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Inflationary Pressures in the Time of Covid-19: *MMT as a Theory of Inflation*

Andrés Bernal

Research Fellow, Global Institute for Sustainable Prosperity

Lecturer, City University of New York

Doctoral Student, The New School for Public Engagement

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Abstract

According to Modern Monetary Theory (MMT), the only constraint on public spending for a currency issuing authority like the United States government is inflation. This paper develops an alternative understanding and analysis of economic inflation through the lens of MMT in the aftermath of the Covid-19 public health crisis and consequential economic shutdown and reopening. It argues that conventional explanations of inflation remain ideologically constricted to an outdated social theory and conceptual framing. As such, public policy responses to contemporary price increases are limited in scope and incapable of neither effectively stabilizing prices nor avoiding the worsening of social inequities and harm. The paper will first develop MMT's insights about inflationary pressures as a theory of qualitatively determined resource use, costs, and political coordination, as opposed to a collapse in the value of money from excessive public spending. An analysis of price pressures throughout 2021 is then provided by examining supply chains, industry specific shocks, and market power. Lastly, inflation is explored in the context of an ongoing planetary climate and environmental crisis with deep implications about the future of sustainability, economic development, and price stability.

Keywords: money, neochartalism, Modern Monetary Theory, heterodox economics, Green New Deal, inflation, critical theory, social theory, accounting, critical management studies, supply chains, geopolitics, climate change, biophysical resources, ecological economics, sustainability, law, governance, public finance, fiscal, monetary, coordination, public administration

JEL Codes: A1, B0, B1, B2, B3, B4, B5, D2, D4, E0, E2, E3, E4, E5, E6, F3, F5, F6, G2, G3, H0, H6, K0, Z1

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Reports of rising prices have popped up in recent months as the US economy continues to reopen in the wake of the Covid-19 pandemic. While fiscal policy has largely been successful in stabilizing communities from the pandemic's impact,[1] inflation as a direct consequence of the Federal government's stimulus nevertheless remains negligible.[2] Instead, a combination of industry-specific shocks and disrupted supply chains has led to bottlenecks, delayed cargo ships, and shortages which have resulted in price surges. We've also observed periods where, contrary to alleged iron-clad laws of supply and demand, prices have stayed the same despite shortages,[3] as well as growing evidence that major corporations have wielded heightened inflation concerns as a pretext to raise prices to increase profit margins independent of costs.[4]

In the midst of current "inflation" anxiety that has already debilitated President Biden's Build Back Better agenda[5] and set a course for interest rate hikes in 2022 and beyond,[6] it's important to develop a coherent inflation theory and appropriate evaluation and management strategy that can separate insight from nonsense so that we don't lose sight of the real crises we face: a public health crisis, infrastructure and supply-chain resilience, climate change disruptions, neo-feudal inequality, and structural racism. All of this will require *more* targeted public investment, not less, to both address our most pressing problems and stabilize the economy. In truth, financing is not the real issue, but

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[*] Mike Lewis provided research support for this Working Paper.

[1] Stephanie Kelton, "The Bright Side of Higher Inflation," *The Lens*, October 24, 2021, https://stephaniekelton.substack.com/p/the-bright-side-of-higher-inflation

[2] Regis Barnichon, Luiz E. Oliveira, and Adam H. Shapiro, "Is the American Rescue Plan Taking Us Back to the '60s?," Federal Reserve Bank of San Francisco, October 18, 2021, https://www.frbsf.org/economic-research/publications/economic-letter/2021/october/is-american-rescue-plan-taking-us-back-to-1960s/

[3] Nathan Tankus, "The New Frontier: Debating Inflation," *Notes on the Crisis*, March 9, 2021, https://www.crisesnotes.com/the-new-frontier-debating-inflation/

[4] David Dayen, "Fighting the Inflation Profiteers," *The American Prospect*, November 24, 2021, https://prospect.org/economy/fighting-the-inflation-profiteers-biden-kennedy/

[5] Adam Johnson, "Build Back Better Is Shelved, DOD Budget Is Rubber Stamped, Pelosi Defends Congress Trading Stock, and Our Media Asks: Why Are Voters Cynical?" *The Column*, December 15, 2021, https://thecolumn.substack.com/p/build-back-better-is-shelved-dod?justPublished=true&fbclid=IwAR1pW6EYdIPg152zn3J0e2ZtHobcH4EYdsCx3_pEtGRpbFpPd8VX4v7brVE

[6] Board of Governors of the Federal Reserve System, "Federal Reserve Issues FOMC Statement," Press Release, December 15, 2021, https://www.federalreserve.gov/newsevents/pressreleases/monetary20211215a.htm

rather it is the resourcing involving the country's productive capacity as well as the politics of resource and cross-sector administrative governance that matter. This article argues that the Modern Monetary Theory (MMT) movement has put forward the most coherent approach to inflation and that adopting this approach will enable us to fight off corporate greed and the usual suspects[7] who are using this moment to hammer their agenda of failed monetary policy and crushing austerity.[8]

An MMT Theory of Inflation

MMT describes how monetary economies work and prescribes how to best apply public policy and investment based on productive capacity, available resources, and price stability. It recognizes that currently, different countries have a spectrum of agency[9] over currency issuance. For example, individual European nation-states gave up their monetary issuing capacity when they adopted the Euro.[10] Other nations have adopted a fixed exchange rate, pegged their currency, or have accumulated external debt denominated in foreign currencies. What we call the national debt here in the US is really just an interest-bearing savings representing the total sum spent into the economy that has yet to be taxed back in the form of treasury bonds. Crucially, the federal government does not issue these bonds because it needs to "borrow" in order to spend.[11] Issuing public debt in the first place is a policy choice that is made primarily so the Fed can drain reserves out of the banking system in order to hit its interest rate target.[12] It is, therefore, not necessary to issue public debt for our government to spend.[13]

So, what is inflation, and how should it be managed? Oxford's definition reads, "a general increase in prices and fall in the purchasing value of money."[14] With that said, it is important to note that the orthodox inflation management approach relies on a set of outdated tools built on a shaky foundation of myths and assumptions disguised as natural laws—namely, using deficit reduction,

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[7] Chris Anstey, "Summers Urges Fed to Signal Four '22 Hikes to Regain Credibility," *Bloomberg*, December 3, 2021, https://www.bloomberg.com/news/articles/2021-12-03/summers-urges-fed-to-signal-four-22-hikes-to-regain-credibility?sref=cv51C53O

[8] The Editorial Board, "Joe Manchin's Inflation Vindication," *Wall Street Journal*, December 11, 2021, https://www.wsj.com/articles/joe-manchins-inflation-vindication-consumer-prices-rise-build-back-better-joe-biden-11639171900

[9] Will Beaman, "Money Beyond Sovereignty (Essay)," *Money on the Left*, March 23, 2021, https://moneyontheleft.org/2021/03/23/money-beyond-sovereignty-essay/

[10] Wynne Godley, "Maastricht and All That," *London Review of Books*, October 8, 1992, https://www.lrb.co.uk/the-paper/v14/n19/wynne-godley/maastricht-and-all-that

[11] Stephanie Bell (Kelton), "Working Paper No. 244: Can Taxes and Bonds Finance Government Spending?," Levy Economics Institute of Bard College, July 1998, https://www.levyinstitute.org/pubs/wp244.pdf

[12] Bill Mitchell, "There is no need to issue public debt," Bill Mitchell - *Modern Monetary Theory Blog*, September 3, 2015, http://bilbo.economicoutlook.net/blog/?p=31715

[13] Mint The Coin, https://mintthecoin.org/

[14] Nigar Hashimzade, Gareth Myles, and John Black, "Inflation", *A Dictionary of Economics* (5th edition), Oxford University Press, 2017, https://www.oxfordreference.com/view/10.1093/acref/9780198759430.001.0001/acref-9780198759430-e-1593?rskey=gNr92P&result=1

unemployment, and tighter monetary policy. In contrast, MMT's inflation approach shifts the focus toward balancing the overall economy's productive capacity, enacting smarter fiscal policy, using a federal job guarantee to maintain full employment, and improving market, credit, and financial regulation. As a social movement of scholars and advocates, this approach has been taken through a normative and democratic framing of meeting social environmental objectives and human needs.

In the orthodox view, prices are understood as driven by natural forces of supply and demand, and so the introduction of new money is seen as an intrusion that can only raise prices. Although we have pretty good tools for measuring price changes within specific industries, inflation measures are imperfect because we cannot accurately calculate "the price level" across the entire spectrum of goods and services produced in an economy. Even the Federal Reserve admits that it has "no reliable theory of inflation."[15] What we actually have are proxy measurements observable by looking at changes in prices across a basket of goods such as the Consumer Price Index[16] (CPI) released by the Bureau of Labor Statistics or the Fed's preferred inflation measurement of Personal Consumption Expenditures[17] (PCE) by the Bureau of Economic Analysis. Far from natural or neutral, a price index is a socially constructed indicator that variously includes and excludes prices that may affect various communities and industries differently. For instance, mainstream news headlines usually focus on "core CPI", which does not include the more volatile food and energy sectors, and historically measures higher than PCE.[18] What we include or exclude is something socio-politically determined which can and does change over time.

Importantly, MMT argues that prices in the real world do not follow law-like functional relationships with quantity. Instead, as pointed out in the work of Frederic Lee, firms set prices based on administrative processes[19] involving a margin over costs intended to support their long-term stability and reproduction. Further, price setting occurs within the broader legal and monetary conditions set by public authorities. This insight stems from interdisciplinary research about governance,[20] cultural mediation,[21] and rulemaking preceding and bringing forth economic institutions such as markets and property as opposed to a world premised on methodological

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[15] Sam Fleming, "Fed has no reliable theory of inflation, says Tarullo," *Financial Times*, October 4, 2017, https://www.ft.com/content/a5438cce-a933-11e7-ab55-27219df83c97

[16] "Consumer Price Index," U.S. Bureau of Labor Statistics, https://www.bls.gov/cpi/

[17] "Personal Consumption Expenditures," U.S. Bureau of Economic Analysis, https://www.bea.gov/data/personal-consumption-expenditures-price-index

[18] Sara Millington and Joseph G. Haubrich, "PCE and CPI Inflation: What's the Difference?," Federal Reserve Bank of Cleveland, April 17, 2014, https://www.clevelandfed.org/newsroom-and-events/publications/economic-trends/2014-economic-trends/et-20140417-pce-and-cpi-inflation-whats-the-difference.aspx

[19] Scott Ferguson, Maxximilian Seijo, and William Saas, "Inflation & the Politics of Pricing with Nathan Tankus," *MR Online*, June 19, 2019, https://mronline.org/2019/06/19/inflation-the-politics-of-pricing-with-nathan-tankus/

[20] Christine Desan, Making Money: Coin, Currency, and the Coming of Capitalism (Oxford, 2014; pubd online Jan. 2015). Oxford Scholarship Online, http://dx.doi.org/10.1093/acprof:oso/9780198709572.001.0001 accessed 15 Dec. 2021.

[21] Scott Ferguson, *Declarations of Dependence: Money, Aesthetics, and the Politics of Care*. University of Nebraska Press, July 2018.

individualism and self interested trade as the primordial building block of social life.[22] [23] In short, the price-setting process has always involved social determinations and political institutions all the way down.

Rising costs play a vital role for understanding prices. As an example, when thinking about costs, the cost of credit is critical.[24] Hiking interest rates at the Federal Reserve raises the cost of credit and can actually contribute to inflationary pressure. Yet this remains the "common sense" approach to many for lowering inflation regardless of the costs on communities: especially working class, impoverished and historically marginalized communities of color. In fact, economists like Jason Furman, professor at Harvard's Kennedy School of Government and former chair of the Council of Economic Advisors under President Obama, admittedly never even considered that raising interest rates might actually *increase* inflation.[25] Another important cost input is labor, the price of which cannot be separated from political processes such as setting investment priorities, the distribution of income and wages, how we manage productive constraints, who has control over primary infrastructures such as energy or communications, and how we account for the resources and the social conditions through which we all participate in the provisioning of goods and services. As economist Erich Walter Zimmermann noted, resources themselves do not refer to objective things, but rather contingent relationships between cultural, socio-technical, institutional, and natural variables.[26] In other words, "resources are not, *they become*".

More of these insights can be found in accounting scholarship. For example, Professor Paolo Quatrrone traces the genealogy of accounting as a form of social discernment that grapples with the work of collecting and distributing value. Far from the recent neoliberal shift that treats accounting as a positivist practice of purely technical, neutral calculations most often at the behest of profits, Quatronne likens accounting to a social mirror that, through enumerating and record keeping, reflects back our decisions and their consequences. As such, accounting guides normative and generative sense-making and affordances within organizational life and an economy at large. As he states of accounting's origins on an episode of the *Money on the Left* podcast[27], "numbers were means to explore the ambiguity of life. They were means to explore the mystery of value. They were means to explore how we always deal with uncertain situations".

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[22] David Graeber, *Debt: The First 5,000 Years*. Melville House, 2011.

[23] Karl Polanyi, *The Great Transformation: The Political and Economic Origins of Our Time*. Boston, MA: Beacon Press, 2001.

[24] Greg Hannsgen, "Minsky's Acceleration Channel and the Role of Money," *Journal of Post Keynesian Economics*, Vol. 27, No. 3 (Spring, 2005), pp. 471-489 (19 pages), https://www.jstor.org/stable/4538939?seq=1

[25] Jason Furman, Twitter, April 8, 2021, https://twitter.com/jasonfurman/status/1380156054722449422?s=20

[26] Thomas R. De Gregori, "Resources Are Not; They Become: An Institutional Theory," *Journal of Economic Issues*, Vol. 21, No. 3, Evolutionary Economics I: Foundations of Institutional Thought (Sep., 1987), pp. 1241-1263 (23 pages), https://www.jstor.org/stable/4225924

[27] Money on the Left, "The Metaphysics of Accounting with Paolo Quattrone," Money on the Left, December 1, 2021, https://moneyontheleft.org/2021/12/01/the-metaphysics-of-accounting-with-paolo-quattrone/

From this framing, the notion of *cost* moves from a purely nominal reflection of commercial encounters and an "efficient" market, to a contingent and dynamic social representation of productive capacity and social structure along with objectives and valuations that mediate both firms and the economy. We know from MMT 101 that it is always possible to invest public money towards deeper and more resilient capacities. But this also impacts the way we work with particular raw materials as well as our ability to innovate and improve the conditions required to create energy, agriculture, housing, healthcare, art, and more. Thus, budgets and prices can be thought of as a collective representation of our societal priorities and political imagination across public, private, or cooperative sectors. Currently, the political process of price setting is overwhelmed by neoliberal disinvestment, corporate greed, and monopolization, but it does not have to be this way.

According to the orthodox lens, when the government spends it is supposed to mechanistically drive inflationary pressures up, just as gravity[28] pulls objects toward each other. To unpack why this view is wrong, we have to look at what orthodox economists misunderstand about money in the first place. The orthodoxy clings to the myth[29] that money originated from barter and exists as a scarce private commodity that passively facilitates market encounters. Therefore, governments have to go out and find it, usually from "taxpayers,"[30] to finance themselves. By contrast, MMT insists that money has, for thousands of years, primarily come from public authorities as a unit of account used to provision resources, settle legal disputes, establish a payment system, and coordinate social obligations such as taxation, fees, and fines.

In this sense, markets and labor are inseparable from the mediating dimensions of law and money as a kind of meta-governance. Money is therefore an infinite public utility of monetary production that is only limited by the real resource capacity of the economy and the stability of its prices. The conventional story ignores what we actually do with money: we spend it to consume as a claim on labor and use prices to determine purchasing power. The risk of inflation has less to do with the value of bills or numbers representing a currency, and more to do with whether an economy can handle people's spending in specific industries as well as how costs are distributed. This can also involve the ability of private monopolists to raise prices and increase profits with little to no accountability. As Fadhel Kaboub explains[31], "what drives inflation in the U.S. today is four major areas: housing, college education, energy, and healthcare". These are all of course notoriously privatized sectors.

[28] Scott Ferguson, "Money's Laws of Motion," *Arcade at Stanford*, https://arcade.stanford.edu/blogs/moneys-laws-motion

[29] Christine Desan, "Creation Stories: Myths About the Origins of Money," Harvard Public Law Working Paper No. 13-20, Posted: 17 Apr 2013, Last revised: 30 Jul 2013, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2252074

[30] Vanessa Williamson, "The Austerity Politics of White Supremacy," *Dissent Magazine*, Winter 2021, https://www.dissentmagazine.org/article/the-austerity-politics-of-white-supremacy

[31] Lizzy Francis, "What Is Modern Monetary Theory? An MMT Theorist Explains," *Fatherly*, March 4, 2019, https://www.fatherly.com/love-money/modern-monetary-theory-economy-green-new-deal/

MMT's insights mean that for our government, anything we can resource, we can afford. Of course, for centuries this power has been used to conquer, control, colonize, and pick winners and losers[32] while the masses have been bombarded with propaganda such as Margaret Thatcher's infamous dictum, "There is no such thing as public money; there is only taxpayers' money," a dangerous myth in its own right.[33]

In one story, the scarcity of money traps us into a contracted zero-sum nightmare in which the only way to fund our agenda is by procuring tax revenues from the wealthy. As Scott Ferguson of MMT's *Money on the Left* Editorial Collective points out,[34] "The scarcity mindset in truth tethers ongoing social spending to the perpetuation of extractive private profits and fosters resentful and divisive nationalisms, as everyone fights to get theirs in the face of a government that simply cannot afford to serve all. Far from a winning strategy, these zero-sum politics are a recipe for perpetual neoliberalism, if not outright fascism." This framework is also what makes the aspirations of the cryptocurrency crowd so dangerous.[35] The "crypto" agenda often comes in the form of appeals to the ideological superiority of "hard money", meaning finite and scarce, but other times has a more ambitious objective to replace public fiat altogether with private actors such as Facebook's Diem.[36] This is especially pernicious when it takes the form of new developments in monetary imperialism as is the case with El Salvador further privatizing its economy over to fintech[37] or billionaire vultures[38] seeking to take over Puerto Rico's energy grid with crypto after Hurricane Maria.

When public money is reduced to the constrained function of taxing and spending it represses its true world-building capacity and lends itself to the exploits of powerful private interests. By contrast, MMT sees money as an instrument of generative production and reproduction with many more positive-sum and qualitatively unique results than the mainstream orthodoxy allows us to see.

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[32] David M.P. Freund, "Government has Always Picked Winners and Losers," *Washington Post*, March 29, 2021, https://www.washingtonpost.com/outlook/2021/03/29/government-has-always-picked-winners-losers/?fbclid=IwAR2hCtqPTFn8v1kCNWy88tW7VpkMr42wBWGXaNxhf6wrkitKUwzFn0nbIvc

[33] Raúl Carrillo & Jesse Myerson, "The Dangerous Myth of 'Taxpayer Money'," *Splinter*, October 19, 2017, https://splinternews.com/the-dangerous-myth-of-taxpayer-money-1819658902

[34] Scott Ferguson, Twitter, January 1, 2020, https://twitter.com/videotroph/status/1212464970614681601?s=20

[35] Scott Ferguson, Maxximilian Seijo, and William Saas, "Digital Money Beyond Blockchain with Rohan Grey," *Money on the Left, MR Online*, July 1, 2021, https://mronline.org/2021/07/01/digital-money-beyond-blockchain-with-rohan-grey/

[36] Michael Garbade, "One currency to rule them all: Facebook's Diem has global ambitions," *Cointelegraph*, October 10, 2021, https://cointelegraph.com/news/one-currency-to-rule-them-all-facebook-s-diem-has-global-ambitions

[37] Tomio Geron, "The companies powering El Salvador's new bitcoin economy," *Protocol*, September 7, 2021, https://www.protocol.com/fintech/el-salvador-crypto-economy

[38] Luke Ottenhof, "Crypto-Colonialists Use the Most Vulnerable People in the World as Guinea Pigs," *VICE*, June 29, 2021, www.vice.com/en/article/wx5zz9/crypto-colonialists-use-the-most-vulnerable-people-in-the-world-as-guinea-pigs

This misunderstanding of money is the root of many dangerous spillover effects, especially the idea that lowering the deficit will necessarily keep inflation in check. Orthodoxy portrays a law-like relationship between price and the quantity of money in circulation,[39] but strong evidence suggests that this is not the case.[40] A government deficit is simply a surplus for the non-government sector, so what matters much more is the distribution of that spending and the economy's ability to absorb it while maintaining price stability. As MMTers Scott Fullwiler, Rohan Grey, and Nathan Tankus explain in the seminal MMT piece on inflation:[41]

> [E]xcess demand is rarely the cause of inflation. Whether it's businesses raising profit margins or passing on costs, or it's Wall Street speculating on commodities or houses, there are a range of sources of inflation that aren't caused by the general state of demand and aren't best regulated by aggregate demand policies. Thus, if inflation is rising because large corporations have decided to use their pricing power to increase profit margins at the expense of the public, reducing demand may not be the most appropriate tool.

Another barbaric idea in the orthodox inflation playbook is the "Phillips curve," the idea that there is a natural rate of unemployment; in this view, we have to keep millions unemployed to fight an imagined "war on inflation." This highly racialized[42] policy fixture has caused astronomical human suffering,[43] reinforcing exclusionary politics to crush the long struggle of civil rights movement organizing for full employment[44] in the name of protecting society from imagined chaos, riots, and civilization breakdown. This is why MMT prescribes a job guarantee[45] to provision a low-carbon care economy.[46] A job guarantee would recognize a right to a dignified job, ensure full employment, and, as an automatic stabilizer, keep inflation in check[47] more successfully than the

[39] Zachary D. Carter, "The End of Friedmanomics," *The New Republic*, June 17, 2021, https://newrepublic.com/article/162623/milton-friedman-legacy-biden-government-spending?fbclid=IwAR28jN8X7XX7SdYA7UG4DTeQFeEC85TpolsL82qKk_Zg-j7MFgL1ZC82CTA

[40] Richard Vague, "Rapid Money Supply Growth Does Not Cause Inflation," Institute for New Economic Thinking, December 2, 2016, https://www.ineteconomics.org/perspectives/blog/rapid-money-supply-growth-does-not-cause-inflation

[41] Scott Fullwiler, Rohan Grey, and Nathan Tankus, "An MMT Response on What Causes Inflation," *Financial Times*, March 1, 2019, https://www.ft.com/content/539618f8-b88c-3125-8031-cf46ca197c64 or https://www.researchgate.net/publication/332318485_An_MMT_Response_on_What_Causes_Inflation

[42] Scott Ferguson, Maxximilian Seijo, and William Saas, "Inflation & the Politics of Pricing with Nathan Tankus," *MR Online*, June 19, 2019, https://mronline.org/2019/06/19/inflation-the-politics-of-pricing-with-nathan-tankus/

[43] Pavlina Tcherneva, "Working Paper No. 895: Unemployment: The Silent Epidemic," Levy Economics Institute of Bard College, August 2017, https://www.levyinstitute.org/pubs/wp_895.pdf

[44] Scott Ferguson, Maxximilian Seijo, and William Saas, "Job Guarantee as Historical Struggle with David Stein," *Money on the Left, MR Online*, May 27, 2018, https://mronline.org/2018/05/27/job-guarantee-as-historical-struggle-with-david-stein/

[45] Scott Ferguson, "The Unheard-of Center: Critique after Modern Monetary Theory," *Arcade at Stanford*, https://arcade.stanford.edu/content/unheard-center-critique-after-modern-monetary-theory

[46] Natan Last, "Good Forms of Collectivity: Low-Carbon Care Work and a Federal Job Guarantee," *Los Angeles Review of Books*, April 26, 2021, https://www.lareviewofbooks.org/article/good-forms-of-collectivity-low-carbon-care-work-and-a-federal-job-guarantee/

[47] Pavlina Tcherneva, "Working Paper No. 902: The Job Guarantee: Design, Jobs, and Implementation," Levy Economics Institute of Bard College, April 2018, https://www.levyinstitute.org/pubs/wp_902.pdf

"reserve army of unemployed" status quo. When we look at the economy through an MMT lens, we see that a capital strike is just an opportunity for the public sector to expand and build out deeper capacities to meet basic human needs.

Whereas mainstream inflation-management strategy relies heavily on increasing the benchmark federal funds rate target, increasing unemployment to slow down an overheating economy, MMTers understand that there is no one interest rate that can truly manage inflation. As Rohan Grey explained via social media[48]:

> Interest rate policy is a blunt tool with lots of negative side effects, by definition not targeted to the actual source of inflation, potentially counterproductive due to contradictory effects of income channel vs price channel, and usually considered to the exclusion of all else...As [Eric Monnet's] book Controlling Credit shows, this interest rate-uber-alles paradigm we've been living in for a generation wasn't natural or inevitable. It was an Anglocentric worldview imposed on the rest of the world that had previously experimented with a much wider range of tools and approaches to modulating and regulating private credit and investment, and achieving and sustaining full employment and price stability more broadly...It's time to bury interest rate supremacy with the rest of them and embrace a better, richer, and more nuanced approach to macroeconomic and monetary policy implementation.

If we learn anything from 1970s "stagflation" and the Volcker shocks,[49] it should be the dangers of using interest rate policy to the exclusion of credit and financial regulation. This framework caused lasting harm to the US economy, the labor movement, and the Global South. As Rohan Grey points out, "One way to deal with weeds in your garden is to bomb your house. That'll get rid of the weeds for sure. But only a maniac would point to gardening-by-mortar as a good idea. But that's the logic of people who use Volcker to justify IR [Interest Rate] supremacy." The Fed has made small improvements in recent years with the shift toward flexible average inflation targeting (FAIT),[50] but FAIT is still built on the same faulty foundation of interest rate supremacy.

In place of this faulty overreliance on interest rate regulation, MMTers prescribe a range of tools: replacing the budget constraint with an inflation constraint,[51] which includes evaluative measures prior to specific government spending; better long term public-private investment planning and

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[48] Rohan Grey, Twitter, April 9, 2021, https://twitter.com/rohangrey/status/1380669524773466112?s=21

[49] Rohan Grey, "RIP, Paul Volcker: The Fed Chair Who Thought We Lived Too Well," *The Nation*, December 11, 2019, https://www.thenation.com/article/archive/volcker-inflation-economy/tnamp/

[50] The FRED Blog, "From Inflation Targeting to Average Inflation Targeting," Federal Reserve Economic Data, November 9 2020, https://fredblog.stlouisfed.org/2020/11/from-inflation-targeting-to-average-inflation-targeting/

[51] Scott Fullwiler, "Replacing the Budget Constraint with an Inflation Constraint," *New Economic Perspectives*, January 12, 2015, http://neweconomicperspectives.org/2015/01/replacing-budget-constraint-inflation-constraint.html

industrial policy; and non-fiscal payfors like antitrust, credit, and financial regulation[52] and bank lending that shrinks morally depraved and destructive sectors such as the prison industrial complex[53] and the fossil fuel industry. The status quo Congressional Budget Office scoring[54] of a bill for $1T in infrastructure spending says we're good to go from an inflation standpoint as long as we offset that $1T with taxes, spending cuts, or sell-offs of state assets elsewhere. A billionaire tax could theoretically cover the trillion dollars, but that isn't necessarily going to offset inflation in the heavy construction industry. We need to look at how that $1T will be absorbed or create inflationary pressures through a range of analyses before a bill goes into motion.

As an example, Medicare For All would dis-employ resources from the private health insurance sector, lower medical service and prescription drug prices, and reemploy resources into a more efficient public insurance program. Enacting Medicare For All would be a deflationary policy and likely wouldn't need major tax hikes. Using this framework, we can think about slashing the war budget on its own obvious merits and to shift resources from war to care, not because we need strictly balanced budget dollars to finance our agenda, but because we need to see the big picture about the economy and how we're going to build it. Instituting PAYGO[55] and deficit reduction for the sake of managing inflation is clumsy and dangerous and massively undercuts the investments needed at the scale of the actual issues we face.

Since interest rates are a policy variable, and higher interest rates mean that the bond-holding class gains at the expense of borrowers, MMT prescribes setting a zero or near-zero permanent rate. Importantly, we do not have to wait around for low interest rate conditions. Critics claim[56] that low interest rates do more harm than good by fueling inequality, bubbles and asset inflation, but to prove that theory, we'd need to see more bubbles and asset inflation in low-interest environments than we do with higher interest-rate levels. This simply isn't the case. As Nathan Tankus reminds us:

[52] Brendan Greeley, "When DoJ and FCC slowed Inflation," *Financial Times*, March 28, 2019, https://www.ft.com/content/2e30057e-b0d2-357a-8a9b-9052308918f8/

[53] Raúl Carrillo, "Our Money Where Our Mouth Is," *Current Affairs*, August 14, 2020, https://www.currentaffairs.org/2020/08/our-money-where-our-mouth-is

[54] David Dayen, "Congress's Biggest Obstacle," *The American Prospect*, January 28, 2020, https://prospect.org/politics/congress-biggest-obstacle-congressional-budget-office/

[55] Pavlina Tcherneva, "Yes, the Federal Government Can Just Print Money," *In These Times*, January 3, 2019, https://inthesetimes.com/article/paygo-government-spending-raising-taxes-modern-monetary-theory-pelosi

[56] Nathan Tankus, "Rana Foroohar's Strange Case For Raising Interest Rates. Does Stringent Monetary Policy Really Produce Equality?," *Notes on the Crisis*, November 24, 2021, https://www.crisesnotes.com/rana-foroohars-strange-case-for-raising-interest-rates-does-stringent-monetary-policy-really-produce-equality/

> That's an argument that relies on misunderstanding the nature of asset price inflation and housing booms. Some of the biggest "bubbles" in the last 40+ years happened in an era of high interest rates. The 2000s were exceptional. Lax financial regulation generates an incentive to use financial institutions to generate asset price inflation regardless of the level of interest rates. It's true **falling** interest rates are a boon to asset prices but falling is different from a low **level**.[57]

If inflation were to persist, we would have plenty of effective tools on the shelf to deal with it other than the failed approach of interest rate supremacy and blind deficit reduction. We can tackle high prices at the source by simultaneously investing in deeper capacities while confronting monopolistic corporate greed and profiteering.

The orthodox view further paints a frightening picture in which excess spending leads straight to hyperinflation and societal collapse, but this narrative contradicts strong evidence[58] to the contrary.[59] Like Rohan Grey explains,[60] inflation—or a rise in prices over a fixed period of time—is a qualitatively different phenomenon than hyper-inflation, which is a spiraling price level where the value of a currency collapses. There are major structural reasons why government spending can't turn the US into Venezuela,[61] including Venezuela's mix of foreign-denominated debt that the United States does not have, its multi-tiered fixed exchange rate system,[62] internal corruption, and foreign and domestic sabotage. In yet another example, Weimar Germany faced hyperinflation not because of overspending, but because the war led to a catastrophic drop in its productive capacity while it was also deep in foreign denominated debt. Zimbabwe's hyperinflation happened in the context of a brutal war for independence, genocide, and a massive drop in agricultural productive capacity and technical know-how.

Hyperinflation hysteria often serves as an excuse to turn a blind eye to the brutality of war and the traumatic legacy of colonization and imperialism. Instead, it naturalizes these outcomes as the consequences of societies incapable of self-governance while displaying a lack of economic

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[57] Nathan Tankus, Twitter, August 30, 2020, https://twitter.com/NathanTankus/status/1300124130046599171?s=20

[58] Steve H. Hanke and Nicholas Krus, "World Hyperinflations," *CATO Working Paper*, August 15, 2012, https://www.cato.org/sites/cato.org/files/pubs/pdf/workingpaper-8_1.pdf

[59] James Montier, "Hyperinflations, Hysteria, and False Memories," *GMO White Paper*, February 2013, http://2zfrwd1id94z1yvpxlxk5mcn-wpengine.netdna-ssl.com/wp-content/uploads/2013/05/GMO-White-Paper-Feb-2013-J.-Montier.pdf

[60] Steven Grumbine, "Inflation and Neoliberalism with Rohan Grey," *Real Progressives*, March 18, 2017, https://www.youtube.com/watch?v=D3hu3rt2SOI&

[61] Fadhel Kaboub, "Why Government Spending Cannot Turn the US Into Venezuela," *In These Times*, January 7, 2019, https://inthesetimes.com/article/united-states-venezuela-modern-monetary-theory-trade-deficits-sovereignty

[62] Daniel Cancel, "A Currency Black Market Quickly Re-Emerges in the Streets of Caracas," *Bloomberg*, August 22, 2018, https://www.bloomberg.com/news/articles/2018-08-22/currency-black-market-quickly-re-emerges-in-streets-of-caracas

common sense. But MMTers who study the Global South, such as Fadhel Kaboub[63] and Ndongo Samba-Sylla,[64] have written about how countries can fight monetary imperialism[65] and eliminate foreign debt by increasing food and energy resilience as well as industrial capacity in the production of value-added goods along sustainable and equitable ends. While many of these nations possess a lower level of monetary agency due to their weaker industry and the quality of their import dependencies, they nonetheless possess domestic resources that are over-exploited and under-utilized resulting in slums and underclasses of unemployed and informal sectors. A job guarantee is thus a powerful vehicle for addressing these conditions as an automatic stabilizer that responds to urgent unmet needs, radically improves quality of life, and strengthens the economic resilience necessary to move away from deeply unequal and dysfunctional international relations.

Covid-19 Inflationary Pressures

In the decades leading up to the Covid-19 pandemic, US inflation remained historically low, typically averaging under[66] the Federal Open Market Committee's (FOMC) target of 2% year over year increase in Personal Consumption Expenditure (PCE).[67] The introduction of a deadly virus, followed by lockdowns that quarantined both people and cargo, mass layoffs and short-term economic contraction were soon met by a historic level of emergency fiscal stimulus. In 2020, supply chains faced the shock of shifting consumer demand toward household goods, away from services, travel, and leisure followed by unpredictable shocks from the slow and rocky global economic reopening in 2021. These shocks have led to a cascade of industry-by-industry bottlenecks, shortages, shipping delays, and inflationary pressures as supply chain managers seek a new global trade balance.

Importantly, backlogs and shortages did not immediately lead to price hikes in 2020,[68] as if guided by some deterministic law of supply and demand. As Nathan Tankus explained, many firms preferred to maintain confidence in their brand by not immediately hiking prices to match delays

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[63] Fadhel Kaboub, "Africa's Path towards Resilience and Sovereignty: the Real Wakanda is within Reach," *Tax Justice Network*, March 30, 2021, https://taxjustice.net/2021/03/30/africas-path-towards-resilience-and-sovereignty-the-real-wakanda-is-within-reach/

[64] Ndongo Samba-Sylla, "Neoliberalism's Colonial Origins (Essay)," *Money on the Left*, June 14, 2021, https://moneyontheleft.org/2021/06/14/neoliberalisms-colonial-origins/

[65] Scott Ferguson, Maxximilian Seijo, and William Saas, "Confronting Monetary Imperialism in Francophone Africa with Ndongo Samba Sylla," *Money on the Left, MR Online*, March 15, 2019, https://mronline.org/2019/03/15/confronting-monetary-imperialism-in-francophone-africa-with-ndongo-samba-sylla/

[66] Federal Reserve Economic Data (FRED), "Personal Consumption Expenditures Excluding Food and Energy (Chain-Type Price Index)," Updated November 24, 2021, https://fred.stlouisfed.org/series/PCEPILFE

[67] Board of Governors of the Federal Reserve System, "Why does the Federal Reserve aim for inflation of 2 percent over the longer run?" FAQs, Last Updated August 27, 2020, https://www.federalreserve.gov/faqs/economy_14400.htm

[68] Federal Reserve Economic Data (FRED), "Consumer Price Index for All Urban Consumers: All Items in U.S. City Average," Last Updated November 10, 2021, https://fred.stlouisfed.org/graph/?g=IKhE

and backlogs, both on a business to consumer and business to business level.[69] Inflationary price pressures did not begin spiking in 2021 due to a financial or accounting imbalance, too much demand or "too much money in the economy", but an imbalance on the resources and infrastructure side of the equation. Mainly, we have seen primarily delays and backlogs in global shipping involving ships, ports, trucks, and trains. Instead of 'deficit reduction' or interest rate hikes, the solution to these inflationary pressures likely involves *larger* targeted deficit spending alongside improved public-private coordination.

Global supply chains are public-private shipping relationships: ecosystems of private firms coordinating with public institutions and infrastructure.[70] Over the past several decades, global supply chains have converged toward a "Just-In-Time" paradigm: a management strategy where raw materials or components are delivered just before they are required to minimize inventory costs, based heavily on forecasting. Our global economy has minimal shock absorbers: sudden big shifts were capable of exposing the decades of neoliberal hollowing-out of our physical and social infrastructure. As Stephanie Kelton noted,[71] "transitory" inflation always meant "of or pertaining to the transition out of a COVID-hampered economy", and we're seeing shocks ripple through the global economy sector by sector through many unexpected but deeply interdependent connections as the pandemic continues. Bloomberg's Joe Weisenthal explains in a recent interview with Tankus that surging Chinese electricity prices have led to surging electricity prices in Europe, which have contributed to a spike in fertilizer prices, which is causing inflationary pressures for grain sellers, which is causing issues for dairy and meat producers.[72] In case there's any uncertainty, we're all in this together.

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[69] Nathan Tankus, "The New Frontier: Debating Inflation," *Notes on the Crisis*, March 9, 2021, https://www.crisesnotes.com/the-new-frontier-debating-inflation/

[70] "About," Port of Los Angeles, 2021, https://www.portoflosangeles.org/about

[71] Stephanie Kelton, Twitter, November 26, 2021, https://twitter.com/StephanieKelton/status/1464228669879164932?s=20

[72] Nathan Tankus, "Notes on the Crisis Podcast #1: Joe Wiesenthal on Supply Chains," *Notes on the Crisis Podcast*, November 3, 2021, https://www.crisesnotes.com/notes-on-the-crises-podcast-1-joe-weisenthal-on-supply-chains/

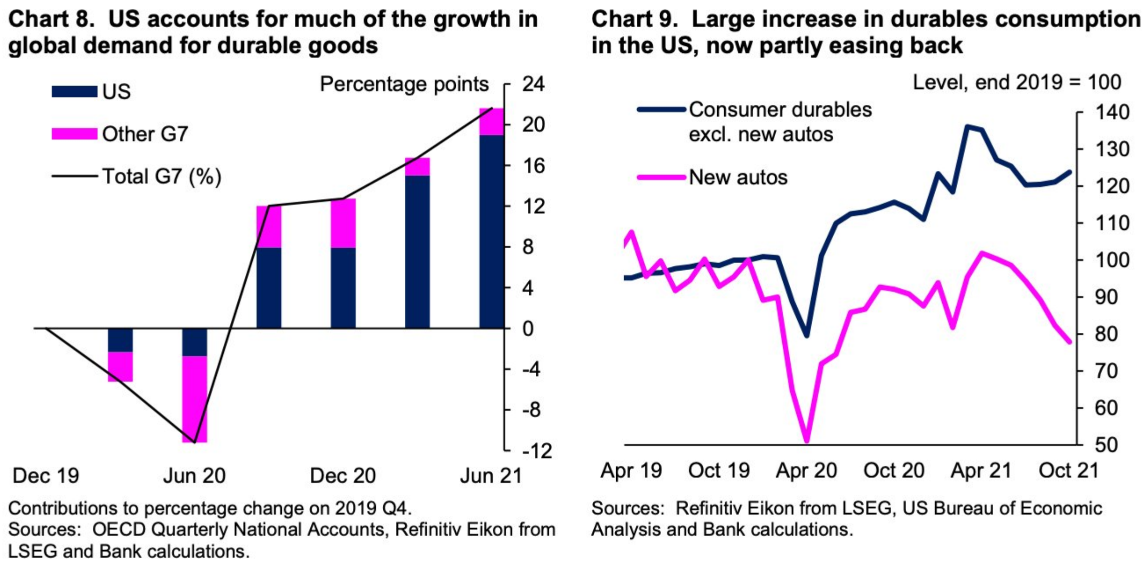

Figure 1: The US accounts for approximately 90% of G7 growth in demand for durable goods.[73]

One of the first warning signs of inflationary pressures was an imbalance of shipping containers between the US and China. Before Covid-19, when a shipment came into the Port of Los Angeles, for instance, the ship would drop its cargo and wait to load up with a container of goods being exported back to Asia, including empty containers. In early 2021, we started seeing ships return to Asia without waiting around for the empties, which led to a shortage of shipping containers in China.[74] Strains from the shocks hit various industries differently at different times. Whereas the lumber industry is facing a "bill" due from years of underinvestment in productive capacity,[75] the trucking industry is hurting from an aging[76] and long over-exploited workforce[77] that still has many informal practices like coordinating shipments over WhatsApp groups and message boards.[78]

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[73] Ben Broadbent, "Lags, trade-offs and the challenges facing monetary policy," Bank of England, Speech to Leeds University Business School, December 6, 2021, https://www.bankofengland.co.uk/-/media/boe/files/speech/2021/december/lags-trade-offs-and-the-challenges-facing-monetary-policy-speech-by-ben-broadbent.pdf

[74] Weizhen Tan, "An 'aggressive' fight over containers is causing shipping costs to rocket by 300%," *CNBC*, January 24, 2021, https://www.cnbc.com/2021/01/22/shipping-container-shortage-is-causing-shipping-costs-to-rise.html

[75] Tracy Alloway and Joe Weisenthal, "Stinson Dean on the Lumber Crash That Followed the Boom," *Odd Lots Podcast, Bloomberg*, November 8, 2021, https://www.bloomberg.com/news/articles/2021-11-08/stinson-dean-on-the-lumber-crash-that-followed-the-boom?srnd=oddlots-podcast

[76] Economics Department, "Driver Shortage Update 2021," American Trucking Associations, October 25, 2021, https://www.trucking.org/sites/default/files/2021-10/ATA%20Driver%20Shortage%20Report%202021%20Executive%20Summary.FINAL_.pdf

[77] Joe Weisenthal, Twitter, October 21, 2021, https://twitter.com/TheStalwart/status/1451163926780076032?s=20

[78] Tracy Alloway and Joe Weisenthal, "The Trucking Episode: Why the Industry Is Such a Mess," *Odd Lots Podcast, Bloomberg*, June 21, 2021, https://www.bloomberg.com/news/articles/2021-06-21/the-trucking-episode-why-the-industry-is-such-a-mess

Another important case that stands out in the inflation discourse is the semiconductor chip shortage.[79] When lockdowns hit at the beginning of the pandemic, car companies canceled orders for chips due to the slowdown in sales. As demand picked up faster than car companies anticipated, the backlog of 100+ chips required for each new vehicle put a massive strain on global supply chains. This shortage has had major spillover effects into used car and rental prices while the industry adjusts. The Council of Economic Advisors noted in July that "used cars, new cars, auto parts, and car rentals together made up about 60 percent of core month-over-month inflation" at the time.[80] Even with these bottlenecks, Morgan Stanley is saying the worst of the chip shortage is "now in the rearview mirror."[81] If there is a long-term need for greater output of semiconductor chips, the solution is improved market regulation,[82] fiscal, and industrial policy to increase investments, innovation, and efficiencies in the productive capacity for chips, not counterproductive rate hikes.

While conservative Democrats and Republicans are pinning sole blame for inflationary pressures on deficit spending, particularly the $1.9T American Recovery Plan Act (ARPA) passed in March of 2021, strong evidence shows that this talking point is majorly overblown. A new paper from the San Francisco Fed[83] exploring the sources of inflationary pressures determined:

> ...the increase in labor market tightness, attributable to the [ARPA], is expected to cause inflation to increase by about 0.3 percentage point in 2021 and by a bit more than 0.2 percentage point in 2022. The impact in 2023 is negligible and is not shown in the figure. Thus, the estimated impact of the ARP on inflation is meaningful, but it is still a far cry from the strong overheating of the 1960s.

This is further bolstered by new research from the Bureau of International Settlements (BIS) which examined the gap between US & European inflationary pressures.[84]

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[79] Michael Liedtke, Tom Krisher, "The microchip shortage explained: How it's impacting car prices and the tech industry," *USA Today*, April 2, 2021, https://www.usatoday.com/story/tech/2021/04/02/chip-shortage-car-prices-tech-items/4849838001/

[80] Council of Economic Advisors, Twitter, July 13, 2021, https://twitter.com/WhiteHouseCEA/status/1414940730196377610?s=20

[81] Sonio Shenoy, "Semiconductor chip shortage issue now in the rearview mirror, says Morgan Stanley; auto stocks surge 3%," *CNBC*, November 16, 2021, https://www.cnbctv18.com/auto/semiconductor-chip-shortage-issue-now-in-the-rearview-mirror-says-morgan-stanley-auto-stocks-surge-3-11480502.htm

[82] Federal Trade Commission, "FTC Sues to Block $40 Billion Semiconductor Chip Merger," Federal Trade Commission Press Release, December 2, 2021, https://www.ftc.gov/news-events/press-releases/2021/12/ftc-sues-block-40-billion-semiconductor-chip-merger

[83] Regis Barnichon, Luiz E. Oliveira, and Adam H. Shapiro, "Is the American Rescue Plan Taking Us Back to the '60s?," Federal Reserve Bank of San Francisco, October 18, 2021, https://www.frbsf.org/economic-research/publications/economic-letter/2021/october/is-american-rescue-plan-taking-us-back-to-1960s/

[84] Daniel Rees and Phurichai Rungcharoenkitkul, "Bottlenecks: causes and macroeconomic implications," Bureau of International Settlements (BIS), November 11, 2021, https://www.bis.org/publ/bisbull48.pdf

In fact, historic fiscal stimulus from the CARES Act in 2020 and ARPA in 2021 have been an overall huge windfall for the private sector,[85] setting up for a much faster job recovery compared to the aftermath of the 2008 financial crisis.[86] When looking at whether so-called "real wages" are out-performing inflation, workers are still ahead over the last 18 months when analyzing aggregate private payrolls (total hours worked * average hourly earnings) or total disposable income versus the PCE price index.[87]

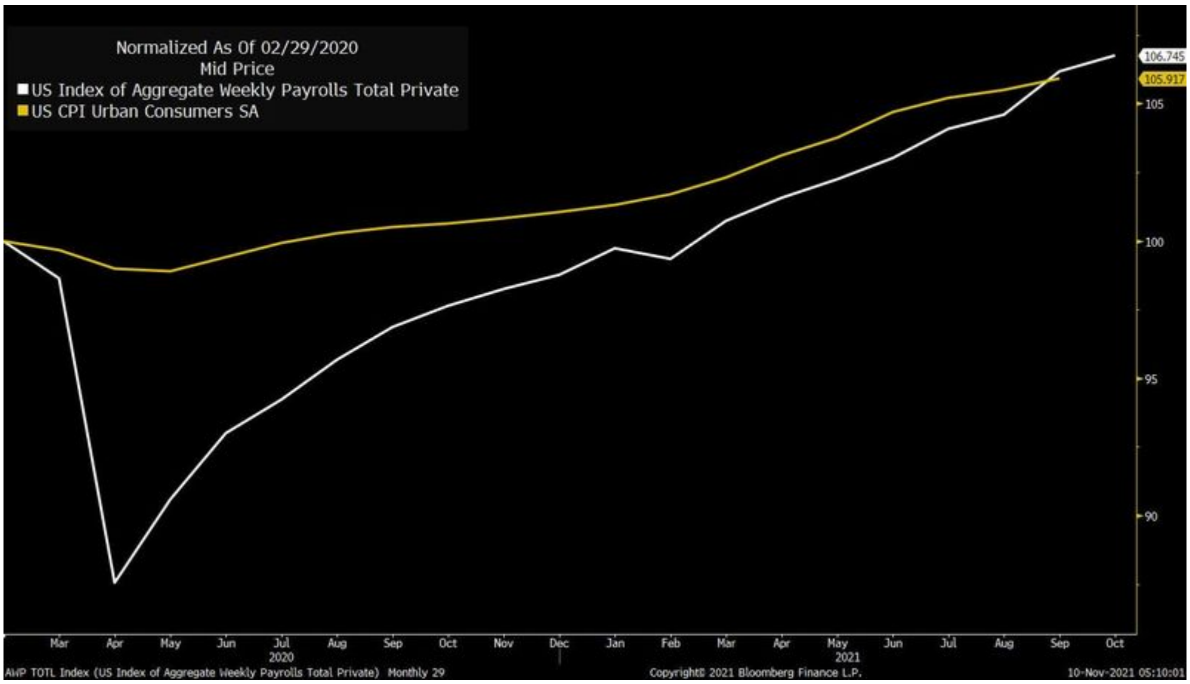

Figure 1: Aggregate private payrolls (total hours worked*average hourly earnings) versus CPI[88]

While inflation has become a major news story and talking point, much less attention has been paid to the immense decline in childhood poverty thanks to the child tax credit.[89] Fiscal policy in the wake of Covid-19 has largely been a success,[90] even though it could have drastically improved

[85] J.W. Mason, "A C-Shaped Recovery?," J.W. Mason Blog, October 26, 2021, http://jwmason.org/slackwire/a-c-shaped-recovery/

[86] Stephanie Kelton, "The Bright Side of Higher Inflation," *The Lens*, October 24, 2021, https://stephaniekelton.substack.com/p/the-bright-side-of-higher-inflation

[87] Lorcan Roche Kelly, Joe Weisenthal, "Five Things to Start Your Day," *Bloomberg*, November 10, 2021, https://www.bloomberg.com/news/newsletters/2021-11-10/five-things-you-need-to-know-to-start-your-day?srnd=markets-vp

[88] Lorcan Roche Kelly, Joe Weisenthal, "Five Things to Start Your Day," Bloomberg, November 10, 2021, https://www.bloomberg.com/news/newsletters/2021-11-10/five-things-you-need-to-know-to-start-your-day?srnd=markets-vp

[89] Arthur Delaney, "Inflation Is Not The Biggest Thing Happening In The Economy Right Now," *HuffPost*, November 16, 2021, https://www.huffpost.com/entry/inflation-child-poverty-tax-credit_n_61940234e4b005197af7ddaa

[90] Stephanie Kelton, "Fiscal Muscle," *The Lens*, November 20, 2021, https://stephaniekelton.substack.com/p/fiscal-muscle

with plans like Rep. Rashida Tlaib's Automatic Boost to Communities Act,[91] or Rep. Pramila Jayapal's Paycheck Guarantee Act,[92] or implementing broader automatic stabilizers[93] (the best being a Job Guarantee[94]) so we can get necessary aid and employment to people during crises automatically, without requiring new legislation.

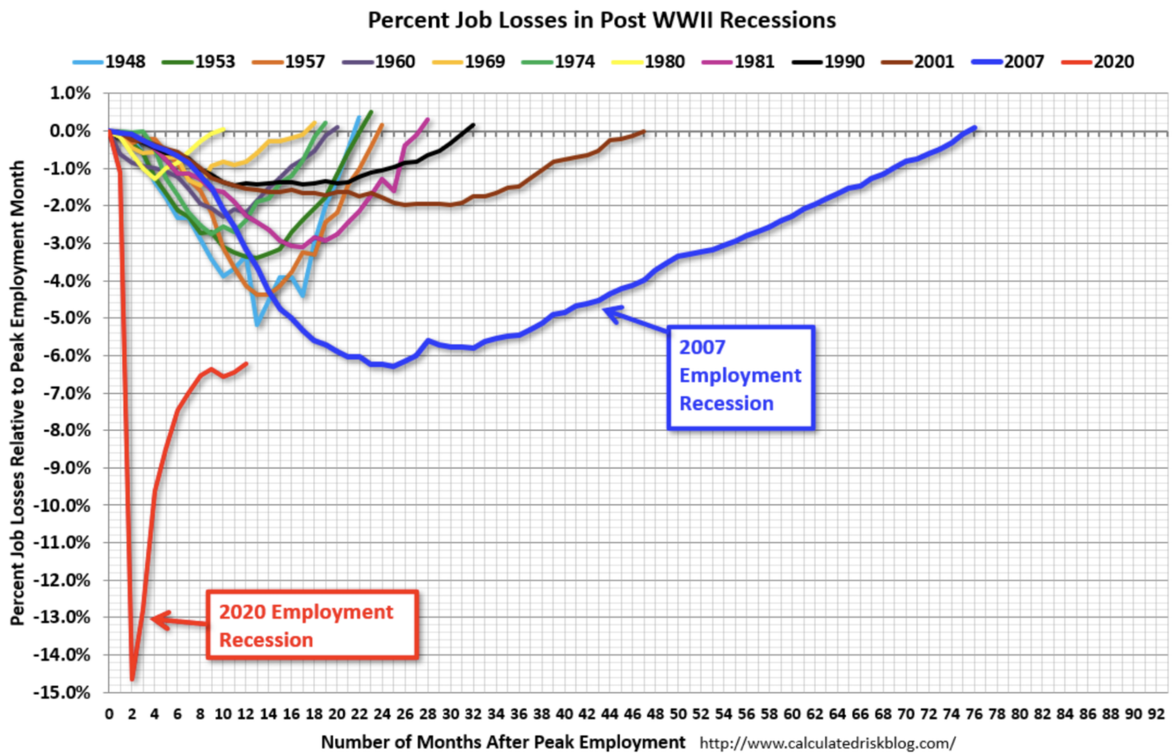

Figure 2: Number of Months After Peak Employment vs. Percent Job Losses Relative to Peak Employment Month[95]

[91] Congresswoman Rashida Tlaib, "Automatic BOOST to Communities Act," February 11, 2021, https://tlaib.house.gov/sites/tlaib.house.gov/files/Automatic%20Boost%20to%20Communities%20Act%20.pdf

[92] Li Zhou, Pramila Jayapal's ambitious plan to get every worker their paycheck during coronavirus, explained," *Vox*, April 10, 2020, https://www.vox.com/2020/4/10/21215611/pramila-jayapal-paycheck-guarantee-act-denmark

[93] Neil Irwin, "Economists Want to Put Stimulus on Autopilot. Congress Has Other Ideas," *The New York Times*, May 15, 2020, https://www.nytimes.com/2020/05/15/upshot/virus-economic-response-stabilizers.html

[94] Pavlina Tcherneva, "What Would Roosevelt Do?," *Project Syndicate*, March 20, 2020, https://www.project-syndicate.org/commentary/coronavirus-cash-support-job-guarantee-by-pavlina-r-tcherneva-2020-03

[95] Stephanie Kelton, "The Bright Side of Higher Inflation," *The Lens*, October 24, 2021, https://stephaniekelton.substack.com/p/the-bright-side-of-higher-inflation

Most of the 2021 inflationary pressures have been confined to specific sectors, further reinforcing the source not being simply "too much demand". Even the conservative *Barron's* noted:[96]

> The consumer-price index rose by 0.8% in April [2021] compared with March on a seasonally adjusted basis, vastly exceeding forecasters' expectations. Most of that increase, however, can be attributed to a few categories that collectively account for just 13% of consumer spending, at least in normal times: used cars and trucks, hotels and motels, airfares, motor vehicle insurance, car and truck rental, admissions to live events and museums, and food away from home.

There are many signs that these inflationary pressures are temporary: lumber prices have dropped significantly,[97] for instance. The June,[98] July,[99] and August[100] CPI reports all cited inflation mostly contained to specific reopening sectors including used cars and trucks, restaurant meals, and hotels. The shock of demand for household goods explains price adjustments on goods ranging from pet-related products[101] to musical instruments.[102] The Biden administration has shown how concerted efforts can make progress on bottlenecks[103] in a matter of weeks through more invested public-private coordination, with the Port of Los Angeles CEO Gene Seroka saying the number of containers sitting on docks has declined 29%.[104] At the same time, the October[105] and November[106] 2021 CPI reports show inflationary pressures picking up more broadly across the economy, with disruptions in fertilizer and grain prices bleeding into food, alongside surging energy and housing

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[96] Matthew C. Klein, "Don't Be Fooled by April's Inflation Jump. It's Being Driven by Reopening Quirks," *Barron's*, May 12, 2021, https://www.barrons.com/articles/dont-be-fooled-by-aprils-inflation-jump-its-being-driven-by-reopening-quirks-51620847392

[97] "Lumber", Markets Insider, *Insider*, Last updated December 9, 2021, https://markets.businessinsider.com/commodities/lumber-price

[98] US Bureau of Labor Statistics, "Consumer Price Index - June 2021," US Bureau of Labor Statistics, July 13, 2021, https://www.bls.gov/news.release/archives/cpi_07132021.pdf

[99] US Bureau of Labor Statistics, "Consumer Price Index - July 2021," US Bureau of Labor Statistics, August 11, 2021, https://www.bls.gov/news.release/archives/cpi_08112021.pdf

[100] US Bureau of Labor Statistics, "Consumer Price Index - August 2021," US Bureau of Labor Statistics, September 14, 2021, https://www.bls.gov/news.release/archives/cpi_09142021.pdf

[101] Joan Verdon, "E-Commerce Inflation Is Not Slowing Down, With Online Prices Up 3.1% In July, Adobe Reports," *Forbes*, August 26, 2021, https://www.forbes.com/sites/joanverdon/2021/08/26/e-commerce-inflation-is-not-slowing-down-with-online-prices-up-31-in-july-adobe-reports/?sh=1a1afd4b61e6

[102] Samantha Hissong, "Did Everyone Buy a Guitar in Quarantine or What?," *Rolling Stone*, January 28, 2021, https://www.rollingstone.com/pro/news/music-instruments-sweetwater-reverb-guitar-center-1119868/

[103] Brooke Sutherland, "The U.S. Supply-Chain Crisis Is Already Easing," *Bloomberg*, November 18, 2021, https://www.bloomberg.com/opinion/articles/2021-11-18/the-u-s-supply-chain-crisis-is-already-easing

[104] President Joe Biden, Twitter, November 16, 2021, https://twitter.com/POTUS/status/1460718967685791757?s=20

[105] US Bureau of Labor Statistics, "Consumer Price Index - October 2021," US Bureau of Labor Statistics, December 10, 2021, https://www.bls.gov/news.release/archives/cpi_11102021.pdf

[106] US Bureau of Labor Statistics, "Consumer Price Index - November 2021," US Bureau of Labor Statistics, December 10, 2021, https://www.bls.gov/news.release/archives/cpi_12102021.pdf

costs.[107] Meanwhile, amid soaring corporate profits,[108] there is mounting evidence[109] that major corporations, including supply chain companies,[110] have used inflation news[111] as a pretext to raise prices and boost profits independent of costs.[112]

Ultimately, it is important to understand these inflationary pressures within a historical context,[113] which is mild yet non-trivial. Some of the inflationary pressures we're seeing have been long overdue as Covid-19 has fundamentally altered employment relationships. We're seeing wage gains by some of the traditionally lowest paid workers in society,[114] record numbers quitting their jobs,[115] and a growing wave of strikes and unionization.[116]

Inflationary pressures could drag out for a bit, especially as wealthier countries maintain a vaccine apartheid[117] over the rest of the world while aggressive variants spread and mutate. Ultimately, resolution will depend on a combination of time for public-private coordination to work out bottlenecks, increased Capital Expenditure (Capex) investments[118]—the money organizations or

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107 Tracy Alloway, Joe Weisenthal, "This Is the Perfect Storm That Caused Grain Prices to Soar," *Odd Lots Podcast, Bloomberg*, November 11, 2021, https://www.bloomberg.com/news/articles/2021-11-11/this-is-the-perfect-storm-that-caused-grain-prices-to-soar

108 John Butters, "Earnings Insight," *Factset*, November 5, 2021, https://www.factset.com/hubfs/Website/Resources%20Section/Research%20Desk/Earnings%20Insight/EarningsInsight_110521.pdf

109 Cory Doctorow, "Pluralistic: 20 Nov 2021," *Pluralistic: Daily Links from Cory Doctorow*, November 20, 2021, https://pluralistic.net/2021/11/20/quiet-part-out-loud/#profiteering

110 Sam Dean, "A broken supply chain is a moneymaking opportunity. For who? Shipping companies," *The Los Angeles Times*, November 26, 2021, https://www.latimes.com/business/story/2021-11-26/the-supply-chain-crisis-is-great-news-for-logistics-companies

111 Faiz Shakir, "The Real Inflation Problem Is Corporate Profiteering," *The New Republic*, November 22, 2021, https://newrepublic.com/article/164505/inflation-corporate-profiteering-biden-consumers

112 Dominick Reuter, Andy Kiersz, "Corporations are using inflation as an excuse to raise prices and make fatter profits — and it's making the problem worse," *Insider*, November 16, 2021, https://www.businessinsider.com/corporations-using-inflation-as-excuse-to-reap-fatter-profits-reich-2021-11

113 FRED, "Consumer Price Index for All Urban Consumers: All Items in U.S. City Average," Federal Reserve Economic Data (FRED), Updated November 10, 2021, https://fred.stlouisfed.org/graph/?g=IKlL

114 Christopher Rugaber, "US wages jump by the most in records dating back 20 years," *Associated Press*, October 29, 2021, https://apnews.com/article/business-wages-salaries-increase-8ce98ea3bcc14c4810eb5a1111e1df49

115 Ben Casselman, "The number of U.S. workers quitting their jobs in September was the highest on record," *The New York Times*, November 12, 2021, https://www.nytimes.com/2021/11/12/business/economy/jobs-labor-openings-quit.html

116 Hamilton Nolan, "America's strike wave is a rare – and beautiful – sight to behold," *The Guardian*, October 19, 2021, https://www.theguardian.com/commentisfree/2021/oct/19/america-strike-wave-john-deere-iatse

117 Sarah Lazare, U.S. Says It Supports a Covid Vaccine Patent Waiver, But Document Reveals It Is Dragging Feet at WTO," *In These Times*, September 15, 2021, https://inthesetimes.com/article/world-trade-organization-trips-waiver-council-proposal-patents-vaccines

118 Enda Curran, "Capex Booms as Companies Prepare for a Post-Pandemic World," *Bloomberg*, September 11, 2021, https://www.bloomberg.com/news/articles/2021-09-11/global-capex-booms-as-companies-prepare-for-post-pandemic-era?utm_medium=social&utm_content=business&utm_campaign=socialflow-organic&utm_source=twitter&cmpid=socialflow-twitter-business

firms spend to buy, maintain, or improve fixed assets, such as buildings, vehicles, equipment, or land—and most importantly, aggressively tackling corporate greed and monopolization, improved industrial policy, infrastructure investment, and public-private coordination to increase supply-chain resiliency. The ideal situation would therefore be to adopt the full MMT inflation approach including a Federal Job Guarantee, deeper inflationary analysis on fiscal policy instead of PAYGO nonsense, and non-fiscal "pay fors" like financial, credit, and antitrust regulation. Blind deficit reduction and interest rate hikes are a recipe for disaster: we need to go after high prices at the source.

Facing the Ecological Crisis

These supply chain issues underscore our global interdependence and the need for deeper and far more equitable economic coordination and structural transformation to address the worsening climate crisis. According to the UN-commissioned 2021 Production Gap Report, the world is on track to produce double the amount of fossil fuels in 2030 than is compatible with keeping warming below the Paris Agreement framework target of 1.5°C warming.[119] A recent study in *Nature*[120] shows that in order to have a 50% chance of keeping global warming below 1.5°C, 60% of current oil and gas reserves and 90% of coal reserves need to stay in the ground. We don't have time to burn existing reserves, much less do any new extraction.[121] As COP26 wraps up in Glasgow with minimal improvements[122] to the status quo, the scientific community is imploring that we face a "Code Red for Humanity."[123] The climate crisis is already here for the Global South right now, and the Glasgow Climate Pact puts the world on track for a devastating 2.7°C warming world. The final language of the COP26 Pact abandoned new obligations for climate financing and long

[119] United Nations Environment Programme, "Production Gap Report 2021," *UNEP*, October 20, 2021, https://www.unep.org/resources/report/production-gap-report-2021

[120] Dan Welsby, James Price, Steve Pye, Paul Ekins, "Unextractable fossil fuels in a 1.5 °C world." *Nature* 597, 230–234 (2021). https://doi.org/10.1038/s41586-021-03821-8

[121] Oliver Milman, "US auctions off oil and gas drilling leases in Gulf of Mexico after climate talks," *The Guardian*, November 17, 2021, https://www.theguardian.com/us-news/2021/nov/17/biden-administration-gulf-of-mexico-oil-gas-drilling-leases?CMP=Share_AndroidApp_Other

[122] Amnesty International, "COP26: Leaders' catastrophic failure on climate shows they have forgotten who they should serve and protect – humanity at large," *Amnesty International Press Release*, November 13, 2021, https://www.amnesty.org/en/latest/news/2021/11/cop26-leaders-catastrophic-failure-on-climate-shows-they-have-forgotten-who-they-should-serve-and-protect-humanity-at-large/

[123] IPCC, "Sixth Assessment Report," *Intergovernmental Panel on Climate Change*, August 9, 2021, https://www.ipcc.ch/report/ar6/wg1/

overdue "loss and damage"[124] compensation owed to the Global South.[125] Instead, the agreement establishes more "Glasgow Dialogue" to "discuss" climate financing in years to come, which further emphasizes the immediate need for movements and leaders around the world to adopt an MMT approach to public finance.

We need global cooperation toward a global Green New Deal that focuses on decarbonizing and building out renewable energy capacity, a managed wind-down of the fossil fuel industry with a just transition for workers while building out a low carbon care economy, and deep investments in frontline communities, especially communities of color that have borne the brunt of the fossil fuel industry for far too long. The US can cancel external debts owed by developing Global South countries, open up swap lines[126] to ease payment issues, and open-source transfer green technology to become a serious partner in this civilizational crisis. Financing the climate fight cannot rely on the private sector[127]; the tab should all be on the public's balance sheet and paid for with public money[128]. The reality of energy prices is that it's entirely political and dependent upon serious investments in a transition to a 100% renewable future. If you care about inflation in energy[129], you should be shouting for an MMT approach to a Green New Deal.

The latest fight in Congress over infrastructure spending is a perfect example of the pitfalls of the "pay for" trap[130] and the need to reject deficit and inflation hysteria if we're ever going to successfully take on climate change. Conservative Democrats and Republicans have wielded current inflationary pressures to water down[131] necessary infrastructure investments, requiring the already pared-down Build Back Better reconciliation bill to go through CBO markup only to face more unnecessary deficit hysteria and potential abandonment. This antiquated approach is

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[124] Lisa Vanhala, "COP26 deal: how rich countries failed to meet their obligations to the rest of the world," *The Conversation*, November 14, 2021, https://theconversation.com/cop26-deal-how-rich-countries-failed-to-meet-their-obligations-to-the-rest-of-the-world-171804

[125] Rishika Pardikar, "Global North Is Responsible for 92% of Excess Emissions," *Eos*, October 28, 2020, https://eos.org/articles/global-north-is-responsible-for-92-of-excess-emissions

[126] Nathan Tankus, "Listen Fed! The IMF Needs Access To Dollar Swap Lines," *Notes on the Crisis*, April 3, 2020, https://www.crisesnotes.com/listen-fed-the-imf-needs-access-to/

[127] Daniela Gabor, "The Wall Street Consensus at COP26," *Phenomenal World*, November 18, 2021, https://www.phenomenalworld.org/analysis/cop26/

[128] Nathan Tankus, Andrés Bernal, and Raúl Carrillo, "The Green New Deal will be tremendously expensive. Every penny should go on the government's tab," *Business Insider*, September 23, 2019, https://www.businessinsider.com/green-new-deal-climate-change-government-spending-no-private-money-2019-9?fbclid=IwAR1NqGXdM3bCpyxE9iGRLMRYMKzjtmAXvQeYD8Kp-V-W4EzYKMNRcLoc8WE

[129] Kate Aronoff, "The Best Way to Fight Inflation: Ditch Fossil Fuels," *The New Republic*, November 24, 2021, https://newrepublic.com/article/164528/deal-inflation-get-off-fossil-fuels

[130] Stephanie Kelton, "Hate The Game," The *Lens*, November 8, 2021, https://stephaniekelton.substack.com/p/hate-the-game

[131] Michael Barbaro, "A Conversation with a Virginia Democrat," *The New York Times*, November 9, 2021, https://www.nytimes.com/2021/11/09/podcasts/the-daily/abigail-spanberger-democrats-infrastructure-bill.html?smtyp=cur&smid=tw-nytimes

dangerous and completely hypocritical, considering the long list of bills passed[132] requiring no such deference[133] to the balanced budget gods. Progressives wanted at least $10T invested in green infrastructure—in line with what both conservative and liberal think tanks[134] have said dealing with climate will cost the US over the next decade. We will not get it by accepting right wing "pay for" framing. It is not "fiscally responsible"[135] to put fictional accounting constraints over the heat death of the planet.

Rep. Alexandria Ocasio-Cortez, who has invoked MMT on several occasions,[136] nailed the stakes of this moment on CNN's Don Lemon Show[137] by explaining, "If we do not get the root cause of these price increases right, then policy decisions could be made that could really negatively impact your life." Price increases, she explained, are confined to specific sectors dealing with reopening and supply-chain bottlenecks. Ocasio-Cortez warned against haphazardly raising interest rates, which would drive up unemployment and may even worsen inflation[138] as we seek to reconstruct the economy after a global pandemic. The solution to the inflationary pressures we're seeing, she noted, is increasing spending on infrastructure and building out more resilient supply chains and productive capacity. This interview was truly a clinic on how elected officials should be talking about inflation.

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[132] Brendan Greeley, "America Has Never Worried About Financing Its Priorities," *Financial Times*, January 16, 2019, https://www.ft.com/content/83402241-997f-3ea0-acca-cfdf36f42db2

[133] Stephanie Kelton, Twitter, November 8, 2021, https://twitter.com/StephanieKelton/status/1457838343123783682?s=20

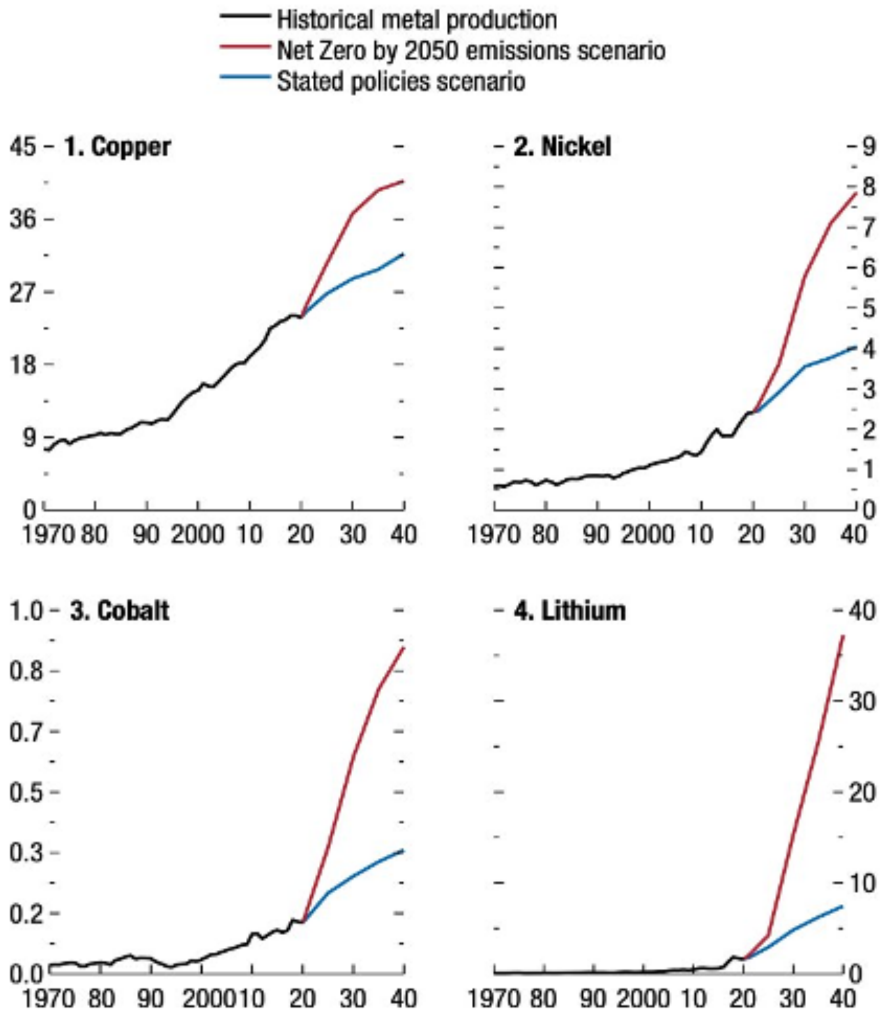
[134] Alexander C. Kaufman, "Biden Wants 5 Times The Climate Spending Obama Won. That's Still 5 Times Too Small," *HuffPost*, March 31, 2021, https://www.huffpost.com/entry/joe-biden-infrastructure-climate-spending_n_6064b288c5b6a38505e1cf02

[135] President Joe Biden, Twitter, October 29, 2021, https://twitter.com/POTUS/status/1454208491783081985?s=20

[136] Eliza Relman, "Alexandria Ocasio-Cortez says the theory that deficit spending is good for the economy should 'absolutely' be part of the conversation," *Business Insider*, January 7, 2019, https://www.businessinsider.com/alexandria-ocasio-cortez-ommt-modern-monetary-theory-how-pay-for-policies-2019-1?r=US&IR=T

[137] NowThis, "Watch Rep. @AOC break down the GOP's inflation talking points in 3 minutes," Twitter, July 20, 2021, https://twitter.com/nowthisnews/status/1417626121558847491?s=20

[138] Deficit Owls, "MMT: The Impact Of Interest Rate Targets On The Economy Is Indeterminate," YouTube, August 26, 2016, https://www.youtube.com/watch?v=_E464oOQ6Tw&t=89s



Sources: International Energy Agency (IEA); Schwerhoff and Stuermer (2020); US Geological Survey; and IMF staff calculations.
Note: Copper and nickel refer to refined production, while cobalt and lithium refer to mine production.

Figure 3. Historical Metal Production and International Energy Agency Transition Scenarios[139]

With the understanding that "resources are not, they become," we can make deeper investments into capacity building with public money to enable dynamic and innovative institutions and systems capable of constantly improving the recipes of raw materials required to provide for effective yet sustainable administrative networks across all sectors of the economy. The

[139] International Energy Agency (IEA) "The Role of Critical Minerals in Clean Energy Transitions," *IEA Special Report*, November 5, 2021, https://www.iea.org/reports/the-role-of-critical-minerals-in-clean-energy-transitions/executive-summary

management of productive capacity with biophysical resources[140] will be critical in years ahead.[141] Turning our attention to the geographical situating of the minerals and raw materials required for the massive upscaling of renewables such as Lithium in Chile, it is vital that we maintain our critical attention to matters of equity and social impact. Political scientist Thea Riofrancos puts it well when stating, "it's vital that the low-carbon world that we need to build doesn't reproduce the inequalities, dispossessions, and exploitations of fossil capitalism or the colonial capitalism on which fossil capitalism is built, where some lives are valued more than others and some pay the costs, social and environmental, for the wellbeing of others."[142]

In order to tackle the various crises we face, there is a rich history[143] to draw upon when it comes to public-private coordination and inflation and resource management in wartime.[144] By rejecting the zero-sum scarcity logic of finite money and fixed resources, we can invoke the same capacity used to mobilize for war and violence today[145] and instead use it to build a 21st century sustainable and renewable energy based care economy.

Conclusion

Given the daunting task of fundamentally transforming our economy and way of life amidst climate shocks and social crises, we will no doubt continue to face challenges to price stability. As we evaluate what must be done across time and space as well as how this can or cannot be achieved, inflation and monetary theories premised on austerity, scarcity, and finitude will surely lead to even greater disasters than what far too many already regularly confront. The standard approach by many central banks to inflation has come at the expense of inclusive employment and any semblance of a fair economy. Will we forever tolerate disproportionate levels of unemployment borne by entire communities over generations while our leaders panic at the slightest decimal

[140] Matthew Berg, Brian Hartley, Oliver Richters, "A stock-flow consistent input–output model with applications to energy price shocks, interest rates, and heat emissions," *New Journal of Physics*, IOPScience, January 20, 2015, https://iopscience.iop.org/article/10.1088/1367-2630/17/1/015011/meta

[141] Adam Tooze, Twitter, October 31, 2021, https://twitter.com/adam_tooze/status/1454776414335643649?s=20

[142] Thea Riofrancos, "A Globally Just Green New Deal," Rhode Island School of Design, Climate Futures II: Design Politics, Design Natures, Aesthetics and the Green New Deal Symposium, Open Transcripts, December 5, 2019, http://opentranscripts.org/transcript/globally-just-green-new-deal/

[143] David Stein, "Wartime Wisdom to Combat Inflation," *Democracy Journal*, August 31, 2021, https://democracyjournal.org/arguments/wartime-wisdom-to-combat-inflation/

[144] Robert Hockett, "War On Inflation, Part 1: The Lesson Of World War II," *Forbes*, November 12, 2021, https://www.forbes.com/sites/rhockett/2021/11/12/war-on-inflation-part-1-the-lesson-of-world-war-ii/?sh=3d8d7e163920

[145] Adam Tooze, "Chartbook #34 How we paid for the War on Terror," Adam Tooze Substack, August 21, 2021, https://adamtooze.substack.com/p/chartbook-34-how-we-paid-for-the

increase in prices? As Darrick Hamilton notes, "those are politically charged questions."[146] The almost-instinctive impulse from "experts" and laypersons alike to recoil at big deficits and long for balanced public budgets[147] preserves the fantasy of monetary purity and market fundamentalism. It is a testament to neoliberal's enduring grip over our imaginations. Instead, we must re-center the provisioning of society back onto a deliberative and normative focus that more accurately represents the economy as it already is: political, cultural, ecological, and interdependent. Therefore, understanding and managing inflation ultimately comes down to knowledge about the state of our society and industry specifics, our capacity to collectively create wealth and meet needs, and how we define these objectives and the conditions required to achieve them.

This entails presenting an alternative and superior theory that explains inflation, or rather price stability/instability, as a politics of coordination that involves various sectors, interests, organizational forms, and goals that must manage and administer "costs" while responding to socially mediated needs and desires within particular constraints and contexts. More importantly, this interdependence is always and everywhere conditioned by a macro constitutional architecture that holistically shapes creative capacities through the power of public law and money. This power, today most often outsourced to private bank lending,[148] can bring about economic creation somewhere and take it away elsewhere. It can include and it can abandon. It can cultivate some aspects of humanity and deprive others. Currently in the case of the United States, it is the Congress's authority over the public purse that can ultimately decide whether to fully employ or expand the nation's productive capacity as well as define whether that capacity will be socio-ecologically sustainable and just.

With inflation hawks bearing down on Fed Chairman Powell to raise rates and on the Biden administration to water down public spending, it's crucial to fight back against the notion that current inflationary pressures are necessarily a result of "too much money printing" from pandemic stimulus. By leveraging MMT's far more sophisticated inflation approach with political action, we can both determine and address the real root causes of high prices. We face a deepening housing

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[146] Matthew Boesler, Olivia Rockeman, "Inflation Jeopardizes the Fed's Goal for Inclusive Employment," *Bloomberg*, December 14, 2021, https://www.bloomberg.com/news/articles/2021-12-14/fed-chair-powell-s-goal-for-inclusive-employment-jeopardized-by-inflation?srnd=premium&sref=vuYGislZ

[147] Joe Weisenthal, "The Untold Story Of How Clinton's Budget Destroyed The American Economy," *Business Insider*, September 5, 2012, https://www.businessinsider.com/how-bill-clintons-balanced-budget-destroyed-the-economy-2012-9

[148] Robert C. Hockett, Saule T. Omarova, "The Finance Franchise," (August 8, 2016). 102 Cornell L. Rev. 1143 (2017), Cornell Legal Studies Research Paper No. 16-29, Available at SSRN: https://ssrn.com/abstract=2820176 or http://dx.doi.org/10.2139/ssrn.2820176

crisis,[149] millions will soon have crushing student loan debt reimposed unnecessarily,[150] and we're nowhere near full employment.[151] We need massive investments to end vaccine apartheid,[152] and to finance a 100% renewable energy economy as we force a managed wind-down of the fossil fuel industry. We can guarantee the right to a living wage job, housing, healthcare, education, transportation, a dignified retirement, a shorter work week, global climate reparations, reparations for slavery and indigenous genocide, publicly funded elections, student[153] and medical debt cancellation and so much more. As long as we can resource it, we can afford it with public money. MMT economist Stephanie Kelton said it best in *The New York Times*:[154] "**The key to responsibly spending vast sums of money** lies in carefully managing the economy's real productive limitations." In doing so, we open our social imaginations up to new political horizons.

[149] Krishnadev Calamur, Chris Arnold, "The Supreme Court Will Allow Evictions To Resume. It Could Affect Millions Of Tenants," National Public Radio, August 26, 2021, https://www.npr.org/2021/08/26/1024668578/court-blocks-biden-cdc-evictions-moratorium

[150] Michael Sainato, "'Killing the middle class': millions in US brace for student loan payments after Covid pause," *The Guardian*, December 9, 2021, https://www.theguardian.com/us-news/2021/dec/09/us-student-loan-crisis-payments

[151] US Bureau of Labor Statistic, https://www.bls.gov/lau/stalt.htm

[152] Zain Rizvi, Jishian Ravinthiran, Amy Kapczynski, "Sharing The Knowledge: How President Joe Biden Can Use The Defense Production Act To End The Pandemic Worldwide," *Health Affairs Blog*, August 6, 2021, https://www.healthaffairs.org/do/10.1377/hblog20210804.101816/full/#.YQ5WGnYbJfw.twitter

[153] Scott Fullwiler, Stephanie Kelton, Catherine Ruetschlin, and Marshall Steinbaum, "The Macroeconomic Effects of Student Debt Cancellation," Levy Economics Institute of Bard College, February 2018, https://www.levyinstitute.org/pubs/rpr_2_6.pdf

[154] Stephanie Kelton, "Biden Can Go Bigger and Not 'Pay for It' the Old Way," *The New York Times*, April 7, 2021, https://www.nytimes.com/2021/04/07/opinion/biden-infrastructure-taxes.html

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