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Behavioural Critique of Modern Macroeconomic Crises: Why Economies Crash

Nnanu, Friday Ben & Gobir, Mustapha Abdullahi, PhD.

Department of Economics, Faculty of Social Sciences, University of Abuja, Gwagwalada, Abuja FCT, Nigeria

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***Corresponding Author:** Gobir, Mustapha Abdullahi, PhD.

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Abstract **Original Research Article**

This paper re-evaluates the structural, behavioural, and systemic fragilities built into modern macroeconomics. Decades of financial engineering and scale-free networks have created a deeply interconnected global system that looks highly resilient on the surface but remains incredibly fragile under stress. By tracing how localized shocks quickly escalate into global real-economy downturns, we look at the core limitations of standard macroeconomic models. We argue that by sweeping the "aggregation problem" under the rug through the artificial concept of the "representative agent," mainstream models remain systematically blind to wealth inequalities, behavioral shifts, and credit leakages into the shadow banking sector. Finally, we evaluate modern structural remedies, assessing the true effectiveness of countercyclical capital buffers and financial transaction taxes. Ultimately, we argue that economists must stop treating markets as static, self-correcting mechanisms and instead model them for what they truly are: complex adaptive systems.

Keywords: Systemic Risk; Financial Networks; Aggregation Problem; Representative Agent; Macroprudential Policy; Complex Adaptive Systems (CAS); Behavioural Macroeconomics.

1. Introduction: The Multifaceted Nature of Modern Crises

The global financial crisis of 2007–09 served as a stark and painful reminder that economic shocks are rarely isolated events. Crises are inherently multifaceted, striking small developing nations and wealthy superpowers with equal force. As Carmen Reinhart and Kenneth Rogoff (2009a) famously observed, “financial crises are an equal opportunity menace.” They can bubble up domestically, blow in from external markets, or spark from imbalances in both private and public sectors. They arrive in an array of shapes and sizes, mutate over time into new vulnerabilities, and jump across borders with incredible speed. Recent empirical work confirms that because our modern financial architecture is hyper-connected, economic shocks now travel across the globe faster than at any other point in human history (Bardoscia *et al*., 2021; Glasserman and Young, 2020). Dealing with them effectively requires swift, comprehensive, and globally coordinated policy adjustments.

While the modern global economy occasionally finds itself facing downturns as deep as the Great

Depression of the 1930s, the real-world fallout on employment and total economic output has changed. Because baseline standards of living and incomes were vastly higher at the turn of the twenty-first century, the initial human and industrial impact of modern crises was somewhat cushioned compared to the early 1930s.

Aggressive, countercyclical economic policies have also played a vital role in softening these blows. However, long-term data on economic recoveries warns that withdrawing fiscal stimulus too early is a critical mistake. Pulling back support prematurely creates deep, long-lasting economic "scarring" that can drag down a nation's productivity growth for a generation (Jordà *et al*., 2022; Rogoff, 2021). Predicting the exact lifespan of any crisis remains an elusive task, but historical data shows a clear pattern: systemic banking crises result in much longer, more painful recessions and slower structural recoveries than standard, non-financial downturns (Reinhart and Reinhart, 2020).

2. Microeconomic Triggers and Real Economy Transmission

The spark that set off the 2007–09 collapse was a highly localized issue: the reckless expansion of credit in the United States subprime mortgage market. This easy money fueled an unprecedented boom in housing prices. As the US economy bounced back quickly from the Dot-Com crash of the early 2000s, property values climbed steadily for over fifteen years. This steady rise created a dangerous illusion—as home prices went up, the paper value of the collateral backing those loans went up with them. Higher property and stock valuations made households feel wealthier, which in turn boosted consumer spending and employment. This feedback loop shows just how tightly monetary policy and asset prices are tied to everyday consumer confidence and household wealth.

During this period, lending to individuals with unstable incomes or poor credit profiles became not just accepted, but politically encouraged. The goal was to expand homeownership to communities that had historically been locked out of the housing market. Borrowers rushed to sign up because initial "teaser" interest rates were remarkably low, with the real financial burden of the principal repayments kicked down the road. Recent reviews of mortgage lending show that these artificial easing cycles create unsustainable real estate bubbles, setting a structural trap for lower-income and highly leveraged families the moment interest rates begin to rise.

To pass off this growing risk, commercial banks pivoted to an "originate-and-distribute" model. Instead of keeping loans on their books, they bundled them together, sliced them into different risk tranches, and sold them off as complex securitized derivatives. Modern banking research highlights the massive moral hazard this created: because lenders had no intention of keeping these loans long-term, they lost all incentive to properly vet the creditworthiness of borrowers in the first place.

This risk didn't disappear; it was simply pushed into the shadows. Banks shifted these toxic assets into off-balance-sheet Special Purpose Vehicles (SPVs) and passed them along to international institutions. Because these vehicles were legally separate, traditional commercial banks weren't required to hold any capital reserves against them. To make these bundles sellable, lenders paid credit rating agencies to evaluate them. The widespread issuance of flawless AAA ratings allowed global financial institutions to maintain incredibly thin capital buffers. Investors worldwide, assuming these assets were completely safe, bought them in massive quantities. This shift of risk away from traditional regulated banks and into opaque shadow banking networks acted as a massive amplifier for the global liquidity crash that followed (Aldasoro *et al*., 2023).

The bubble burst when central banks began raising interest rates to curb rising inflation. The housing market quickly oversaturated, causing property values and collateral to plummet. Millions of subprime borrowers suddenly found themselves facing sharply higher monthly payments that they could neither afford nor refinance. As defaults surged, highly leveraged banks were left holding non-performing loans

backed by real estate that was rapidly losing value. When banks across the system tried to clean up their balance sheets by simultaneously dumping these assets, it triggered a fire-sale effect. This massive liquidation caused capital and funding mismatches that froze the interbank credit supply, starved non-financial businesses of working capital, and directly harmed real-world employment and business investment (Aldasoro *et al*., 2023; Aldridge *et al*., 2023).

3. The Architecture of Contagion: Network Economics

Economies do not behave like simple physical systems where independent particles bounce off each other randomly and predictably. Instead, the interactions between individuals, corporations, and banks are shaped by intricate, non-linear network structures. In recent years, network economics has become an essential tool for understanding how tiny, micro-level cracks can cause massive, macro-level structural collapses, particularly across global supply chains and interbank lending markets (Jackson, 2021).

During economic booms, this heavy interconnectedness is praised as a great tool for spreading and diversifying risk. However, as risk is chopped up and spread across countless financial instruments, the institutions buying them lose sight of the underlying assets. The risk gets diversified, but the vital information about that risk gets completely diluted. When a shock hits, this lack of clarity triggers a fast-spreading epidemic of mistrust; banks abruptly stop lending to each other because no one knows who is quietly holding the toxic exposure.

The delicate balance between network design and systemic collapse was famously outlined by Franklin Allen and Douglas Gale (2000). In a perfectly complete network—where every bank has a small, equal exposure to everyone else—minor shocks are easily absorbed by the group without causing a wider collapse. However, in less connected or highly clustered networks, a local shock cannot be easily absorbed. Instead, it forces neighbouring banks to liquidate long-term assets to survive, dragging otherwise healthy institutions into a cascading default.

Modern research on network topology adds to this view by highlighting the "robust-yet-fragile" nature of modern finance: dense networks are incredibly good at absorbing small shocks, but they act as high-speed superhighways for total systemic failure the moment a shock crosses a certain threshold (Glasserman and Young, 2020). Once these default cascades get moving, local asset devaluations rapidly turn into widespread liquidity freezes, driven forward by the fact that many interconnected banks hold the exact same overlapping portfolios (Bardoscia *et al*., 2021). Real-world data reveals that global financial networks are dominated by a core-periphery structure. A handful of hyper-connected mega-banks act as central hubs for the entire global economy, leaving the entire system vulnerable if even one of those central nodes fails (Caldarelli *et al*., 2023).

4. Epistemological Failures: The Aggregation Problem and Dynamic Stochastic General Equilibrium (DSGE) Models

Macroeconomic theory took a major-turn-decades ago when it decided that all models of large-scale economic phenomena had to be built on "sound micro-foundations"—meaning they had to be rooted in the rational choices of individual agents. However, trying to scale up individual behaviour to explain an entire national economy runs headfirst into the "aggregation problem" (Stoker, 1995). To bypass this massive mathematical hurdle, mainstream models—including the widely used Dynamic Stochastic General Equilibrium (DSGE) frameworks—resort to an intellectual shortcut: they treat the entire aggregate economy as if it were a single, perfectly rational "representative agent" making decisions.

This shortcut is theoretically deeply flawed. Contemporary critiques confirm that by collapsing a diverse economy into a single average individual, standard DSGE models completely miss how wealth inequality and unequal spending habits amplify economic shocks (Stiglitz, 2018; Kaplan *et al*., 2018). When low-income household's live paycheck to paycheck, their immediate reaction to a financial shock is vastly different from that of wealthy

households. To bridge this gap, modern macroeconomics is moving toward Heterogeneous Agent New Keynesian (HANK) models, which throw out the representative agent and instead look at a diverse distribution of households to understand how shocks and policies actually ripple through society (Challe, 2020).

Furthermore, mainstream economics has long ignored major behavioural critiques of its core assumptions. Substantial evidence from behavioural experiments and neuroeconomics shows that *homo economicus*—the perfectly rational, unemotional economic actor—does not exist. Modern behavioural macroeconomics builds these human limitations directly into its models, demonstrating that bounded rationality and herd mentality naturally generate volatile market dynamics, such as asset bubbles and sudden crashes, that traditional models claim are impossible (De Grauwe and Ji, 2020). It is time for economics to move past the representative agent myth and explicitly study economies as complex adaptive systems.

5. Macro-Critical Vulnerabilities: Sovereign Debt and Structural Regulation

5.1 External Sovereign Debt Crises

Sovereign defaults are uniquely destructive macro-shocks. Pinpointing when a country enters default is relatively simple, as it is marked by missed payments, credit downgrades, or spikes in bond yields (Edwards, 1984). However, figuring out when a sovereign debt crisis actually *ends* is a much fuzzier task. Traditionally, economists looked at when a country managed to borrow from private markets again or when its credit rating stabilized (IMF, 2011).

In today's global landscape, tracking and resolving these debt crises has become much slower and more fragmented. The rise of diverse private creditors and non-traditional bilateral lenders outside of the traditional Paris Club has caused major coordination failures. This fragmentation significantly lengthens the time a country spends in financial distress, delaying its recovery and market re-entry (Graf von Luckner *et al*., 2024; Kose *et al*., 2021).

5.2 Macroprudential Policy and Financial Transaction Taxes

To stop the financial system from feeding into its own boom-and-bust cycles, we need intelligent, anti-cyclical rules. Older frameworks, like the Basel II rules, actually made recessions worse by forcing banks to tighten their lending criteria at the exact moment the economy was struggling. This issue has since been addressed by the Basel III Countercyclical Capital Buffer (CCyB), which forces banks to build up rainy-day capital cushions during economic expansions so they can safely keep lending when a downturn hit (Rendón *et al*., 2024).

However, modern general equilibrium models warn that tightening rules on traditional banks can backfire. If traditional borrowing becomes too restrictive, credit simply migrates to unregulated, non-bank financial intermediaries, lowering lending standards across the broader economy (Darst *et al*., 2020). This shifting of risk means that explicit, cross-border coordination among regulators is vital. Without global cooperation, financial institutions will always find ways to sidestep domestic laws by moving their high-risk activities to less regulated jurisdictions (MDPI, 2026).

Alongside banking rules, fiscal policy can use a Financial Transaction Tax (FTT)—such as a tiny 0.1% levy on stock and bond trades—to put a dampener on hyper-fast, speculative trading. Public finance literature shows that while a well-designed FTT can successfully suppress high-frequency, predatory speculation, it must be carefully calibrated. If the tax is set too high, it risks draining market liquidity and raising the cost of capital for vital, long-term business investments (Dávila, 2022; Eichfelder *et al*., 2022).

6. Synthesis of Economic Thought and Policy Recommendations

The history of macroeconomics reveals a long, ongoing struggle to accurately model the harsh realities of deep industrial depressions:

- The Classical School: Relying on Say’s Law, flexible wages, and the idea that

savings always balance out investment, classical economists assumed the free market would always fix itself. This belief collapsed during the Great Depression, where a massive drop in global demand proved that supply-side theories are useless when nobody has the money to buy goods (Sunny *et al*., 2024).

- The Neoclassical School: This school shifted focus to marginal utility and how consumers perceive value. Yet, its reliance on perfectly rational actors who have unbiased, easy access to information constantly falls apart when confronted with real-world market imbalances.
- The Keynesian School: John Maynard Keynes established that aggregate demand is the true engine of economic output, proving that free markets have no automatic mechanism to maintain full employment. The power of this framework was clearly visible during the macroeconomic disruptions of the early 2020s, where governments worldwide rushed to deploy multi-trillion-dollar fiscal stimulus packages to keep consumer spending from collapsing during pandemic-related shutdowns (Bergström, 2024).
- The Monetarist School: Driven by the Quantity Theory of Money, monetarists argued that managing the money supply was the only real priority and that government intervention should be minimal. However, modern central banking analyses show that this rigid approach has largely been abandoned. The historic breakdown of the relationship between the money supply and actual inflation has forced policymakers to favour flexible, discretionary inflation-targeting over rigid, automated money-supply rules (King, 2024).

Policy Recommendations

To truly protect global economies from devastating structural failures, policy must look past basic financial indicators. Long-term macroeconomic health requires building deep institutional resilience. This means strengthening democratic foundations, supporting social market systems to prevent the rise of a marginalized economic underclass, investing heavily in education and research, and making genuine structural commitments to green energy efficiency.

Ultimately, macroeconomists must stop trying to fit a volatile world into static, outdated equilibrium equations and instead design policies that treat the global economy as the living, evolving, and interconnected complex system it actually is.

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