out to be pretty worthless. . . . The economic problem is not production per se but economizing production” (Bylund 2022a, 18).

Economics concerns itself with explaining how the production of goods is economized—goods that have value because they satisfy consumer wants. Production is undertaken to provide this utility to a consumer, who is either the producer himself or someone else. The former—production for oneself—is highly unproductive but makes it easier to target correctly anticipated wants (Packard 2020). The latter—production for others—benefits from the division of labor and comparative advantage, making it highly productive (Bylund 2016a, 2016b), although it also increases the challenge of anticipating wants—that is, determining value. Both history and theory show that production for others is strictly preferable, despite the value problem, which markets can all but solve through the open exchange of goods and resources directed by the price mechanism (see Mises 1935; Hayek 1945).

MMT acknowledges the issue of value with respect to money: Proponents find it necessary to explain why the “otherwise worthless” (Kelton 2022) government currency has value by pointing to taxation (which it does not, as I show in Bylund 2022b). They thus apparently recognize that this is a problem that needs a solution, but they appear to assume that for goods—whether private or public—the value is unproblematic or automatic. This is, of course, incorrect. Goods are not valuable simply because they are produced; rather, it is their expected value that justifies engaging in costly production (Bylund 2025).

Since MMT does not explicitly address the value or production of goods, we cannot know what their value theory is—if they have one—or how they suppose that value is created. Nor do we know where they think market prices come from, how they are determined, what they represent, what their function or effect is, or what if any relationship there is between value and prices. These are more than peculiarities or inconsequential omissions: At best, MMT offers only superficial and far from satisfactory arguments.

In his MMT white paper, Mosler attempts to explain price theory from the MMT perspective. But his discussion amounts to merely asserting that prices are market phenomena that entail “expressions of relative

value.” There is no attempt to explain how prices are determined or what their function is. Mosler (2023) appears to believe that what matters is that prices—relative values—are denominated in money (government currency), whose price, or value, is set by the government:

Only MMT recognizes the source of the price level: the currency itself is a public monopoly and monopolists are necessarily “price setters.”

Market forces determine relative prices. Their only information with regard to the absolute value of the currency comes from the state through its policies and institutional structure.

Therefore:

The price level is necessarily a function of prices paid by the government’s agents when it spends, or collateral demanded when it lends.

In what’s called a market economy, the government need only set only one price, as market forces continuously determine all other prices as expressions of relative value, as further influenced by institutional structure.

Despite the occasional nods to standard price theory—which in economics implies a theory of goods, their production, and their value—Mosler and MMT show no interest in addressing the real economy beyond aggregates and general abstractions. This disinterest is also implied by their reliance on sectoral analysis, abstract references to “capacity” and idle resources, and the oft-cited job guarantee. MMT appears to have a primarily instrumental view of goods and their value: Goods are assumed to exist, presumably produced using “resources,” and they have value. But their value—as opposed to relative value (prices)—is either assumed or considered automatic. What matters for MMT is that goods prices are denominated in government currency, whose “absolute value” is determined by government policy; the real economy seems largely irrelevant. Indeed, Kelton’s *The Deficit Myth* (2020) rarely uses core economic terms such as “consumer,” “goods,” or “products,” and when it does, it is only

in reference to inflation (e.g., the Consumer Price Index or a basket of consumer goods) or to things that businesses “churn out.” Similarly, while Wray’s *Modern Money Theory* (2024) uses such terms more frequently, it is never to discuss the nature, production, or value of goods.

But there is a problem here. Whereas economics derives the market value of goods from consumers’ subjective valuations—ultimately reflecting each good’s contribution to individual satisfaction—MMT asserts that goods prices (their market value) are determined by “market forces” using a currency whose value is determined by the prices paid by the government as it spends the currency into existence. The problem arises because (1) the government can continuously adjust the value of the currency, thereby undermining the market’s expressions of relative values; and (2) market prices cannot be assumed to express relative values when purchasing power is determined by the specific recipients of the government’s new currency (not the private sector at large) and when currency is taken out of the economy through taxation, which also has a nonneutral effect. In other words, whether directly through its specific policies and actions, or indirectly, the government, in the MMT system, determines not only the value of the currency but also the structure of prices. What, then, do prices actually represent? They are not and cannot be “expressions of relative value,” as Mosler claims. They express instead the government’s valuation (or interest) in the resources and goods.

THE CREATION OF VALUE

The problem of prices suggests a deeper flaw. Economics assumes that production is undertaken to satisfy consumers and that the profit motive directs entrepreneurs and businesses to serve them (Mises 1998, 2008). An entrepreneur succeeds in the open market if his or her innovation—“novel production undertaken in the pursuit of creating new value” (Bylund 2025, 2)—serves consumers to a greater extent than do existing or new productions from competing entrepreneurs. The tendency and outcome of this competitive process is that consumers—that is, everyone—are made better off. Although economic practice is rarely as simple as some

economic models suggest,⁹ the market still functions according to this fundamental principle and, in the long run, serves consumers.

The entrepreneurial process in MMT, however, is fundamentally undermined—if not set aside entirely. According to the reasoning of MMT proponents, money is made available in the private sector only because government “spends it into existence,” which means the government buys goods and services from private businesses (“concrete, steel and lumber” as Kelton puts it). Even setting aside public choice issues and destructive incentives, this constitutes demand beyond what comes from consumers. Consequently, the government distorts production by directing—by demanding, not commanding—production. By MMT’s own assumption, there is no limit to the government’s ability to demand (other than the need to avoid causing excessive price inflation) since the government creates the currency. Actors in the private sector can demand only to the extent that they have acquired government currency, which means government spending is in fact the *primary* source of demand in the economy. The private sector, therefore, mainly serves the government rather than consumers: Not only do actors in the private sector produce goods for the government but—according to MMT’s reasoning—they must do so to ensure there is enough money in circulation to sustain market transactions.

This raises several questions about how the economy—the private sector—is supposed to function. If it is primarily directed not by consumers but by policymakers, then for the economy to create value for people, we must assume that policymakers not only have consumers’ best interests at heart but also understand those interests. This assumption is, at best, naïve—and it ignores entirely the calculation problem (Mises 1935) and public choice issues (Buchanan and Tullock 1965). Moreover, MMT assumes that the value creation process acts in reverse: Rather than entrepreneurs attempting to figure out what will best serve consumers and competitively securing the best resources to produce that

⁹ These models include general equilibrium and perfect competition. The real economy is, of course, affected by imperfect and asymmetric knowledge, value uncertainty (Bylund 2026), and institutional rules and regulations.

good, policymakers identify what people—or society—need and place orders with market actors to produce them. In other words, the value of what is to be produced is assumed to be *already known*—by policymakers or the government. This, in turn, suggests that there is, to MMT, little or no uncertainty in production. Value is treated as certain and automatic, not as a problem to be solved. Consequently, MMT assumes away the economic problem.

The implication of this reasoning is even more telling. As noted earlier, proponents of MMT lean on the idle-resources fallacy. Kelton claims that firms, at least during recessions, “operate far under their productive capacity.” Whether or not this is so, if the government spends new money into existence by placing orders with firms that are not yet producing at capacity, this suggests not only that the requested goods have already been developed but also that adequate production processes are already in place (and at least partially in use). In other words, it is primarily the government that identifies—or even determines—what is of value and generates it by exploiting existing capacity. But this raises questions: Where do new valuable goods—innovation—come from? What incentives do actors in the private sector have to innovate? And to what end—or for whose benefit—do they undertake innovation?

Unsurprisingly, MMT again points to the government as the solution. Mitchell and Fazi (2017, 23–24) argue that the “state played a vital role” in generating employment and wealth:

It managed aggregate demand, through state consumption as well as through the transfer and redistribution of income, so that firms would have enough confidence to undertake extended and expensive R&D . . . as well as the subsequent heavy capital investment involved in complex mass production; it generalised mass consumption norms so that most citizens could share in the prosperity generated by rising economies of scale; it supported firms through financial and investment aid, R&D funds, public procurement, market protection, etc.; it invested heavily in R&D itself, particularly in areas where the private sector was

too risk-averse, thus playing a key entrepreneurial role in the development and commercialisation of new growth-enhancing and profit-boosting technologies in areas such as aviation, nuclear energy, computers, the Internet, the biotechnology revolution, etc., as Mariana Mazzucato shows in her book *The Entrepreneurial State*; it created telecommunications and transport networks, a crucial infrastructure for modern economies; it invested in public education, thus supplying firms with an increasingly skilled workforce; and, more generally, it created the national and international regulatory framework needed for the smooth functioning of the system (through the global umbrella of US hegemony, the repression of speculative finance, the stabilisation of exchange rates, the secure provision of energy, etc.).

There are reasons to discuss each of these points and the role of the state in them, but economists have already addressed these issues. Mazzucato's claims rest on the same error noted earlier: focusing on the net contribution of a specific project while disregarding its opportunity cost (see McCloskey and Mingardi 2020; Wennberg and Sandström 2022; Henrekson et al. 2024). Proponents of MMT seem unaware of this scholarly discourse, just as they ignore much of the scholarly literature. Instead, they invent their own logic and present the government as a solution to every problem. The following statement from Kelton (2020, 103) is symptomatic:

Crowding out is a story that depicts government deficits as the villains of progress. Saving is considered an act of virtue because it is believed to supply the fuel that is used to fund the kinds of private sector investments that make us a wealthier society. Deficits are said to undermine that prosperity by siphoning away some of that fuel for its own use. Fiscal deficits and private investment are therefore considered to be in tension with each other, as government borrowing necessarily leaves behind a smaller pool of savings to support the needs of private industry. This is the

conventional wisdom among mainstream economists. It may appear straightforward and compelling, but it is best thought of as a series of domino-linked myths.

As noted earlier, if government spending of new currency is how the private sector gains "net financial resources," then government *necessarily* crowds out private investment. So, how does Kelton claim that crowding out is a "myth"? She does not explain. But we can now provide the answer that Kelton does not: MMT asserts the existence of value and the preeminence of the government in the economy. By its own logic, the private sector is facilitated by and ultimately exists to serve the government—not consumers. To the extent that value is a factor, it is determined by the government, which creates money, rules over it, and decides its "absolute value." In this way, all the issues that economists have studied for three centuries are assumed away. The real economy poses no problem because, from the perspective of MMT, everything that takes place within the private sector is simply there.

According to MMT, economizing is an unnecessary—if not entirely fabricated—limitation, which can be overcome by recognizing that the government can and must create more currency. Once this is accepted, along with the accounting identities of sectoral analysis, the government stands out as the originator and creator, without which there would be neither society nor economy. Economizing, and therefore scarcity, is reduced to the remnants of faulty economic thinking—a "barbarous relic," if you will. If this all sounds familiar, it is because we have seen this type of argument before, and whenever it has been applied in practice, the results have been disastrous. There is no reason to assume this time will be different.

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7.

“CHECK YOUR PRIVILEGE”: MMT’S PRIVILEGE POSITION AND ECONOMIC DESTRUCTIONISM



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Even though the tenets of modern monetary theory (MMT) mainly appeal to an audience on the political left, a significant criticism has also emerged from the Left itself concerning MMT’s “privilege.” For example, in the popular socialist publication *Jacobin*, we read, “Another serious problem with MMT is its *embeddedness in a rich-country perspective*, and in particular American exceptionalism—in this case the ‘exorbitant privilege,’ as a French finance minister once put it, that comes with issuing the world’s dominant currency. . . . MMT’s unacknowledged dependence on the *exorbitant privilege* of the United States . . . is almost completely unaddressed by its proponents” (Henwood 2019; emphasis added).

Though not necessarily on the political left, Keynesian economist Thomas Palley (2019, 20–21) has employed similar language regarding MMT, describing MMT’s “exorbitant privilege and the US centric nature of MMT’s theorizing. . . . It is easy to misperceive the fiscal capacity of the US government as confirming MMT. That is because the US government superficially appears to have the power to conduct policy as prescribed by MMT. However, that appearance is false. The

US conveys a misleading impression because it is the beneficiary of the fact that the world operates on a *de facto* dollar standard.”

Few have raised this criticism of MMT, let alone addressed it in full (see King 2012, 8; Nersisyan and Wray 2024, 7–8). While not sufficient to refute MMT completely, the criticism contains an element of truth: This privilege rests on certain assumptions which take for granted a starting point that either would not exist or could not continue if MMT were actually implemented. MMT ideas seem to be gaining popularity in a handful of wealthy countries where MMT has not historically been applied.

The irony deepens when considering that these countries—rather than having a history of chartalism, which is foundational to MMT—have long had commodity standards and demonstrated relatively greater fiscal discipline, partly because of the limits imposed by commodity money. MMT gained intellectual traction in wealthy countries—wealthy in production, with a stronger record of respecting free trade, property rights, and sound money. Most significantly, these countries possess institutions that have painstakingly developed a robust capital structure. Taking that structure for granted while enjoying its benefits is part of the “privilege” of the United States in general and MMT in particular. Proponents of MMT would doubtless claim that a wealthy country like the modern US has greater fiscal flexibility to pursue their policy designs—and this is true to an extent—but that is the material point. *How* did the US achieve such a unique position? It was not by following MMT but by doing nearly the opposite.

MONETARY SOVEREIGNS AND CHARTALISM VERSUS THE MONETARY HISTORY OF THE UNITED STATES

The US is MMT’s monetary sovereign *par excellence*. While it is not the only country where MMT might apply, it is arguably MMT’s strongest case. There are few monetarily sovereign governments in the first place—Kelton (2020, 19) identifies countries like “the US, Japan, the UK, Australia, Canada” as possessing a “high degree of monetary

sovereignty.” MMT proponents point out that the US is not like Venezuela or Weimar Germany, because it is highly monetarily sovereign (Brown 2019). The US also uniquely holds the world’s reserve currency—a status no other country possesses. That said, historical evidence from US monetary history strongly undermines MMT’s claims. In fact, historical evidence shows that the few countries where MMT might apply have not become monetary sovereigns by following MMT’s policy prescriptions. The monetary history of the US will be used here to challenge MMT on two related assertions: (1) chartalism and (2) monetary sovereignty.

Chartalism

Chartalism is a key foundational tenet of MMT. It has been called one of the “foundation myths”¹ of MMT (Taylor 2019, 2; see Knapp 1924). Chartalism posits that a political state creates an otherwise worthless fiat token, requires the people under its jurisdiction to trade real resources for that token, and then taxes them in terms of the token—thus making it a generally accepted medium of exchange (i.e., money) (Bylund 2022). Kelton (2020, 26–27) explains that MMT rejects “the ahistorical barter narrative” in favor of chartalism, and Wray (2012, 2–3) calls the idea of barter leading to a generally accepted medium of exchange “a fantasized story.” Barter leading to money is commonly dismissed as an unjustified myth (see Graeber 2014). Arguments in favor of Mises’s regression theorem notwithstanding (Mises [1912] 2009; Menger [1892] 2009; Hansen 2019), the question is whether chartalism reflects the monetary history of the United States.

Here, we can pose a simple question: Does the monetary history of the United States indicate chartalism? The answer is clearly no. Not only does the US monetary history not exhibit chartalism but it positively exhibits a history of barter and commodity standards—especially in its long history of the gold standard—despite government attempts to

¹ The word “myth” here can refer to an untrue belief, but it is used more in the sense of the “lore” of MMT presuppositions—that is, certain foundational ideas that form a kind of theoretical core necessary for making sense of MMT.

impose fiat currencies. It is hard to overstate the importance of this point: If the US—MMT's favorite example of a monetary sovereign—does not exhibit a history of chartalism, then it actually serves as a counterexample to MMT.

Examining the monetary history of America is not like examining ancient history to see how humans first developed money (see Graeber 2014). America's monetary history is well documented and fairly recent. For example, Rothbard (2002, 48, 51) and Griffin (1998, 159–60, 157) record a history of money arising through barter and commodity standards, contra chartalism (Michener [2003] 2011; Wray 2016). Historically, governments have intervened in and sought to control money and banking, but they did not originate money proper. Purporting to demonstrate a case of chartalism in the US, Wray (2016) describes a colonial government imposing paper money on its citizens and promising to redeem it for gold in the future. Money, however, already existed, and people accepted the paper currency only because of its connection to commodity money (Bylund 2022). At best, this example fails to demonstrate chartalism; at worst, it serves as a counterexample.

Far from indicating chartalism, gold (and other goods) already existed as commodity money in a context of multiple commodity monies which had emerged through barter on a free market (Rothbard 2002, 51–52). In fact, governments could only get people to accept paper money substitutes because there was a preexisting link between the paper and the commodity money. Governments have historically intervened in established money and banking systems precisely because doing so was a tempting source of revenue (Rothbard 2006, 274). They were able to do this only because money proper already existed in the market as a medium of exchange. Were this not the case, governments would have had no reason to establish monopolies over currency, nor would their fiat tokens likely have been accepted. Even if chartalism had occurred somewhere, it does not align with the historical evidence from the US. In short, MMT can embrace chartalism or appeal to the US as an example, but it cannot do both consistently.

Monetary Sovereignty

The US is MMT’s favorite example of a “monetary sovereign.” As it currently stands, no country better embodies the conditions where MMT might apply. The crux of the issue is that—at least when it comes to the US—MMT must choose between chartalism and monetary sovereignty. If chartalism is indeed a key foundation of MMT, then the US cannot serve as a confirmation of MMT, because its history does not confirm chartalist theory. If, on the other hand, the US can apply MMT as a monetary sovereign—without having developed money according to chartalist principles—then chartalism is unnecessary. This is an internal problem for MMT.

Strangely, Wray (1998, 1) admits that even if chartalism is false, it does not ultimately matter for *modern* monetary theory. Chartalism—with its state theory of money—provides a basis for the nature and role of money in MMT. Furthermore, bold claims are made regarding the historical accuracy of chartalism over the barter-to-medium-of-exchange narrative. Apparently, MMT invokes chartalism and a few vague historical examples to establish the authority and validity of the theory, only to then throw this element away as irrelevant.

The only way for a country to achieve monetary sovereignty is through a sustained period of economic growth and capital investment, supported by limited government and sound money—conditions which are anathema to MMT. This raises an important question: Does a country achieve monetary sovereignty by doing nearly the opposite of what MMT prescribes (Murphy 2020, 245)? The unacknowledged “privilege” in MMT is that it virtually ignores the process by which the US became a monetary sovereign and the issuer of the world’s reserve currency. MMT overlooks the true causes of the US’s status as a monetary sovereign, the possibilities open to a monetary sovereign, and the economic history of the US. As a result, it unrealistically assumes that applying MMT—in spite of the US’s monetary history—will generate greater prosperity. In reality, MMT is only briefly possible in a few

wealthy, monetarily sovereign countries that have achieved their positions by following nearly opposite policies.

The monetary history of the US—MMT’s proudest exemplar—refutes MMT’s chartalist claims and demonstrates that monetary sovereignty arises from disciplined growth and sound money.

MMT, CAPITAL THEORY, AND THE STRUCTURE OF PRODUCTION

Any sufficiently advanced technology
is indistinguishable from magic.

—ARTHUR C. CLARKE, “Clarke’s Third Law on UFOs”

The fact that such shifts [from saving to consumption] can and do happen serves to refute easily the fashionable assumption that our capital structure is, by some magical provision or hidden hand, permanently and eternally self-reproducing once it is built. No positive acts of saving by capitalists are deemed necessary to maintain it.

—MURRAY N. ROTHBARD, *Man, Economy,
and State with Power and Market*

Leonard Read’s (2016) brilliant “I, Pencil” illustrates the complexity, beauty, and spontaneous order of free markets, the division of labor, and social cooperation, but also the “magic” of an antecedent capital structure. Part of the genius of “I, Pencil” is that it traces many of the elements of a completed pencil back through the stages of the time-structure of production. Most people—even many economists—take the existence of a developed capital structure for granted.

Thankfully, people do not have to fully understand the “magic” of monetary theory or capital theory to benefit from money and a capital structure. This is probably true for most people living in advanced economies. However, this happy ignorance can also lead people to take certain conditions for granted, even while advocating policies which

would undermine what they unknowingly presuppose. This is part of MMT’s unacknowledged “privilege.”

Proponents of MMT take for granted an abundance of capital goods and a developed, complex structure of production—one that took centuries to build. While most people are happily unaware of the institutional conditions that made such a capital structure possible, they nonetheless benefit from it. Such conditions fostered saving, capital accumulation, and capital investment, and they include private property, contract enforcement, freer trade, sound money, decentralization, limited government, lower taxes, and rule of law. Ignorance of this “magic” is not necessarily harmful or morally blameworthy. In fact, complete knowledge of all that contributed to such a capital structure is virtually impossible, and part of its beauty is that one does not have to understand it to enjoy it. But Rothbard (2000, 202) makes the point that while ignorance of economics is no crime, it is irresponsible to have a loud, vociferous opinion about economics while remaining ignorant. Unlike other subjects, widespread ignorance of economics can have significant societal consequences.

MMT and Capital Theory

MMT entirely overlooks the fact that the only way an economy can grow sustainably is through production, private saving,² capital accumulation, and capital investment. Capital goods³ are scarce, and capital formation requires a preexisting institutional framework that is hospitable to saving, capital accumulation, and capital investment.

The existence of a capital structure is not a given. Capital must be formed and maintained. “There was and is always the choice between maintaining, increasing, or consuming capital” (Machlup 1935b, 580).

² Some MMT proponents claim that government deficit spending amounts to net private savings, implying that government deficits enable net private financial assets (Kelton 2020, 78–79; Mitchell 2010; cf. Murphy 2019).

³ For definitions of “capital,” see Mises ([1949] 1998, 488, 490; [1951] 1974, 111); and Rothbard ([1962, 1970] 2009, 58; 1970, 138).

Mises ([1922] 1951, 201) states simply, “Capital does not reproduce itself.” This is a greatly overlooked fact—even by entire economic schools of thought. While most people understand that production partially comes from labor, labor is often misunderstood as the *only* productive factor. Even in capitalist societies, people do not typically understand the role of capital. An abundance of capital goods is often assumed—a misunderstanding which is neither new nor unique to MMT. Mises ([1951] 1974, 111) explains,

Now nobody ever contended that one could produce without working. But neither is it possible to produce without capital goods, the previously produced factors of further production. These capital goods are scarce, i.e., they do not suffice for the production of all things which one would like to have produced. Hence the economic problem arises: to employ them in such a way that only those goods should be produced which are fit to satisfy the most urgent demands of the consumers.

The only process by which an economy can realize sustained economic growth and raise the standard of living is the accelerated increase in per capita capital goods (Mises [1945] 1974, 5–6; [1950] 1974, 92). Historically, this was the case in Europe and, especially, the US. The development of institutions more favorable to saving, capital accumulation, and investment over centuries brought about unprecedented economic growth in Europe and America, beginning with the Industrial Revolution and continuing to the present (Mawhorter 2022; Raico 1994, 2012). MMT proponents overlook what it took for the US to attain its unique status, not realizing that their proposed policies would consume capital without maintaining or increasing it.

The Fatal Flaw—the Assumption of Automatic Capital

MMT lacks a capital theory or any understanding of the intertemporal structure of production (Newman 2020), a flaw it shares with Keynesians

and monetarists (Keynes 1936, 329; Huerta de Soto 2020, 524, 543; Hawtrey 1932, 119–25). This error largely originates with Clark, Fisher, and Knight,⁴ economists who promoted the mistaken view of capital as a self-sustaining “fund” (Huerta de Soto 2020, 512–17). Rothbard ([1962, 1970] 2009, 401–2) argues that this view ignores time and stage analysis in production. Likewise, Hayek (1936, 201–2) and Böhm-Bawerk (1895, 127, 131) rightly condemn such a view as “mystical.” MMT inherits this fallacy, assuming a fully developed and perpetually maintained capital structure without recognizing its fragility or the need for ongoing reinvestment. Kalecki’s influence—particularly his view that deficits fund themselves and should replace private investment with government consumption (Kalecki 1969, 1939; see Mueller 2019, 26–32)—amplifies this problem by treating the state as a self-sustaining economic actor. As Mueller (2019, 37, 41) notes, MMT lacks a microeconomic foundation, treating the economy as a purely monetary system divorced from human action, entrepreneurship, and the constraints of capital scarcity. By ignoring capital altogether and assuming its existence as a given, MMT builds its policy prescriptions on a dangerously false premise—one that dismisses the institutional, entrepreneurial, and temporal preconditions for genuine economic growth. Taking the intricate capital structure for granted, MMT ignores the reality that genuine economic growth depends on sustained capital accumulation, supported by institutions that protect property rights, encourage saving, promote private production and exchange, and limit government fiscal and monetary intervention.

MMT’S “PRIVILEGE”—CAPITAL, KNOWLEDGE, AND CALCULATION ASSUMPTIONS

Part of the “privilege” of MMT is its ambidextrous ignorance and unknowing assumption of the existence of a well-developed capital

⁴ Space does not permit a full explication of the intellectual history here. Instead, see Böhm-Bawerk (1895); Clark (1894); Fisher (1896); Hayek (1936); Machlup (1935a, 1935b); Kirzner (1966); Knight (1934).

structure.⁵ In other words, MMT proponents do not understand the capital structure, yet they live and think within a painstakingly developed one. It is a form of “privilege” to unknowingly assume certain preconditions while simultaneously arguing for policy which would undermine those preconditions. This is similar to the presumptions of socialists during the twentieth-century socialist calculation debate, who assumed the availability of dispersed knowledge (Hayek 1945), the preconditions of economic calculation (Mises [1920] 2012), and an already developed and functioning structure of production—even as they advocated policies undermining all of these.

Capital Consumption

Before addressing the issues of MMT and capital consumption, we should remember that MMT’s central claim is that the US uniquely occupies a special position as a monetary sovereign—even possessing the world’s reserve currency—and can therefore apply MMT. However, the US achieved this position not through MMT but through freer markets, sounder money, and more limited government—conditions which facilitated capital investment. This resulted in economic strength and the credibility of the dollar, both at home and abroad. The very basis MMT takes for granted would be undermined through the capital consumption its policies would encourage.

Capital consumption is the refusal to maintain the value of capital—that is, the process of net dissaving (Rothbard [1962, 1970] 2009, 534). Rothbard ([1962, 1970] 2009, 535) clarifies that this does not mean “eating machines” but rather “failing to maintain existing gross investment and the existing capital goods structure, using some of these funds instead for consumption expenditure.” Capital consumption can occur voluntarily, based on changes in social time preference. It

⁵ It may seem strange, at first glance, to claim that someone could be simultaneously ignorant of something while assuming it, yet this is done all the time. There are many things that people may assume or presuppose without knowing it. For example, one may be ignorant as to why air is valuable even while breathing.

can also be induced by policy through interventions such as inflation, spending, and taxation. Policy-induced capital consumption creates the temporary appearance of greater permanent wealth. Newman (2020, 25) explains as follows: “Although entrepreneurs produce more consumer goods now, their decreased devotion to maintaining and building up the capital stock reduces the economy’s capacity to produce for future consumption and the structure of production shortens. The economy permanently shrinks.”

MMT policy prescriptions would entail massive capital consumption. This is because “devotees of MMT assume a one-sector economy with an unlimited supply of capital whose only constraint is labour” (Mueller 2019, 41). Throughout history, many have wrongly presupposed an abundance of capital goods—socialists, the welfare school, central planners, and now MMT proponents. In *Human Action*, Mises ([1949] 1998, 844; emphasis added) deals with similar unjustified assumptions: “The Santa Claus fables of the welfare school are characterized by *their complete failure to grasp the problems of capital*. . . . All the effusions of the contemporary welfare school are, like those of the socialist authors, *based on the implicit assumption that there is an abundant supply of capital goods*. Then, of course, it seems easy to find a remedy for all ills, to give to everybody ‘according to his needs’ and to make everyone perfectly happy.”

Mises’s criticism was not that the socialists and welfare school denied scarcity, the need for production, or the need for labor, but that they failed to account for scarce capital goods and the time-structure of production. Increased wealth, resulting from increased capital, has not eliminated the scarcity of capital or the need to maintain and expand it; however, the improved standard of living may lead to the false impression that the supply of capital goods is always superabundant. Moreover, as the capital structure develops, most people become unaware of its existence or importance. Therefore, calling for massive capital consumption through policies of inflation and government spending may be seen, at least partially, as stemming from “privilege.”

Proponents of MMT are correct in a literal fiscal sense that a monetarily sovereign government cannot go “bankrupt” and can always print

more money (Tymoigne and Wray 2013, 2, 5). The issue is “real resource constraints” (Kelton 2020, 37). MMT alleges that it can free us from a sense of “false scarcity” inherited from the gold standard. Kelton et al. (2018; emphasis added) write, “Politicians need to reject the urge to ask ‘How are we going to pay for it?’ . . . We must give up our obsession with trying to ‘pay for’ everything with new revenue or spending cuts. . . . Once we understand that money is a legal and social tool, no longer beholden to the false scarcity of the gold standard, we can focus on what matters most: the best use of natural and human resources to meet current social needs and to *sustainably increase our productive capacity to improve living standards for future generations.*”

It is not that MMT proponents have never heard of economic scarcity (though they often speak as if they have not), nor is it that the government is going to “run out” of money or that the United States is not wealthy enough to “afford” an unspecified stint of inflation and spending on various programs. Rather, the problem is that the theory neglects the stubborn reality of the scarcity of capital. Inflation, spending, taxation, and regulations all affect the intertemporal structure of production, distort economic calculation, redirect resources contrary to the ends chosen by individuals, and encourage present capital consumption without replacement.

MMT proponents also assume that central planners can redirect economic production toward “the best use of natural and human resources,” thereby maintaining or improving standards of living (Kelton et al. 2018). They indicate no awareness of the role of saving and capital investment in achieving this goal. Furthermore, even if MMT did acknowledge the essential role of capital investment, its proponents would likely entrust this investment process to the state. Tymoigne and Wray (2013, 44–45; emphasis added), for instance, argue that “government should be directly involved continuously over the cycle, by putting in place structural macroeconomic programs that *directly manage the labor force, pricing mechanisms, and investment projects*, and constantly monitoring financial developments. . . . But MMT goes beyond full employment policy as it also promotes *capital controls* for open economies, *credit controls*, and

socialization of investment. Wage rates and interest rate management are also important.”

But such a role shift is impossible. Mises ([1949] 1998, 847) explains: “History does not provide any example of capital accumulation brought about by a government. As far as governments invested in the construction of roads, railroads, and other useful public works, the capital needed was provided by the savings of individual citizens and borrowed by the government. But the greater part of the public debts was spent for current expenditure. What individuals had saved was dissipated by the government.”

Governments, by their nature, whether through inflation, spending, taxation, or other interventions, cannot invest in capital accumulation. Instead, government spending should be understood as consumption spending on goods preferred by political elites (Rothbard [1970] 2006, 121–22). The nature of government is such that it can only redirect or deplete existing capital, not create it. Like the socialists before them, MMTers unknowingly assume away the complex capital structure, dispersed knowledge, and real calculation conditions they would systematically destroy through their policies of inflation, debt, and central planning.

Economic Destructionism

Inflation had the great advantage of evoking
an appearance of economic prosperity and of increase of
wealth, of falsifying calculations made in terms of money,
and so of concealing the consumption of capital.

—LUDWIG VON MISES, *The Theory of Money and Credit*

Inflation reduces saving and investment,
thus lowering society’s standard of living.

—MURRAY N. ROTHBARD, *Man, Economy,
and State with Power and Market*

MMT is acknowledged to be possible only in a few wealthy countries, and it is no coincidence that these countries have historically engaged

in substantial capital accumulation and investment. In such countries, an unspecified period of capital consumption through MMT policies becomes possible—but not without severe consequences. MMT would involve massive capital consumption and inhibit further capital accumulation and investment (see Machlup 1935a). It would temporarily give the false impression of greater wealth while concealing its role as the cause of “economic destructionism” (Mises [1922] 1951, 458, 469, 496, 497).

The countries that have followed the model recommended by MMT, especially in Latin America, “were devastated by a massive squandering of capital, widespread malinvestment, and high inflation” (Mueller 2019, 31). Even Japan—another “monetary sovereign”—offers a compelling case study of the consequences of inflation, debt accumulation, and artificially low interest rates (Mueller 2019, 41). In effect, many countries—even qualified “monetary sovereigns”—have implemented MMT by expanding their money supply and public debt, while their central banks have actively monetized the debt (Mueller 2019, 40). Japan’s investment in capital formation has decreased significantly since the 1970s (Mueller 2019, 41n58, citing World Bank gross capital formation data for 1970–2023). In the US, while similar practices have been adopted, investments have not yet been crowded out to the same extent—but the reason *why* reveals both something unique about the status of the US and MMT’s “privilege.” Mueller (2019, 40) argues that “the United States is, in some ways, an exception. The US’s massive accumulation of debt has not yet led to a contraction of investment activity. This is not, however, because the US is the issuer of a sovereign currency—it is because the US dollar is the world’s major reserve currency. In practice, this means substantial foreign savings flow into the US to finance the public sector and external sector deficits” (Mueller 2019, 40).

Needless to say, this precarious position is not one that any other country currently enjoys. The fact that the US currently maintains this status, however, does not mean it is immune from the consequences of capital consumption, nor that MMT could be successful there. In fact, the long-term, consistent application of MMT could even threaten the dollar’s status as a global reserve currency—one of MMT’s most

“privileged” presuppositions. Ignorance of the capital structure, the delayed consequences of capital consumption, and the assumption that the US’s unique monetary position is permanent all lead MMT proponents to mistakenly assume that their policies could work in the US. This is a leap in logic based on erroneous assumptions and a misinterpretation of the US’s unusual context. MMT could be implemented temporarily, but it represents nothing new—it is simply old-fashioned capital consumption.

Mises believed such policies were nefarious because they concealed the trade-offs and costs. Capital consumption gives the false impression of prosperity, and once the real consequences occur, people are unlikely to know what to blame. Mises ([1922] 1951, 458) says that “such a policy of destructionism means the consumption of capital. There are few who recognize this fact. Capital consumption can be detected statistically and can be conceived intellectually, but it is not obvious to everyone. . . . The increasing difficulties of maintaining the higher standard of living are ascribed to various causes, but never to the fact that a policy of capital consumption is being followed.”

Politicians and theorists, like MMTers, can achieve success by advocating economic destructionism (Mises [1922] 1951, 458). This reflects the “privilege” inherent in MMT—proposing enormous capital consumption while assuming that capital will always be available. Once a certain point is reached, however, MMT “leads everyone to consume his fortune; it discourages saving, and thereby prevents the formation of fresh capital. It encourages the confiscatory policy of taxation” (Mises [1922] 1951, 496). MMT’s policies would spur an unsustainable consumption of capital, disguised as prosperity, leading inexorably to a gradual economic decline concealed behind slogans of progress and spending without limits.

The Knowledge Problem—MMT’s Fatal Conceit

Hayek (1988, 76) famously said, “The curious task of economics is to demonstrate to men how little they really know about what they imagine

they can design.” MMT assumes as a given the knowledge and evaluative ability necessary to centrally plan an economy. Hayek recognized that any type of central planning or socialization must fail because qualitative economic knowledge is dispersed throughout society. Moreover, the subjective process by which actors rank their ends is not accessible to political elites, who have their own subjectively ranked ends. In fact, a subjective preference cannot be known until it is demonstrated in concrete action.

Even setting aside the subjective element and focusing only on empirical data available at any given time, the sheer volume of information would be so overwhelming, heterogeneous, dispersed, localized, and constantly changing that it would be functionally impossible to use (see “the computation problem”: Engelhardt 2013; Cwik and Engelhardt 2024). Moreover, central planners do not possess and cannot utilize this qualitative, subjective knowledge. Any attempt to do so would arbitrarily replace the subjective value preferences of individuals—demonstrated in their choices—with those of political elites (Rothbard [1970] 2006, 107, 121–22, 213).

The fatal conceit of MMT is its pretense of knowledge and its assumption that the ends it prescribes are qualitatively superior to those chosen by private individuals—or even by non-MMT political elites. MMTers often express a reasonable critique: Politicians hypocritically use MMT’s prescribed tools for their own projects while decrying MMT (see Ocasio-Cortez, quoted in Hockett 2019; Kelton et al. 2018; Tymoigne and Wray 2013, 2, 5). Austrians can appreciate this point. But what solution do proponents of MMT suggest? The exact same thing.

As a supposed alternative, MMT proponents advocate the consumption preferences of political elites over those of private consumers (see Rothbard [1970] 2006, 121–22, 213). MMTers would simply choose *different* ends. This might be described as a case of “Do as *I* say, not as *you* do.” The privilege here is the assumption that they possess superior knowledge sufficient to centrally plan and manage an economy, as well

as the hubris that their rejection of individual value preferences will be qualitatively superior (Mawhorter 2023, 33–34). MMT embodies Hayek’s fatal conceit by arrogantly assuming that elites possess the knowledge and ability to plan the economy better than the decentralized choices of millions of individuals, whose subjective valuations they ignore.

Economic Calculation—MMT’s Calculational Chaos

Developed Austrian capital theory enabled Mises to formulate his fundamental critique of socialism—the impossibility of economic calculation (Mises [1920] 2012). Mises identified three preconditions for economic calculation: private property, freedom of exchange, and sound money. In short, economic calculation depends on private ownership in the market for producer goods or the factors of production. Economic calculation, however, is not simply a choice between pure economic calculation or none at all. It is a matter of the degree of interventionary distortions. Rothbard ([1970] 2006, 222–23) calls this “calculational chaos.”

Historically, contrary to MMT policy prescriptions, the US has had one of the strongest records when it comes to private property, freedom of exchange, and sound money. Of course, all three preconditions of economic calculation have been distorted at times by interventions, leading to injections of “calculational chaos.” Nonetheless, it was this historical foundation that not only fostered savings, capital accumulation and investment, and economic growth but also enabled the US to achieve its status as a so-called monetary sovereign.

Part of MMT’s privilege is its assumption of the ongoing existence of a functional price system for producer goods and of economic calculation, even while advocating policies that would distort both. Like the arguments for socialism that Mises ([1920] 2012) critiqued, MMT’s policy prescriptions would undermine the foundations of the system it hopes to plunder.

MMT clearly recognizes the importance of money and prices, especially the original purchasing power of money (PPM) through

chartalism (Mawhorter 2023, 36–37). MMT proponents also know that money can be used as a policy instrument to affect prices and redirect real resources. What they naïvely assume is that inflation can simply be directed and controlled throughout the entire price and capital structure without causing further unintended distortions. Every policy used to implement MMT would lead to calculational chaos,

For *each* governmental firm introduces its own island of chaos into the economy; *there is no need to wait for socialism for chaos to begin its work*. No government enterprise can ever determine prices or costs or allocate factors or funds in a rational, welfare-maximizing manner. . . . Thus, any government operation injects a point of chaos into the economy; and since all markets are interconnected in the economy, every governmental activity disrupts and distorts pricing, the allocation of factors, consumption/investment ratios, etc. Every government enterprise not only lowers the social utilities of the consumers by forcing the allocation of funds to ends other than those desired by the public; it also lowers the utility of everyone . . . distorting the market and spreading calculational chaos. The greater the extent of government ownership, of course, the more pronounced will this impact become. (Rothbard [1970] 2006, 222–23)

MMT naïvely overlooks how the PPM and original prices are established, the nonneutrality of money, the effects that pervade the price structure and structure of production, the distortionary effects of inflation, government spending and taxation, the reactions of people to taxation, the effects of capital consumption, and the Austrian business cycle (Mawhorter 2023). MMT, like socialism, cannot allow undistorted economic calculation; therefore, it must either revert to a market economy or exhaust the preexisting capital structure (Rothbard [1970] 2006, 333). Mises's ([1922] 1951, 458, 497) past critiques of socialism serve as a fitting critique of MMT:

In fact Socialism [or MMT] is not in the least what it pretends to be. It is not the pioneer of a better and finer world, but the spoiler of what thousands of years of civilization have created. It does not build; it destroys. For destruction is the essence of it. It produces nothing, it only consumes what the social order based on private ownership in the means of production has created. Since a socialist order of society cannot exist, unless it be as a fragment of Socialism [or MMT] within an economic order resting otherwise on private property, each step leading toward Socialism [or MMT] must exhaust itself in the destruction of what already exists. . . .

Socialism [or MMT] has not consciously willed the destruction of society. It believed it was creating a higher form of society. But since a socialist society is not a possibility every step toward it must destroy society.

MMT is not a new paradigm to pioneer a better world if only the public and political elites would recognize the supposed truth of its propositions. Rather, it is a theory of unacknowledged privilege built atop foundations it would destroy. It assumes the US's monetary sovereignty without accounting for the causes of the country's centuries-long development of its capital structure. It makes bold yet inaccurate claims about US monetary history in an attempt to find chartalism where it does not exist. It presumes qualitatively superior knowledge and tools to centrally plan the economy toward greater prosperity. Like the socialists in the calculation debate, MMT unknowingly relies on a developed structure of production, sound money, and a functioning price system—while proposing policies that would erode them all.

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8.

IS IT “BETTER TO PRODUCE ANYTHING THAN NOTHING”? JOB GUARANTEES VERSUS IDLENESS



LUCAS M. ENGELHARDT

*A*ll things are subject to the law of cause and effect, and ideas have consequences. While there are many theoretical inadequacies to object to in modern monetary theory (MMT), this chapter takes a different approach. Rather than the theoretical and logical connections (or lack thereof) within MMT, this chapter focuses on one of the practical consequences of the acceptance of MMT.

Modern monetary theorists typically advocate job guarantees (or employer-of-last-resort policies), using their monetary theory to shut down any objections about how to pay for such policies. While MMT, if accepted as true, can justify avoiding such questions, this still leaves the question of why an employer-of-last-resort policy, specifically, is so widely advocated by modern monetary theorists. Put another way, Why don't we find modern monetary theorists advocating other programs that are objected to on the basis of cost? After all, modern monetary theorists do not typically advocate unrestrained military expansionism. So, what is special about an employer-of-last-resort policy?

One (arguably positive) consequence of MMT is its shift in focus from the financial aspects of economic policy to the effects of policy

on resource use. This shift, in turn, raises concerns about “idleness”—particularly of labor. A job guarantee offers a possible solution to labor idleness, or “involuntary unemployment,” thereby improving resource use and increasing the size of the economic pie—an obvious benefit.

But this simple line of reasoning avoids an important question: Why are resources idle in the first place? This chapter provides an overview of the job guarantee proposal, drawing specifically from Randall Wray’s (1997) exposition,¹ and then applies William Hutt’s (2011) *The Theory of Idle Resources* to explain the phenomenon of idleness, with an emphasis on labor idleness. Finally, Hutt’s classification scheme is used to evaluate the likely effects of a job guarantee. In the end, we find that the effect of a job guarantee is not simply the mobilization of idle resources but a redistribution of resources out of the private sector and into the public sector—removing them from the purview of entrepreneurs serving consumers on the basis of profit-and-loss calculations and putting them into the hands of bureaucrats trying to manage the economy without the benefit of profit signals.

EMPLOYER OF LAST RESORT—AN OVERVIEW OF THE PROGRAM

Prominent modern monetary theorist Randall Wray has long advocated for the government to act as an “employer of last resort” (Wray 1997). The idea is fairly straightforward: The government would stand ready to hire any and all workers who were available, able, and willing to work in “basic public sector employment,” where they would be paid a “basic public sector wage.” This wage would be determined on the basis of a living wage calculation. When Wray wrote the paper in 1997, he advocated an hourly wage of \$6.25. Adjusted using the Consumer Price Index from January 1997 to January 2025, this would come to approximately \$12.50 per hour—or roughly \$25,000 per year for full-time employment.

¹ Though Wray used the term “employer of last resort,” this chapter will employ the more modern term “job guarantee.”

Wray is not alone in advocating for an employer-of-last-resort or job guarantee program. Warren Mosler and Bill Mitchell were both early advocates of similar systems, with Mosler using the term “employer of last resort” around the same time as Wray, and Mitchell (2020) introducing a similar concept under the phrase “buffer stock employment” as early as 1978. In fact, there is reasonable evidence that MMT came about, at least in part, because Mitchell (2019) recognized that Mosler’s proposal was substantially similar to his own. A job guarantee—by whatever name—continues to be the central policy proposal that accompanies the theoretical framework of MMT (Wray et al. 2018). Given the prominence of Wray’s 1997 proposal, I will focus on his exposition here, updating only the language to refer to the proposal as a job guarantee.

A natural concern about a job guarantee is that it could be quite expensive. However, Wray suggests that the cost would not be as much as many might think. In February 2025, the United States reported 7.1 million unemployed people, based on the Bureau of Labor Statistics definition of individuals who are willing and available for work, actively seeking work, but have not secured a job. If all of these individuals were to take jobs through the basic public sector employment program, the cost would be approximately \$177.5 billion. While this is certainly a large sum, it represents a relatively small proportion of the budget, which has recently exceeded \$6 trillion. For comparison, the temporary unemployment insurance paid during the covid pandemic exceeded \$300 billion per year for 2020 and 2021 (Pandemic Response Accountability Committee 2021).

Of course, any figure here is approximate at best. Administrative costs, the costs of materials and equipment, and the cost of paying people who move from private sector employment to basic public sector employment (either because they made less in the private sector or simply preferred public sector employment, despite lower pay) would all drive the cost higher than the \$177.5 billion estimate. On the other hand, there are some offsets that might drive the cost down: Decreases in unemployment compensation (particularly if, as Wray suggests, such programs are eliminated) and the likelihood that some people would decline basic

public sector employment (whether for ideological or psychological reasons, or because they believe they can job search more efficiently when not working) would lead to lower costs than this back-of-the-envelope calculation suggests. Wray also points out that administrative costs could be minimized by using existing structures—such as unemployment offices or nonprofits receiving public sector employees as “volunteers” paid through the job guarantee budget.

So, why should such a system be adopted, according to Wray? He offers a number of reasons: (1) the current “pay for idleness” unemployment compensation system creates obvious disincentives to work; (2) “pay for work” is generally more politically acceptable than “pay for welfare,” so this approach would have the advantage of ensuring that everyone who can work can earn an income, even if private sector jobs are unavailable; and (3) as John Maynard Keynes also argued, idle labor is permanently lost. Unlike durable goods, labor cannot be saved up for future use: Each hour that a person is not working is an hour of potential labor that is simply lost. While Wray admits that the program may not be completely efficient from an economic standpoint, he suggests that it is better than allowing labor to simply vanish without producing anything at all.

Naturally, many questions could be raised about the details of this program, but it may be unreasonable to expect too much detail from an economist presenting only the sketch of an idea. Even if Wray provided an idealized form of this program, the reality is that politicians and bureaucrats would, in the end, determine the exact dollar figure for the basic public sector wage, the types of jobs offered, and how to use existing or new bureaucracies and nongovernmental organizations to administer the program. While Wray provides some illustrative suggestions (as previously mentioned, he proposes a specific wage and a list of possible jobs that would qualify under the program), for our purposes, it is enough to focus on two aspects: (1) the program is designed to prevent “pay for idleness,” and (2) its economic justification relies heavily on MMT as an underlying theory.

THE EMPLOYER-OF-LAST-RESORT POLICY AND MMT

Wray makes it clear that the job guarantee policy rests heavily on MMT as a theoretical basis. The reason for this is twofold: (1) MMT explains why “how to pay for it” is not a concern, and (2) MMT explains why an employer-of-last-resort policy would not be inflationary.

The common narrative about government funding goes something like this: First, the government raises funds through a combination of taxing, borrowing, and money printing. This money is then spent on the various programs that the government wishes to fund. So, whenever a new program is proposed, certain questions naturally arise: Where is the money coming from? Will it require politically unpopular taxes that distort decisions? Will it involve borrowing that could crowd out private investment now while pushing a tax burden on our grandchildren? Will it rely on money printing that results in price inflation?

MMT, however, suggests that for any government with the authority to create its own currency—that is, any government that possesses “monetary sovereignty”—the common narrative is wrong. In fact, according to MMT, there is no choice about how to fund spending, because it is always funded the same way: through money creation. In the MMT framework, all government spending is initially funded by creating new money. The government then introduces taxes to create demand for the money it created (though expositions of MMT differ in whether taxation should be primarily thought of as decreasing the money supply or as increasing money demand, the effect on money’s purchasing power is the same either way). Finally, the government can issue bonds to achieve interest rate targets.

Wray claims that both this process and the popular acceptance of MMT (at least among policymakers) are required for a job guarantee to be implemented. In Wray’s (1997, 6n6) words, “we do not believe the ELR [that is, the job guarantee] proposal can be separated from the more general theoretical orientation.” In general, while individual modern monetary theorists may differ in aspects of their exposition

and policy advocacy, the job guarantee is one element that seems to be universally supported.

First, let us consider why MMT would be a prerequisite for a job guarantee. The most obvious reason is that MMT rejects concerns about how government spending is funded. According to MMT, it is always funded the same way: through the creation of money. Asking “how are we going to pay for it?” is simply a distraction. But the reasoning is a bit more subtle than that—after all, this question is asked about any government program, so why is a job guarantee considered different? The key is twofold: (1) the job guarantee is objected to on the basis of cost, and (2) the program is likely to have a countercyclical spending pattern, meaning its costs will rise exactly when government budget deficits are already worsening because of a declining economy.

The first point is fairly obvious—if opponents object to a policy on the basis of cost, then advocates have to deal with those objections. The second point, however, is where the subtlety comes in. Like many policies advocated by Keynesians, a job guarantee is seen as an “automatic stabilizer.” Automatic stabilizers are policies intended to moderate the business cycle by increasing government spending or decreasing tax burdens during recessions, and doing the reverse during booms. Income taxes and unemployment compensation are two familiar examples. In the case of a job guarantee, during economic downturns, as people are laid off from the private sector, they would move into public sector employment—increasing the cost of the job guarantee. At the same time, falling private sector incomes imply that tax receipts will decline. Thus, there will be a systematic worsening of the government budget—at least for those who see government deficits as a problem.

MMT, however, argues that there’s nothing concerning about government deficits. During a recession, it claims, public sector deficits brought on by automatic stabilizers simply reflect the desire for increased private sector saving. Meanwhile, government deficits provide some combination of money and bonds that can serve as saving instruments—supply rising to meet demand thanks to this policy design. Under a fiat currency system, this poses no issue: The money is simply created and

bonds can be issued to prevent interest rates from falling too low. By contrast, under a commodity standard, modern monetary theorists would typically admit that the conventional funding narrative holds. If public sector wages were paid in gold, the government would need to obtain that gold through taxation or borrowing. Thus, while under fiat money public spending doesn’t “crowd out” private investment, under a gold standard it would. (This argument suggests that fiat money is a prerequisite for any effective automatic stabilizer program.)

Now, let us consider why a job guarantee follows naturally from MMT. We should first admit that no particular theory must lead to advocating a particular policy. After all, you could accept the Misesian critique of economic calculation under socialism and still advocate for socialism if you happen to hate prosperity and the thriving of human civilization. Policy advocacy combines both positive and normative prerequisites. Assuming that modern monetary theorists care about human well-being and prosperity, and pairing this normative outlook with their view that government finances are never a constraint, it follows that human prosperity depends purely on our ability to use available resources efficiently. Attaining “potential output” would entail not leaving anyone unemployed who is willing to work. After all, each moment of idleness is a moment of potential labor that vanishes.

THE THEORY OF IDLE RESOURCES

At first glance, idleness seems to be inherently wasteful. But if this is true, why are resources ever left idle? After all, it is unlikely that modern monetary theorists are alone in their desire for human prosperity. It is also not immediately obvious what benefit idleness provides to the owners of idle resources. Thus, advocates of job guarantees—like Keynes before them—tend to argue that idleness offers no real benefit and should be eliminated.

However, the claim that idleness is simply the result of error or irrationality is not particularly convincing—especially given that unemployment rates above 0 percent are generally seen as normal, even in

the absence of minimum wages (though what is considered a “natural” rate of employment has varied significantly over time!). This brings us to William Hutt, author of *The Theory of Idle Resources* (2011). In this book, first published in 1939, Hutt describes several reasons why resources might be left idle.

First, resources might be idle because they are valueless. Valueless resources are those that would not be used even if there were no charge for their use. Hutt notes that this category tends to apply primarily to natural resources which have no known use or require complementary resources currently being used in other endeavors. For example, large sections of desert or wilderness may have no economic value without significant investments in complementary capital goods. An increase in the availability of such complementary resources would bring these idle resources into use—but until then, they remain idle. Hutt also notes that this category typically does not apply to machinery, which usually has a positive scrap value if nothing else, nor to labor. There are exceptions, however: In the case of machinery, some machines may be so expensive to scrap that the value of the scrap is insufficient to cover the cost of scrapping. In the case of labor, Hutt suggests that labor may be valueless in cases of extreme disability.

Second, resources may be idle because of what Hutt calls “pseudo-idleness.” This concept is probably easiest to understand with machinery. Some machines may have a capital value that is greater than their scrap value but currently have no hire value. Since capital value is based on the expected value of the future product, pseudo-idleness occurs for a machine when either the demand for its product is lower than it is expected to be in the future or the costs of complementary resources are higher than they are expected to be in the future. This idea also applies to durable consumer goods. For example, the car in my garage is “pseudo-idle.” It is not currently in use, but I have no plans to scrap it, because it will be valuable the next time I need to drive somewhere. So, while my car is not “idle” in the strict sense, it is doing the important work of being available for a valuable future use. Another case Hutt discusses is goods in process. Partially finished goods are not valuable in themselves but

become valuable when production is completed. The capital value is greater than the scrap value, even though the hire value is zero.

Hutt devotes an entire chapter of the book to pseudo-idleness in labor. In labor markets, there are two main cases where pseudo-idleness occurs. The first is people undergoing education or training. These future laborers are not currently working (or are working less than they otherwise could), but that is because they are like goods in process. Their current hire value—while maybe not technically zero—is insufficient to draw them away from their studies, which promise greater rewards in the future.

The second case is that of the “casual worker”—that is, the day laborer without regular employment. To provide a concrete image, suppose that potential workers gather in a town square where employers that need temporary workers can recruit workers just for that day. In this case, the workers sitting around the square waiting for a job are “pseudo-idle.” They are idle, but the promise of employment is sufficient to convince them to wait in the town square rather than to seek more regular employment. Hutt points out that, in this case, these workers must expect that the hourly wage for the time spent working is sufficient to compensate for both the working time and the unpaid waiting time—otherwise, they would take more regular paid positions. Some regular paid positions have similar waiting and work structures. Receptionists and administrative assistants, for example, may spend some of their paid working time waiting for tasks. These workers are generally not considered “idle” during their waiting times, because they receive direct pay for their availability. In the case of casual day laborers, the compensation for availability comes in the form of wages high enough to cover the waiting time.

Third, idleness may be caused simply by preference—a cause unique to labor, since capital goods cannot “prefer” not to work.² The most obvious case of preferred idleness is a preference for leisure. Even those

² Land may appear to be “idle” because of preference—that is, landowners may prefer to keep their land in a natural state than to develop it. However, Hutt (2011, 38) suggests that this land is best thought of as “utilized” rather than “idle.”

who are employed rarely work every waking hour—rather, they establish patterns of labor and leisure. But preferred idleness isn't limited to a general preference for leisure over labor. It also occurs when available combinations of wages and occupations are not acceptable to a worker. If every job offer I receive has working conditions or pay that I find unacceptable—perhaps, because of pride, I consider the occupation or pay level “beneath me”—then I can rightly be described as preferring idleness, even if it isn't because of a direct preference for leisure. Put another way, if the wage offer is below my “reservation wage,” I will refuse the position. Hutt notes that preferred idleness is not a poor use of resources but simply reflects the human desire not to spend all available time working with no consideration of pay or position.

As part of this discussion, Hutt considers the possibility of “irrational” preferred idleness. Here, he is considering a phenomenon proposed by John Maynard Keynes (1936): that workers may accept a cut in their real pay caused by increases in the price level but would refuse an equivalent cut in their nominal pay. For example, a worker may continue working for \$20 per hour even if prices go up by 10 percent but would quit if his employer tried to cut his pay to \$18 per hour (with prices remaining constant). Similarly, an unemployed person might refuse a job at \$15 per hour but accept that job at \$16.50 per hour when prices are 10 percent higher, even though the real wage—its purchasing power—is the same in both cases.

Hutt is friendly to the idea that such a phenomenon may exist—people may react more strongly to nominal wage changes than to changes in purchasing power brought on by changes in the average level of prices. Hutt's response, however, is essentially, So what? Preferences are preferences, and even if economists might prefer workers to respond based on the composite of nominal wages and price levels that we call “real wages,” there is no reason that people have to form their preferences this way. It is not the role of an economist to condemn particular preferences but simply to get the analysis right, taking those preferences as facts. If labor supply is very elastic for any downward change in nominal wages, then that is simply a fact to account for. What to do about the disconnect

between the response to nominal wages and the response to prices is a matter for entrepreneurs and policymakers.

A fourth form of idleness is “participating” idleness. This form of idleness is a bit odd, as it would not typically exist in a highly competitive environment. Consider, instead, the case of cartelization—either through private organization or through state intervention aimed at organizing production in a particular industry so that the producers act collectively as a monopoly, restricting production to earn monopoly profits. How should the profits be divided among the producers that participate in the cartel? Profits could be distributed based on a participant’s capacity to produce, which can happen through a combination of past production and future productive capacity. If existing capacity gives the participant a greater claim to the monopoly profits, then cartel members have an incentive not to scrap previously productive but now unused capacity. The excess capacity can serve as a bargaining chip within the cartel, since it provides credibility to the threat of deviating from the cartel’s planned restriction of production.

Turning to labor, this type of idleness is found in the form of “short time” arrangements involving work sharing. In these arrangements, when demand falls, an employer reduces work hours in a more or less proportional fashion rather than laying off part of the workforce. To retain their share of work hours workers must maintain a relationship with their employer—typically meaning they cannot pursue other employment opportunities. Much like in the case of the cartel, these workers accept periods of idleness so that they can claim some of the earnings for whatever work is done.

Hutt points out another form of participating idleness that can arise when regulation sets wages above the equilibrium level. In these cases, high wages will tend to draw in a greater supply of labor than there is demand for. This excess supply results in some level of idleness, but the idle workers remain in that market because they expect to receive their share of high wages. In this way, participating idleness in these industries is similar to the pseudo-idleness of the day laborer—the primary difference being that it results when regulation sets wages high. For a day

laborer's pseudo-idleness, high pay results when entrepreneurs intentionally pay high wages to ensure that those workers find it worthwhile to be available when the entrepreneurs need them.

A fifth form of idleness is enforced idleness. For enforced idleness to exist, two conditions must be met. First, resources must have been driven out of production by some kind of force—whether legal requirements, physical violence, strikes, or boycotts. Second, the resources have to remain idle because of some additional motive for idleness, such as participation claims, valuelessness, or pseudo-idleness relative to other possible employment. If there is no other cause for idleness, then enforcement alone would not result in idleness but rather the repurposing or scrapping of resources.

Consider a labor market example: Suppose a segment of the population is producing subversive literature. Then, the government decides that such literature is no longer legal to produce. In general, we would expect the resources used to create this subversive literature to be redirected. The printing presses could be used for the creation of state-sponsored propaganda or, at the very least, something less subversive. The writers would take their skills and use them to write children's books or restaurant reviews. If the resources are not diverted, then there must be some motive for keeping them idle. To put it another way, an enforced decrease in production doesn't necessarily create idleness. Resources must be idle for some other reason once their best option for use is removed. Perhaps the printing press used for subversive literature cannot be used for anything else, as might be the case if carved printing plates are used rather than a more flexible technology. At the very least, the plates would become valueless unless they can be easily scrapped. Perhaps the workers object to any other form of employment and so engage in preferred idleness.

Hutt notes that enforced idleness is different from—though related to—the problem of diverted resources. With diverted resources, resources that get excluded from one specialization take on another—much like the writers that move from subversive literature to children's books. Similarly, enforcement can cause hypothetical future resources to be directed into different production lines than they otherwise would have

entered without enforcement. But neither of these diversions result in idleness.

Finally, Hutt notes that enforced idleness may occur when an industry withholds productive capacity for resources needed by another industry's production. For example, if tire manufacturers refuse to produce enough tires, this could lead to enforced idleness in car production, since automotive plants are not easily repurposed for other uses.

A sixth form of idleness is withheld capacity, which occurs when output is intentionally decreased to secure private benefits from contrived scarcities. The most obvious case would be a firm that, after gaining monopoly privilege, decreases production. This decision can lead to four possible results: participating idleness, valueless resources, diverted resources, or scrapping of excess capacity. Participating idleness will occur if the firm needs to retain control of the idle resources to ensure those private benefits—either because of cartel or regulatory arrangements, or because the credible threat of increased production is necessary to prevent entrants from invading a monopolized market. If participating idleness is not necessary, then machinery may become valueless if it is sufficiently specialized and expensive to scrap. In other cases, resources would likely be diverted or scrapped. In labor markets, withheld capacity—for example, on the part of labor unions—may result in several reasons for idleness among laborers: participating idleness (in the case of work sharing), preferred idleness, or pseudo-idleness (with respect to alternative employment).

Hutt suggests that monopolists often do not seek maximum profit. Instead, they seek "reasonable" profit, in part because demand curves are unknown, making it difficult to take full advantage of demand inelasticities. If this happens, then a fall in demand may mean that prices can stay stable, since the price was previously "too low," compared to what was required for profit maximization, but has now become consistent with the monopolistic price. The excess capacity is technically "withheld" to maintain the high price and held in pseudo-idleness in expectation of recovered demand. Hutt points out that labor markets may see a similar phenomenon—he agrees with Keynes on this—when unions or simply

social convention holds wages high during downturns. However, he observes that such conventions and organizations are not inevitable. They are not the result of any scientific law but instead may change over time as the public's beliefs—and therefore practices—change.

The final type of idleness is aggressive idleness or strike idleness. Strike idleness is fairly self-explanatory: It is a form of idleness in which a resource is held idle by an owner to negotiate a better distribution with cooperating parties. While participating idleness may be used for negotiating with potential competitors in a cartel, aggressive idleness is used by workers to negotiate with employers (or, alternatively, for employers to negotiate with workers through lockouts). In both cases, idleness is used for negotiation; the main difference lies in the relationship to the other party in the negotiation.

IDLENESS VERSUS JOB GUARANTEES

Having now seen some of the reasons that resources may be left idle, we are better prepared to consider how effective a job guarantee would be. But first let us consider what its effects would be—assuming it does have an effect. We will consider two points of comparison: one, a world with unemployment benefits, similar to those found in many countries today, and the other a free market in which any support for the unemployed comes from private unemployment insurance (which exists as supplemental insurance in the US today) or from private charity.

There are two notable differences between a system of unemployment compensation and a job guarantee. First, unemployment compensation is naturally limited in scope and time. In contrast, a job guarantee is universal in both.³ Second, unemployment compensation is, as Wray observes, “pay for idleness”—that is, taking a job would end compensation. On the other hand, a job guarantee is “pay for work.” When comparing the impact of these two policies, we must consider the level of unemployment compensation, the level of the basic public sector wage,

³ With possible exceptions in scope for those with severe disabilities.

and the value of the output from basic public sector employment. Basic public sector employment will generally be value destroying⁴—otherwise, the private sector would hire this set of people at this wage to do these jobs.⁵ As a result, the policy will result in a redistribution of resources along two lines.

First, if job guarantee jobs provide income for consumption, then consumer goods are redirected toward those receiving the job guarantee income and away from those receiving private sector incomes. But the same is true of unemployment compensation, which will have the same effect when spent on consumer goods. In which case is the redistribution larger? The size of the redistribution can be judged for unemployment compensation by the cost of that compensation. In the case of a job guarantee employee, what matters is the difference between the cost of the employee and the value created. To give a concrete case, in January 2025, the average weekly benefit for unemployment compensation in the US was \$470.47 (US Department of Labor 1971–2025). At \$12.50 per hour for a forty-hour workweek, that would come to \$500 per week. The redistribution is similar under the two policies, though slightly larger under the job guarantee.

The second form of redistribution is in the markets for factors of production—most obviously, labor itself. To the extent that workers take job guarantee jobs rather than private sector jobs, labor is reallocated away from the private sector—where its use is governed by profit and loss signals which force entrepreneurs to consider consumer desires—toward the public sector, which operates outside the profit and loss system. Advocates of job guarantees emphasize that, unlike with unemployment compensation, job guarantee workers at least produce something. If the compensation is similar, then the job guarantee is clearly superior. However, very few jobs rely on labor alone. If job guarantee artists are

⁴ One point not considered here is the value of maintaining a connection to the job market. Some advocates of job guarantees suggest that these jobs can fill gaps in a résumé. But this benefit is unlikely to occur, since the guaranteed nature of these jobs means they would likely carry a stigma similar to that of unemployment.

⁵ There is an exception in cases where the private sector is effectively banned from competing with the public sector. The relationship between value and cost then becomes uncertain.

hired to paint a mural downtown, they will need paint, brushes, and ladders. If job guarantee workers are going to help administer the system, they will need computers, office space, and furniture. This raises an important question: How much will these workers cost beyond their wages? Approximately 8 to 9 percent of federal spending is on compensation (Edwards 2024). This suggests that for every dollar spent on compensation, another ten to twelve dollars goes to other expenses. Applying this ratio directly is probably unfair, but even if we remove all mandatory spending, compensation only accounts for about one-third of discretionary spending. If this ratio holds for the job guarantee workers, then the cost would not be \$500 per week per worker but closer to \$1,500 per week per worker. Without accounting for profit and loss, it is impossible to say whether the cost of these workers is worth the value of the services they provide. If we only consider the additional \$30 relative to unemployment compensation, it seems plausible that many workers would create at least that much value, even if they are used inefficiently. But once we account for the costs of complementary factors, it seems much less likely that job guarantee workers would offer a better deal than those that simply receive unemployment benefits.

The comparison between job guarantees and private compensation for the unemployed is much clearer. Private compensation is value creating. Because people choose to purchase unemployment insurance and insurance companies operate profitably, we know that the insured are willing to pay a premium to reduce the risks associated with job loss. Similarly, building an emergency savings fund combines delayed consumption with self-insurance. Private charity is also likely to be value creating (at least *ex ante*) since donors only give to causes they find worthwhile. The fact that these causes also benefit the recipients further enhances the value-creating nature of charity. In contrast, a job guarantee, because it is funded by taxation (whether through levying taxes or through inflation), has no clear test to demonstrate its value to either potential employees or philanthropists.

While the job guarantee is likely to be the worse option in either case, how much worse depends on where the job guarantee employees

come from. Are they people who would otherwise be receiving unemployment compensation, or are they people whose idleness was privately funded? According to Bureau of Labor Statistics data, in February 2025, there were 7.1 million unemployed people in the US. According to US Department of Labor data, in the week of February 22, 2025, approximately 2.3 million workers received unemployment compensation. If every unemployed worker accepted a job guarantee job, then approximately two-thirds of those joining that program would be moving from privately funded idleness into basic public sector employment. Such a situation isn't new or unusual (see Wandner and Stettner 2000 and, more recently, US Bureau of Labor Statistics 2023). The reality is that most basic public sector employees would have previously been privately supported, but everything depends on whether the unemployed would even take these basic public sector jobs in the first place.

This is where Hutt's theory of idle resources comes in. To predict whether a job guarantee will attract basic public sector employees from the ranks of idle workers, we must consider why those workers were idle.

First, consider valueless resources. As Hutt explains, labor is almost never valueless—except in cases of severe disabilities. Since labor is almost never idle because it is valueless, it follows that a job guarantee would not reduce such idleness. Wray, however, points out a specific case where labor might be considered a valueless resource but where a job guarantee may result in a decrease in that idleness. While he does not expect disability compensation programs to be fully replaced by a job guarantee, he does suggest there may be otherwise unemployable people with a disability that could be employable through a job guarantee. Because most jobs require complementary resources, an employee might have insufficient labor skills to justify the expenditure on those resources. In this case, Wray admits that a job guarantee would be inefficient. “However, a rich society can afford inefficiencies, and the noneconomic benefits of work can offset at least some of the economic costs” (Wray 1997, 42). According to Wray, it would be a better use of resources, from an economic standpoint, for the employee to simply

receive government support not conditional on work, because providing the complementary resources leads to inefficiency.

Second, consider pseudo-idleness. In the case of labor, pseudo-idleness occurs when workers want to remain available for intermittent high-wage work, which prevents them from taking lower-paying regular work. Are they likely to take low-paying jobs if they are guaranteed? At first glance, it seems that the answer is no. If the employers that hire workers intermittently always go to the town square, then workers who want to get hired must be in that square to be hired. But Wray suggests that there could be a change in the economic structure. If potential day laborers were generally found in job guarantee employment, then employers could seek their workers in job guarantee offices instead. Of course, modern day laborers rarely sit in town squares. They register with staffing agencies that pay workers and sell their services to interested employers, often on a day-by-day basis. It is plausible that job guarantee offices could do something similar (they would crowd out existing staffing agencies at least to some degree). They would pay their employees the basic public service wage every day, and on some days workers would be directly employed in the public sector while on other days they would be hired out as day laborers to the private sector. This could be managed either by the job guarantee bureaucracy, acting like a temp agency and continuing to pay the worker the basic public sector wage, or by the bureaucracy that releases the employee to private sector employment. The second option is more in line with Wray's vision of a job guarantee, so the question is whether, from the perspective of the workers, a job guarantee program office that operates in this way is superior to a private staffing agency. If so, then a job guarantee would reduce pseudo-idleness. If not, then it would not reduce pseudo-idleness. Assuming that there is an effect, it seems clear that workers would benefit from the job guarantee. But for society as a whole to benefit, the benefit must outweigh the cost, which seems unlikely for a simple reason: Unless the base public sector wage is less than the private sector minimum wage, the private sector could have created these jobs—but did not.

Third, job guarantee employment would not pay well enough that everyone would prefer it over idleness. But change happens on the margin: Would some people who prefer idleness under the current system prefer job guarantee employment? While the devil is in the details—for example, the quality of job guarantee employment would matter—it seems very likely that a group currently preferring idleness would be willing to work if the pay were somewhat higher (\$12.50 per hour is above the US federal minimum wage, after all) or if the available jobs were somewhat more attractive. To the extent that the job guarantee effectively convinces potential workers, the redistributive effects mentioned above would become relevant. But it is unlikely that many of those in preferred idleness are currently receiving unemployment compensation, making the shift to the job guarantee the more expensive move.

Fourth, when considering participating idleness, many of those that operate on “short time” receive limited unemployment compensation. This suggests that, in this case, removing this unemployment compensation and replacing it with a job guarantee would have less of a negative effect. But it’s unlikely that many of these workers would take job guarantee jobs in the first place, since they have already demonstrated a preference for partial, participating idleness over full-time work at lower wages. Both enforced idleness and withheld capacity require other motives to be operative—and so, the analysis from the relevant sections would apply here.

Finally, consider the aggressive idleness of strikes and lockouts. Here, Wray is explicitly ambiguous about the effect of a job guarantee. On the one hand, the availability of basic public sector employment could embolden workers to negotiate more aggressively. After all, at worst, they can fall back on the basic public sector wage. This could lead to an increase in strikes, where striking workers would take job guarantee jobs in the interim. In that case, the program wouldn’t just convert idleness into job guarantee employment; it would divert resources away from strike-prone sectors into the public sector. Wray claims, however, that the improved information provided by a job guarantee system could allow employers to more easily identify qualified employees, thus making it riskier to

strike from jobs that pay significantly more than the basic public sector wage, since employers could easily use the job guarantee system to find qualified replacements. As a result, strikes may become less common, reducing idleness without increasing job guarantee employment. Which of these two effects would dominate is unclear.

CONCLUSIONS

Understanding idle resources from a theoretical perspective allows us to analyze the underlying assumption behind job guarantee proposals: that idleness creates a loss of value. Hutt's explanations suggest that there are reasons for idleness, some of which would not be affected by job guarantee proposals. Where that is the case, such programs will be ineffective in reducing idleness. But even where these proposals do reduce idleness, they also create a need to reallocate scarce factors of production out of the private sector—where profit and loss provide an incentive, means, and guide to use resources to create value for consumers—and into the public sector—where economic calculation is impossible and the creation of value unclear. In the end, this means replacing an economy directed by entrepreneurs seeking to satisfy consumers with an economy directed by central planners seeking their own ends.

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INDEX



Note: The letter *f* following a page number denotes a figure.

- Acemoglu, Daron, 146n5
aggregate production statistics, 9, 92
American Economic Review, 22
Austrian School of economics
 agreement with MMT, 5–6
 business cycle theory, 131, 182
 covid crisis and, 10–12
 disagreement with MMT, 6–7, 13–14, 67
 Federal Reserve and, 6
 government bonds vs. net wealth of private sector, 83–88
 hard institutional disciplines vs. soft restraints (MMT), 137
 IOUs are not assets, 74–75
 monetary adjustment process and spending, 43–44
 structure of production, 105–8, 106n12, 107f, 109f, 110–11, 111f
 value/quantity of money and spending, 44–45

Bailey, Martin J., 83–84
bankruptcy and government, 5, 77, 175–76
Barnett, William, 93–94
Barro, Robert, 82–86n8, 85n7
barter
 chartalism and, 167
 vs. indirect exchange, 19–20, 23
 as origin of money, 7, 18, 34, 34n19
Batemarco, Robert, 99n6
Baumol, William J., 144
Bernal, Andrés, 176, 180–81
Blakeley, Grace, 134
Block, Walter, 93–94
Böhm-Bawerk, E., 173, 173n4
Borio, Claudio, 72n2
Brown, Ellen, 166–67
Buchanan, James, 82, 135, 158
buffer stock employment. *See* job guarantee program
Bureau of Economic Analysis, 102, 102n9
Bureau of Foreign and Domestic Commerce, 100–101, 102n9
Bureau of Labor Statistics, 191, 205
business cycle theory, 6
Bylund, Per, 20n3, 23n7, 141
 government spending money into existence, 167
 production goal, 157–58, 158n9
 USA's monetary history vs. chartalism, 168
 value creation, 150–51, 155
Bylund, Per, works of
 How to Think About the Economy, 154

- calculation problem, 7, 158, 174, 181–82
- Cantillon effect, 131
- Cantillon, Richard, 131, 146n4
- capital consumption
 - as destructionism, 165, 177–79
 - government and, 177–78
 - net dissaving, 174
 - as policy induced, 175–77
 - resource restraints and scarcity of capital, 176
- capital theory, 172–73, 173n4
- Carlock, Greg, 176, 180–81
- Carson, Carol S., 100
- Carver, Thomas Nixon, 62n9
- catallactics, science of monetary exchanges, 46, 94–97, 95n2
- chartalism
 - as balance between taxation/inflation, 142, 166
 - chartal money, 22, 22n5
 - commodity money existed prior, 168
 - credit theory of money and, 18, 31, 32n15
 - definition of, 21–22
 - fiat money, 23–24, 36, 167–68
 - as foundation myth of MMT, 167
 - historical development of money in Mesopotamia and, 24–25
 - Menger's theory, 6–7
 - vs. monetary history of USA, 167–68
 - vs. monetary sovereignty, 169
 - money, definition of, 23
 - purchasing power of money (PPM) and, 181–82
 - as state theory of money, 1n3, 23–24
 - See also* money
- Clark, John B., 173, 173n4
- Clarke, Arthur C., 170
- classical monetary theory (CMT). *See* CMT
- clay cuneiform documents in Mesopotamia, 24–27, 34, 35n24
- CMT (classical monetary theory)
 - money as commodity, 45–48, 51
 - money value determined by cost of production, 47, 53
- Cochrane, John, 131n9
- computation problem, 180
- consumer price index (CPI), 91
 - as basis for fiscal policy, 137
 - Boskin commission, 126
 - consumption basket, 126
 - expansionary policy, distortion through, 131
 - inflation rate calculation through composite indices, 9, 119
- consumption, government spending as, 96–99, 107, 111
- cost of production theory, 47
- credit theory of money, 18, 31, 32n15
- Cripps, Eric L., 32n15
- currency
 - fiat, 2, 5, 12, 14, 20, 23–24, 23n8, 35–36, 58, 117, 141, 141n1, 194–95
 - moneyiness of, 142
 - sovereignty of, 3n7
 - US dollar as world's major, 9–10, 178–79
- Cwik, Paul F., 180
- Davenport, Herbert J., 62n9
- Deaton, Angus, works of
 - "Saving and Growth," 71
- debt ceiling, 5, 12

- debt monetization
 - analysis of, 92, 105
 - money supply, increase of, 108–9
 - structure of production, 105–8, 106n12, 107f, 109f, 110–11, 111f
- deepity, definition of, 142
- deficits as surplus of private sector (net financial assets), 70–76, 70n1, 144–45, 147–48, 153
- Dennett, Daniel, 142
- Department of Commerce, 100, 102n9, 103–4, 112
- destructionism, economic, 165, 177–79
- Disyatat, Piti, 72n2
- Dorfman, Joseph, 53n5
- Dorn, James A., 153
- double coincidence of wants. *See* barter
- economic consumption as destructionism, 165, 177–79
- Economic Research Division, 102, 102n9
- Edwards, Chris, 204
- efficiency of money/rapidity of circulation, 50–51, 53–56
- electoral pressures vs. economic measures, 135–37, 147–48, 180–81
- employer of last resort. *See* job guarantee program
- Engelhardt, Lucas M., 10, 151, 180, 189
- equation of exchange, 55–57
- European Central Bank (ECB), 71, 136
- Fazi, Thomas, 93, 96, 99n8, 105, 109, 114, 159–60, 164
- Federal Reserve, 3, 5–6, 10–11
- Fegley, Tate, 122n3
- fiat money/currency
 - vs. bankruptcy, 5
 - chartalism and, 23–24, 36, 167–68
 - deficits and, 194–95
 - government and, 2, 14, 20n3, 35–36, 58, 117
 - origin of, 20, 23n8
 - supply of, 141, 141n1
- Fisher, Irving, 41–42, 55–57, 121, 173, 173n4
- Foroohar, Rana, 134
- framework of public finance, reversal of, 6–7
- Friedman, Milton, 43, 61, 135
- Friedman, Milton, works of
 - Monetary History*, 61
- functional finance, 1, 1n4
- Garrison, Roger W., 107
- GDP (gross domestic product)
 - calculation of, 69, 99n8
 - deficit and, 117–18
 - vs. GNP, 98–99, 98n5, 102–4
 - spending illusion and, 41
- Geloso, Vincent, 99n6
- Gilbert, Milton, 102
- Gilbert, Richard, 102–3, 104n11
- Girton, Lance, 53–54
- GNP (gross national product)
 - calculation of, 9, 102–4, 112
 - cost/payment price principle and, 101–2
 - deficits and inflation, 117–18
 - vs. GDP, 98–99, 98n5, 102–4
 - PPR and, 98–99, 99n6, 104–5, 108, 110
- Gordon, Robert J., 136

- government, role of
 access to money vs. economic limits of spending, 142
 aggregate production statistics, 9
 bankruptcy and, 5, 77, 175–76
 bonds and net wealth of private sector, 83–88
 capital creation/depletion, 176–78
 deficits and inflation, 117–18
 deficits vs. private sector investments/savings, 3–4, 70–72
 fiat money/currency and, 2, 14, 20n3, 35–36, 58, 117
 idle resources doctrine/federal job guarantee, 151–52, 153n8, 159–60, 191
 influence for political benefits, 147–48
 vs. private sector agreements, 78–79
 relative value vs. government price determination, 156–57, 161
 value creation/assessment and, 150–51, 156–57, 161
See also fiat money/currency; monetary sovereignty
- government spending
 as antithetical to investment, 92–93, 111–12
 catallactics, science of monetary exchanges, 94–97
 consumer vs. capital goods, 94, 98
 as consumption, 96–99, 107, 111
 debts as safe assets, 76–77, 80–82, 86, 176
 deficits as surplus of private sector (net financial assets), 70, 70n1, 73–76, 144–45, 147–48, 153
 as demand creation, 158–59, 161
 as determinant of purchasing power/value of currency, 59–60, 59n7
- government spending (*continued*)
 inability to produce goods for profit, 95–96, 97n3, 100
 as malignant/unproductive consumer, 104–5
 malinvestments, 97, 97n4
 net wealth/financial assets, 8–9, 83–88, 144
 private sector, outcompeting of, 9, 151, 153n8, 161
 pure interest rate and, 109–11
 retrogression as result of, 112
 “spending money into existence,” 57–58, 148–51, 157–58
 value creation/assessment, absence of, 9, 150–52, 153n8
- Graeber, David, 18, 25, 31–33, 167, 168
 Graeber, David, works of
Debt: The First 5,000 Years, 31
 Great Depression, economic activity during, 100
 Grey, Rohan, 12–13
 Griffin, G. Edward, 168
 Gundapaneni, Siddharth, 99n6
- Haberler, Gottfried, 42n1, 119–25, 127, 130
- hacksilver
 barley:silver price ratio, 32, 32nn14–15, 35n20
 coin use and, 30–31, 33–34
 counterfeit silver, 29
 geographical reach of, 29–30
 hoards/ingots as standard units, 28–30
 as money in Mesopotamia/Ur III, 24–30, 31–34
- Hadley, Arthur T., 55n6
 Hansen, Alvin, 92, 167

- Hansen, Kristoffer, 18n1, 22n6
 Havrilesky, Thomas, 47n2
 Hawtrey, Ralph G., 172–73
 Hayek, F. A.
 Cantillon effect, 131
 electoral pressures, 135
 money illusion, 42n1
 quantity theory, 60–61
 structure of production, 107, 153, 155, 173–74
 subjective preference, 179–80
 hedonic price adjustment and inflation control, 128–29, 128n7, 130n8
 Henrekson, Magnus, 160
 Henwood, Doug, 165
 Higgs, Robert, 99n6
 Higgs, Robert, works of
 Crisis and Leviathan, 11–12
 historical money. *See* monetary history of USA; origins of money in Mesopotamia/Ur III
 Hockett, Robert, 180–81
 homo economicus, 23
 Huerta de Soto, Jesús, 107, 172–73
 Hutt, William H., 10, 45, 152
 Hutt, William H., works of
 Theory of Idle Resources, *The*, 190, 196–202

 Ialongo, Nicola, 29
 ideal formula. *See* Paasche and Laspeyres indices
 idle resources doctrine/federal job guarantee, 151–52, 153n8, 159–60
 idleness, types of, 10
 aggressive/strike idleness, 202, 207–8
 enforced idleness, 200–201
 idleness, types of (*continued*)
 participatory idleness, 199–200, 207
 preference-based idleness, 198–99, 207
 pseudo-idleness, 196–97, 206
 value-based idleness, 196, 205
 withheld capacity idleness, 201–2
 inflation
 federal job guarantee program and, 4
 increase during covid, 10–11
 macroeconomics and, 131
 measurement theory, 120–25, 127, 130
 monetary, 13, 74n4
 money illusion and, 42n1
 Phillips curve, 4, 153, 153n8
 of price, 4, 9, 14
 price level/rate of price inflation, calculation of, 124
 as result of monetary policy, 42, 42n1
 statistics, index based, 119
 inflation control
 asset price inflation and speculative bubbles, 8, 132–33
 asset price vs. consumer goods inflations, 131–33
 consumption basket, need for constant adjustment, 126–27
 delays to measure/control inflation, 135
 electoral pressures vs. economic measures, 135–37
 hedonic price adjustments, 128–29, 128n7, 130n8
 income/substitution effects, 125–26
 interventionism as distortion, 130
 real wealth growth and economic inequalities, 134, 134nn10–11

- inflation control (*continued*)
 substitution effects, 119, 125–26, 126n6
- Innes, A. Mitchell, 25, 27
- insolvency of government, 5, 77, 175–76
- interpersonal utility comparison, 152, 152n7
- interventionism as distortion, 129–30
- invisible hand of the market, 23, 36
- IOUs as medium of exchange, 3n7, 57–58, 74–75
- Israel, Karl-Friedrich
 economic inequalities, 134nn10–11
 hedonic price adjustments, 128n7
 inflation control, 9, 117
 Paasche and Laspeyres indices, 120n1, 121n2, 123n4
 Phillips curve, 153
 quality adjustments, impact of, 130n8
 substitution effects, 126n6
 welfare economics, 122n3
- Jevons, W. Stanley, works of
 Money and the Mechanism of Exchange, 54
- job guarantee program (federal)
 as anchor for inflation expectations, 4
 as automatic stabilizer of economy, 194
 as central to MMT framework, 4, 6–7
 cost calculation/consequences, 191–92, 203–4
 deficits as tool for full employment, 117–18
 fiat currency as prerequisite, 194–95
 government and, 191
 job guarantee program (federal) (*continued*)
 monetary sovereignty/money creation and, 193–94
 as redistribution of private sector resources, 190
 vs. unemployment compensation, 192, 202–5
 as value destroying, 203, 203n4
 See also idle resources doctrine/federal job guarantee; idleness, types of
- Jones, A. H. M., 147n6
- Kalecki, Michal, 173
- Kane, Richard E., 100, 102–3, 102n9
- Karr, Jean-Baptiste Alphonse, 91
- Kelton, Stephanie, 1–2
 chartalism vs. ahistorical barter narrative, 167
 deficits and inflation, 117–18
 deficits as myth, 160–61
 federal jobs/idle resources, 152, 159
 monetary sovereignty, 166–67
 political reasons, economics based on, 180–81
 private sector growth vs. deficits, 68, 70–71, 89, 148, 171n2
 production and private sector capacity, 154
 resource restraints vs. scarcity, 176
 spending, importance of public, 43, 149–50, 158
 “their red ink is our black ink,” 3, 68, 86, 143, 148
 value creation vs. money, 155
- Kelton, Stephanie, works of
 “Big Myth of Government Deficits, The” (TED Talk), 2, 149
 Deficit Myth, The, 2, 141–43, 156–57

- Kelton, Stephanie, works of (*continued*)
Finding the Money (documentary), 2
 “Just Use ‘the Computer’ at the Fed to Give People More Money,” 12
- Kemmerer, Edwin W., 55n6
- Keynes, John Maynard, 172–73, 192, 195
- Keynes, John Maynard, works of
General Theory, 61
- Keynesian economics (New/post-)
 automatic stabilizer policies, 194
 economic privilege, 165
- Kennedy and Johnson administrations, 61
- MMT and, 76–78, 80–82, 88, 91–93
 school of, 1, 1n2, 58
 structure of production, 102, 105, 112, 172–73
- King, J. E., 166
- Kirzner, Israel, 120, 173n4
- Klein, Peter G., 11–12
- Knapp, Georg Friedrich, 22n5, 167
- Knight, Frank H., 173, 173n4
- Koning, J. P., 6–7n9
- Krugman, Paul, 76, 85n7
- Kuznets, Simon, 9, 99–100, 101–2, 103–4, 112
- Latsos, Sophia, 134n10
- Laughlin, J. Laurence, 50, 62n9
- Leemans, W. F., 27, 35n25
- Lepenes, Philipp, 103, 103n10
- Lerner, Abba, 1, 85n7, 92
- Lerner, Abba, works of
 “Money as a Creature of the State,” 22
- Machlup, Fritz, 171–72, 171n3, 173n4, 178
- macroeconomics
 government’s financing of expenditure, 82–84
 inflation and, 131
 as new discipline, 61
 overlapping generations (OLG) model, 84–85
 price increases vs. monetary/fiscal policies, 91
- Mai, Ludwig H., 53n5
- malinvestments and government spending, 97, 97n4
- Marcuss, Rosemary D., 100, 102, 102n9
- Martín Hernández, Carlos, 30
- Mason, Will E., 47n2, 48
- Mawhorter, Joshua, 165, 172, 180–82
- Mazzucato, Mariana, works of
Entrepreneurial State, The, 160
- McCaffrey, Matthew, 93–94
- McCann, Charles R., 62n10
- McCloskey, Deirdre Nansen, 160
- Meadows, Andrew, works of
 “Coinage,” 30
- medium of exchange. *See* money
- Menger, Carl, 147, 167
- Menger’s origin of money theory
 barter as origin, 7, 18, 34, 34n19
 as counter to chartalism, 6–7, 17–18, 36
 definition/explanation of, 18
 historical/archeological validation of, 25, 36
 indirect exchange (vs. barter), 19–20, 23
 media of exchange/money, development of, 20–21, 24, 35, 35n24
 saleableness/marketability of goods (*Absatzfähigkeit*), 19, 21

- Mesopotamia. *See* origins of money
in Mesopotamia/Ur III
- metallism/precious metals as money,
21, 21n4, 24–25, 33–34, 48, 51, 61
- Michener, Ron, 168
- Mill, James, 46, 48n3, 51
- Mill, John Stuart
cost of production theory, 47
money as commodity vs. token
for goods, 45–46, 48–49
proportionality doctrine, 49–50
rapidity of circulation/efficiency of
money, 50
spending illusion, 48–51
- Miller, Merton H., 81–82
- Mingardi, Alberto, 160
- Minsky, Hyman, 1, 1n5, 76
- Mises, Ludwig von
business cycle theory, 5–7
calculation problem, 158, 174,
177, 181
capital consumption as destruc-
tionism, 178–79
capital structure, importance of,
171–72, 171n3
monetary adjustment process,
43–44
monetary expansion, varying of,
131
monetary theory, 147
money as commodity, 45–46, 48
money as tool to express prices,
147
money illusion and, 42n1
price level/inflation, calculation
of, 124
production goal, 157–58
regression theorem, 18n2, 62n10, 167
socialism, critique of, 7, 14, 182–83
value creation and government
spending, 150–51, 155
- Mises, Ludwig von, works of
Human Action, 175
Theory of Money and Credit, *The*, 177
- Mitchell, Bill (William)
debt monetization, 105, 109
deficits and private sector growth,
68–71, 91–93, 96, 105, 109,
171n2
GDP, 99n8
idle resources doctrine/federal
job guarantee, 151–52, 153n8,
159–60, 191
- Mitchell, Bill (William), works of
Modern Monetary Theory, 68–69
- MMT (modern monetary theory)
accounting tautologies, 8, 71–73,
88
Austrian School, (dis)agreements
with, 5–7, 137
calculation problem (creation of
value), 158, 174, 177, 181
capital as self-sustaining fund
theory, 172–73, 173n4
covid crises and, 12–14
definition of, 2–4
job guarantee program, 4, 6–7
Keynesian theories and, 76–78,
80–82, 88, 91–93
quantity theory and, 43, 60
spending illusion, 8–9, 42, 52, 60
structure of production, 105–8,
106n12, 107f, 109f, 110–11, 111f
us (private sector) vs. them (gov-
ernment), 143
- MMT and inflation control/management
asset prices vs. consumer goods,
131–33

- MMT and inflation control/management (*continued*)
 consumption bundle/basket, 126–27
 deficits and, 117–18
 electoral pressures vs. economic measures, 135–37
 Haberler's theory of inflation measurement, 120–24
 hedonic price adjustments for quality changes, 128–29, 128n7, 130n8
 income/substitution effects, 125–26
 interventionism as distortion, 130
 Paasche and Laspeyres indices, 120–21, 123–25, 127
 price and, 4, 14
 price inflation rate calculation, 118–20, 130, 137
 real wealth growth and economic inequalities, 134, 134nn10–11
 speculative investments/bubbles, 8, 132–33
 subjective value theory, 121–22, 127
 underlying preferences as variables, 9, 122–24, 130
- MMT and prices/value
 calculation problem, 158
 capital consumption, policy induced, 174–77
 capital creation/depletion and government, 177–78
 demand creation via government spending, 158–59, 161
 idle-resources fallacy, 159
 net dissaving, 174
 opportunity cost vs. net contribution of projects, 160
 prices as exchange ratios, 9
 public choice, 158
- MMT and prices/value (*continued*)
 real economy expression as price, 9, 144–47, 154, 156
 resource restraints and scarcity of capital, 176
 value creation, 150–52, 153n8, 154–55, 158–59, 161
- MMT and privilege
 computation problem, 180
 economic calculation as calculational chaos, 181–82
 economic destructionism, 165, 177–79
 US dollar as world's major reserve currency, 9–10, 178–79
- MMT concepts
 capital structure, importance of, 170–74, 171n3, 176
 deficits, function of, 70–72, 117–18
 deficits as surplus of private sector (net financial assets), 70–76, 70n1, 144–45, 147–48, 153, 171n2
 focus on sectors vs. processes in private sector, 9, 147, 153
 IOUs, 57–58, 74–75
 job guarantee program as redistribution of private sector resources, 190
 monetary theory, 147
 money as accounting tool, 57, 59, 176
 net zero balance, 72–73
 net zero nature of exchange, 144–45
 overlapping generations (OLG) model, 84–86n8, 85n7
 production increase vs. money supply, 146
 production/capital accumulation and economic growth, 9, 171–73, 176

- MMT concepts (*continued*)
 public debt as safe assets, 76–77, 80–82, 86, 176
 sectoral balance approach, 8, 9, 67, 70–77
See also government, role of; government spending; idle resources doctrine/federal job guarantee; idleness, types of
 modern monetary theory (MMT).
See MMT
- Modigliani, Franco, 81–82
- monetary adjustment process, 43–44
- monetary expansion, 13, 131, 133
- monetary history of USA
 barter history and commodity standards, 167–69
 vs. chartalism, 167–68
 as issuer of world's dominant currency, 9–10, 165–66, 174, 178–79
 privilege due to robust capital structure, 166, 169–70, 174
See also fiat money/currency
- monetary sovereignty
 allows spending via money creation, 193–94
 vs. chartalism, 169
 countries with, 166–67, 174, 193
 governments as, 3–4, 3n7
 job guarantee program and, 193–94
 malinvestments (squandering capital/inflation), 178
 as privilege, 9–10, 167, 169–70, 183
See also bankruptcy and government
- money
 chartal, 22, 22n5
 as commodity vs. token for goods, 45–46, 48–49
 as creation of the state, 36
 definition of, 23, 141n1
- money (*continued*)
 fiat currency, 2, 5, 12, 14, 20, 23–24, 23n8, 35–36, 58, 117, 141, 141n1, 194–95
 government “spending money into existence,” 57–58, 148–51, 157–58
 historical development in Mesopotamia, 24–25
 introduced through government spending (IOUs)/taxation, 57–58
 purchasing power of money (PPM) and, 181–82
 as tool to express prices, 147
 as unit for debt, 25
 value determined by cost of production, 47, 53
- moneyiness of currency, 142
- Moorey, P. R. S., 35n21
- Mosler, Warren, 1, 59, 59n7, 152–53, 155–57, 191
- Mosler, Warren, works of
Finding the Money (documentary), 2
Modern Monetary Theory, 68–69
- Mueller, Antony P., 173, 175, 178
- Mundell, Robert A., 86
- Murphy, Robert P., 8, 33n16, 67, 85n7, 169, 171n2
- National Bureau of Economic Research (NBER), 100–101
- National Income Division (of Department of Commerce), 102, 102n9
- Near East economy. *See* origins of money in Mesopotamia/Ur III
- neoclassical monetary theory (NMT). *See* NMT
- Nersisyan, Yeva, 1–2, 13, 166
- net dissaving, 174

- net financial assets, 70–76, 70n1, 144–45, 147–48, 153
- Newcomb, Simon, 55n6
- Newman, Jonathan R., 1, 17, 147
- Newman, Patrick, 9, 91, 106, 172–73, 175
- Newton, Bernard, 53n5
- Nicholson, Joseph Shield, 42, 52–53, 52n4
- Nies, James B., 25–26, 28
- NMT (neoclassical monetary theory) vs. CMT, 8
- marginalist/subjective-value economists and, 62, 62n9
- peculiarity of money and, 56
- purchasing power determined by spending, 52
- spending illusion and, 52, 60, 62–63
- See also* Fisher; Nicholson; Walker
- nonprofits, 95n1, 192
- North, Douglass C., 146n5
- O'Brien, Ellen, 99n7, 104n11
- Ocasio-Cortez, Alexandria, 2, 180–81
- OLG (overlapping generations) model, 84–86n8, 85n7
- origins of money in Mesopotamia/Ur III
- barter as origin, 18, 34, 34n19
- clay cuneiform documents, 24–27, 34, 35n24
- coin use and, 30–31, 33–34
- hacksilver as money, 24–30, 31–34
- indirect exchange (vs. barter), 19–20, 23
- media of exchange/money, development of, 20–21, 24, 35, 35n24
- overlapping generations (OLG) model, 84–86n8, 85n7
- Paasche and Laspeyres indices, 120–21, 120n1, 121n2, 123–25, 123n4, 127
- Packard, Mark D., 155
- Palley, Thomas, 165–66
- Pandemic Response Accountability Committee, 191
- Paoletti, Paola, 27, 34, 35n23
- payment-in-kind system, 34
- payment price principle, 101–2
- Peyronel, Luca, 28–30
- Phillips curve, 4, 153, 153n8
- political reasons, economics based on, 135–37, 147–48, 180–81
- Polleit, Thorsten, 12
- Ponzi game, 85–86n8, 85n7, 88
- post-Keynesianism, 1n2
- Powell, Marvin A., 30n12, 32, 32n14, 34, 34n19, 35nn20–21
- PPM (purchasing power of money), 12, 42–43, 45–48, 50–55, 59, 62, 125, 181–82
- PPR (private product remaining), 98–99, 99n6, 104–5, 108, 110
- praxeology, 94
- precious metals as money/metallism, 21, 21n4, 24–25, 33–34, 48, 51, 61
- price as determinator of spending. *See* spending
- price level/rate of price inflation, 120–25
- private product remaining (PPR), 98–99, 99n6, 104–5, 108, 110
- privilege, economic. *See* MMT and privilege
- proportionality doctrine, 49–50, 55
- purchasing power of money (PPM), 12, 42–43, 45–48, 50–55, 59, 62, 125, 181–82

- pure interest rate and government spending, 109–11
- quantity theory, criticism of, 8, 41–44, 48–56, 60–62, 62n9
- Radford, R. A., 147
- Rahmstorf, Lorenz, 30–31, 33n17
- Raico, Ralph, 172
- rapidity of circulation/efficiency of money, 50–51, 53–56
- Read, Leonard, works of
“I, Pencil,” 170
- regression theorem, 18n2, 62n10, 167
- Reilly, Chandler S., 99n6
- retrogression and government spending, 112
- Ricardo, David, 45–46
- Robinson, James A., 146n5
- Roosevelt, Franklin D., 102
- Roper, Don, 53–54
- Rothbard, Murray N., 5, 21
Austrian business cycle theory, 131
calculational chaos, 181–82
capital structure, importance of, 171–74, 171n3
catallactics, science of monetary exchanges, 94–97, 95n2
debt monetization, 105
demonstrated preference, 122n3
GNP calculation, difficulties of, 9, 103–4, 112
GNP vs. PPR, 98–100, 99n6, 104–5
government, role/influence of, 92–95, 104, 109–10, 147–48
Kuznets and, 100–102
monetary expansion within economy, 131
- Rothbard, Murray N. (*continued*)
monetary history of USA, 168
presentist approach, 23n7
structure of production, 105–7
subjective value, 180
taxation as consumption, 96–99
- Rothbard, Murray N., works of
Man, Economy, and State with Power and Market, 170–71, 177
- safe assets, public debt as, 76–77, 80–82, 86, 176
- Salerno, Joseph T., 8, 11, 41, 61n8, 109–10
- Samuelson, Paul, 85–86n8, 121n2, 122n3
- Sandström, Christian, 160
- scarcity, 9, 141, 146–47, 161, 173, 175–76
- Schnabl, Gunther, 126n6, 128n7, 130n8, 134n11
- Schwartz, Anna, works of
Monetary History, 61
- Scott, William Amasa, 62–63, 62nn9–10
- Selgin, George, 6–7n9
- Semenova, Alla, 17–18, 22n5, 23, 34
- Senior, Nassau, 47–48, 51
- Sharlach, Tonia M., 25, 33, 33n18
- Skousen, Mark, 107, 109–10
- Smith, Adam, 142, 146
- sovereignty. *See* monetary sovereignty
- spending
monetary adjustment process, 43–44
value/quantity of money, 44–45
See also government spending
- spending illusion
CMT and, 48–51

- spending illusion (*continued*)
 inflation as result of monetary policy, 42, 42n1
 IOUs as medium of exchange, 57–58
 in Kennedy and Johnson administrations, 61
 MMT and, 8–9, 42, 52, 60
 money as accounting unit, 57, 59
 money illusion, 41, 42n1
 NMT and, 52, 60
 state spending and purchasing power/
 value of currency, 59–60, 59n7
 warning against, 62–63, 62nn9–10
 stabilization (of price). *See* job guarantee program
 Stettner, Andrew, 205
 structure of production and debt
 monetization, 105–8, 106n12, 107f, 109f, 110–12, 111f
 substitution effects, 119, 125–26, 126n6
 Sumerian Third Dynasty of Ur (Ur III). *See* origins of money in Mesopotamia/Ur III

 Tankus, Nathan, 12–13, 70n1
 Taylor, Lance, 167
 “their red ink is our black ink,” 3, 68, 86, 143, 148
 Thomas, Robert Paul, 146n5
 Thompson, Christine M., 28–29, 31, 35n21
 Thornton, Mark, 11
 Tlaib, Rashida, 12–13
 Tobin, James, 83, 86–87
 Tullock, Gordon, 135, 158
 Tymoigne, Eric, 6–7n9, 76, 175–77, 180–81

 Ur III/Sumerian Third Dynasty of Ur. *See* origins of money in Mesopotamia/Ur III
 US Department of Labor, 203
 US dollar as world’s major reserve currency, 9–10, 178–79
 US monetary history. *See* monetary history of USA
 US Treasury, 6–7n9, 12–13

 Viner, Jacob, 46

 Walker, Francis Amasa, 42, 53–55
 Wallis, John Joseph, 101
 Wandner, Stephen A., 205
 Watson, Michael V. Szpindor, 22–23n6
 Watts, Martin, 92–93, 96, 105, 109
 welfare programs as pay for idleness, 122n3, 192, 202–5
 See also idleness, types of; job guarantee program
 Wennberg, Karl, 160
 Wicksteed, Philip, 62n9
 Wray, L. Randall, 1–2, 13, 18
 capital, control of, 176–77
 chartalism, 21–22, 167–69
 debt monetization, 105, 109
 government, role of, 135, 175–76
 government vs. private sector (net financial assets), 144, 148
 Graeber and, 31, 31n13
 homo economicus, 23
 Innes and, 27
 job guarantee proposal, 190–94, 205–6, 207–8
 Menger’s origin of money theory, 23–24, 36

- Wray, L. Randall (*continued*)
Mesopotamia/Ur III, 25, 27,
30n12, 35
money/IOUs as accounting units,
57
state spending and value of cur-
rency, 58–59, 59n7, 91–93, 96,
105, 109, 166
us (private sector) vs. them (gov-
ernment), 143
- Wray, L. Randall, works of
Finding the Money (documentary),
2
Modern Money Theory, 157
Understanding Modern Money, 23

