



# Summary

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## LETTER FROM THE PRESIDENT

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### To our readers:

At the core of the Levy Institute’s mission is a commitment to impacting public policy through innovation in economic research. Now entering our 34th year, the Institute’s work continues to open new avenues for inquiry while shifting the public discourse.

Our research has long supported a more active role for fiscal policy and warned of the dangers of letting public policy be guided by deficit panic—themes that have been thrust into greater public prominence over the last several years. On November 20, 2019, Senior Scholar L. Randall Wray was invited to testify before the US House of Representatives’ Budget Committee, where he urged a reexamination of the economic impact of public debt and deficits. This issue of the *Summary* features written testimony submitted for the hearing; prepared by Wray and Yeva Nersisyan, the testimony explains why federal deficits have become the norm in the context of the US economy, argues that they are not only necessary but useful, and advocates strengthening automatic fiscal stabilizers. In an appendix, Wray responds to a Question for the Record submitted by Representative Ilhan Omar on the “fiscal space” available for a Green New Deal and the benefits of prioritizing public spending that supports working families. Wray has an additional paper in this issue in which he examines state and local government debt through the lens of Modern Money Theory and proposes a new understanding of how the fiscal space available at the federal level can be used to revitalize local economies.

In a related vein, this issue includes two working papers that are part of a series of empirical investigations uncovering evidence for the Keynesian view that the chief determinants of government bond yields are the decisions of monetary policymakers (by contrast with the influential “loanable funds” theory of interest rates), lending further support to a more expansive view of fiscal sovereignty. Tanweer Akram and Huiqing Li inquire into the impact of Japan’s monetary policy on its government bond yields; Akram and Anupam Das extend their earlier work on the short-term interest rate’s influence over the long-term interest rate, this time employing daily data on changes in US Treasury security yields.

As part of an ongoing program developing and applying alternative measures of poverty—work that has influenced a number of national statistical agencies—Senior Scholar Ajit Zacharias, Research Scholars Thomas Masterson, Fernando Rios-Avila, Michalis Nikiforos, and Kijong Kim, and Research Associate Tamar Khitarishvili present the findings of their study on consumption and time poverty in Ghana and Tanzania, undertaken with the support of the William and Flora Hewlett Foundation. In a Research Project Report under the Levy Institute Measure of Time and Income Poverty (LIMTIP) program, the authors focus on the impacts of improving physical and social infrastructure in Ghana and Tanzania, investigating the costs and benefits of policies that can lower household time requirements and thereby alleviate their impoverishing effects.

As this project expands, Luiza Nassif Pires joins the LIMTIP team as our newest Research Fellow in the Gender Equality and the Economy program, and a new intensive course in gender-sensitive macroeconomic modeling for policy analysis is scheduled for this summer at the Levy Institute, in collaboration with American University. A working paper under the Gender program by Srinivas Raghavendra, Research Scholar Kijong Kim, Sinead Ashe, Mrinal Chadha, Felix Asante, Petri T. Piironen, and Nata Duvvury puts forth the results of their study on the macroeconomic impacts of violence against women and girls in Ghana.

Also in this issue, Research Associate Jörg Bibow reviews the evolution of the international monetary and financial architecture against the background of John Maynard Keynes’s original Bretton Woods plan, contrasting the precarious position of emerging economies under hyperglobalized finance with Keynes’s *bancor* vision. Lorenzo Esposito and Giuseppe Mastromatteo argue that the faulty assumptions of a particular strand of mainstream theory played a key role in rendering economic systems more fragile; they advocate an expansion of well-managed public intervention to increase long-term potential output. Research Associate Lekha Chakraborty reflects on the future of fiscal federalism in India. And finally, Zengping He and Genliang Jia examine local government debt growth in China—tying it to increased concerns of a Chinese Minsky moment—and argue that the central government should play a more active role in relieving these local burdens.

As always, I welcome your comments and suggestions.

Dimitri B. Papadimitriou, *President*

## **Program: The State of the US and World Economies**

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### **An Analysis of the Daily Changes in US Treasury Security Yields**

TANWEER AKRAM and ANUPAM DAS

Working Paper No. 934, August 2019

Extending earlier work examining Treasury security yields based on quarterly and monthly data, Tanweer Akram, Thrivent, and Anupam Das, Mount Royal University, employ data on daily changes in the short-term interest rate to ascertain their effects on the daily changes in Treasury securities' long-term interest rate. The authors contend that their findings support John Maynard Keynes's argument that central bank actions with regard to the short-term interest rate have a decisive influence on the long-term interest rate, and that the use of high-frequency data makes their analysis useful to investors, financial analysts, and policymakers because it enables real-time analysis based on a wide range of variables.

Akram and Das note that the literature on government bond yields is substantial, but contains unresolved debates between the neoclassical and Keynesian schools of thought. The neoclassical view, based on the loanable funds theory, maintains that government bond yields depend on the demand for and supply of loans in the market, and an increase in government debt and deficit ratios leads to higher bond yields. In contrast, the Keynesian view is based on the liquidity preference theory of interest rates. It suggests that, in a world of ontological uncertainty, interest rates have a psychological and sociological foundation and, while other factors may have some influence, the central bank's actions on the short-term rate have the greatest effect on the long-term rate.

The authors offer an overview of long-term Treasury security yields between 1982 and 2018, noting that they have been declining in line with the secular fall in observed headline and core inflation, with the Federal Reserve's lower policy

rate in the aftermath of the global financial crisis reinforcing the trend. Plotting the federal funds effective rate versus the 3-month Treasury bill yield illustrates that they track each other closely and changes move in lockstep. They continue by looking at trends in various other financial variables over the same time period, including the Chicago Board Options Exchange's volatility indices for the S&P 500 and the Nasdaq as a measure of investor sentiment; crude oil prices as an indicator of inflationary pressure and global demand; the commodity price index and prices for copper and gold as clues about inflationary pressures, inflation expectations, and aggregate demand; and the dollar-to-euro exchange rate for indicators of investor confidence and financial flows. Additionally, scatterplots (provided in the appendix) show the relationship between yields on Treasury securities of various tenors and the 3-month Treasury bill and that between the year-over-year changes in the yields, revealing a strong positive correlation between the yields on long-term Treasury securities and Treasury bills and a positive correlation in their year-over-year changes, both of which decline as the maturity tenor increases.

After summarizing their data and explaining their variables as described above, the authors outline the equations used in examining the relationship between the short-term and long-term interest rates on Treasury securities of various tenors. They use the longest dataset possible given the data availability, running from January 1982–December 2018 and containing over 13,500 observations. Because the study deals with an extended time series, they first test for unit roots, finding that the null hypothesis of a unit root is rejected at less than the 1 percent level for all variables. However, the first differences of these variables, which represent the daily changes, are stationary. In the following step, they estimate their equations using the ordinary least squares technique on the first differences. As predicted by Keynes, in all equations the short-term interest rate has the strongest influence on Treasury security yields, and changes in the current short-term interest rate have a stronger effect on the yields of Treasury securities of shorter tenors than on those of longer maturities. Other variables had the expected effects, with the exception of gold prices, where an increase resulted in either no change or lower bond yields. Robustness tests showed evidence of serial correlation in only one of the 36 equations,

with mixed results for heteroskedasticity. Reestimating the equations using the Nasdaq volatility index in place of the S&P volatility index offers similar results with no evidence of serial correlation and fewer instances of heteroskedasticity.

The authors suggest their findings are relevant for policy debates in advanced economies and recommend that future research use high-frequency data for both advanced and emerging economies to determine whether the Keynesian perspective on bond yields holds.

[www.levyinstitute.org/pubs/wp\\_934.pdf](http://www.levyinstitute.org/pubs/wp_934.pdf)

## Program: Monetary Policy and Financial Structure

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### Statement of Senior Scholar L. Randall Wray to the House Budget Committee, US House of Representatives: Reexamining the Economic Costs of Debt

L. RANDALL WRAY and YEVA NERSISYAN

On November 20, 2019, Senior Scholar L. Randall Wray appeared before the Budget Committee of the US House of Representatives for a hearing focused on the economic costs of public debt. In written testimony submitted to the committee, Wray and Yeva Nersisyan, Franklin & Marshall College, explore the causes and consequences of US federal budget deficits and debt.

Wray and Nersisyan point out that federal government spending has not been growing rapidly relative to GDP and population growth in the postwar period and is not the leading cause of rising public debt. Recessions, and the collapsing tax revenues that result, have become the most important drivers of debt growth. Wray and Nersisyan observe that while tax revenues follow a strong procyclical trend (declining in recessions; rising in recoveries), spending has become only slightly countercyclical (rising in recessions; declining in recoveries). They explain that the deficit, as a percentage of potential GDP, has risen during the typical downturn more than it has declined during the typical expansion; combined with the predominance of periods of GDP growth below

potential, this has meant that the net impact of automatic stabilizers in the postwar period has been biased toward deficits.

From the perspective of the sectoral balances framework (the interaction between the financial balances of the government, private, and foreign sectors), it is clear why government deficits are the norm in the US economy, according to Wray and Nersisyan, and why (given the US current account deficit) they should be. Holding the external balance constant, the government's deficit adds to the private sector's surplus. Since the current account is likely to continue to be in a deficit position for the foreseeable future, Wray and Nersisyan point out, allowing the domestic private sector to net save requires the government's deficit to be greater than the current account deficit. Under such circumstances, they argue, it is only when the economy overheats that the government should seek to remove demand from the economy by moving to a budget surplus.

The other upshot of the sectoral balances perspective is that the federal deficit is not entirely under congressional control. Attempts to reduce or expand the government's deficit can be offset by movements in the private and foreign sector balances. Wray suggests that there are different paths to larger deficits: discretionary spending increases or tax cuts could create a larger deficit temporarily, but ultimately "pay for themselves" by boosting the rate of GDP growth, or austerity could slow growth, ultimately reducing tax receipts and increasing some transfer spending. In other words, we can achieve the same deficit ratio in either a "good" way or a "bad" way. As Wray and Nersisyan put it: "each deficit ratio is consistent with many different growth rates." This is part of the reason the authors maintain that the budget deficit itself should not be treated as a policy target. They advocate building in stronger automatic stabilizers for federal fiscal policy.

As for public debt, Wray and Nersisyan observe that the relationship between the debt-to-GDP ratio and the federal funds rate has been somewhat negative in the postwar period—which is the opposite of the conventional wisdom, they note. And debt service (interest payments as a percentage of GDP) has not been closely related to the debt ratio—debt service follows the fed funds rate, with a lag. Since interest payments on the debt are strongly related to the fed funds rate and the fed funds rate is determined by the Federal Reserve, Wray and Nersisyan argue, in that sense the "sustainability"

of a rising debt ratio is in large part a matter of monetary policy. Moreover, the federal government can always make the payments required to service its debt and can therefore never be forced for financial reasons to default on its debt. The legislated debt limit poses a legal obstacle to making debt service payments, but this is a self-imposed political limit, they emphasize, not an economic or financial one.

[www.levyinstitute.org/pubs/tst\\_11-20-19.pdf](http://www.levyinstitute.org/pubs/tst_11-20-19.pdf)

## **The Impact of the Bank of Japan's Monetary Policy on Japanese Government Bonds' Low Nominal Yields**

TANWEER AKRAM and HUIQING LI

Working Paper No. 938, October 2019

Contrary to the conventional view that higher debt ratios lead to higher government bond yields, long-term yields on Japanese government bonds (JGBs) have stayed low over the past 30 years in spite of Japan's elevated and rising government debt ratios. Asserting this is consistent with the Keynesian view that a central bank's short-term rates have decisive influence on long-term yields, Tanweer Akram, Thrivent, and Huiqing Li, Central University of Finance and Economics, employ empirical evidence gathered in previous studies (including Institute Working Paper No. 906) to illustrate the effects on JGBs.

Presenting an overview of the evolution of JGBs' nominal yields from 1990—when asset bubbles in equities and real estate burst—to the present, the authors note that they have been low and declining. From the early 1990s through 2000, the Bank of Japan (BoJ) kept its policy rate low, pursuing a zero interest rate policy after 2001 and negative interest rate policies after 2016, with the short-term rate moving in lockstep with the policy rate and ultimately turning negative with the BoJ's introduction of quantitative and qualitative monetary easing (QQME). Over the period under investigation, lower growth, fiscal stimulus, increased transfers, and the aging population contributed to elevated government debt ratios in an economy characterized by stagnation, low inflation, and deflationary dynamics. Additionally, protracted appreciation of the yen reduced export competitiveness and weak wage growth lowered domestic demand. The BoJ's policy responses

resulted in a modest balance sheet expansion through 2006, followed by a decline until Abenomics' accommodative policies, fiscal actions, and structural reforms tripled the balance sheet through large-scale JGB purchases, as well as purchases of other securities at the end of 2018.

In accordance with the Keynesian view of short-term rates' influence on long-term yields, Akram and Li suggest that these macroeconomic conditions necessitated the BoJ's accommodative positions responsible for the low long-term JGB yields. This stands in contrast to mainstream theories, such as the loanable funds theory that posits that the supply of funds is discouraged by low rates, or the IS-LM model where government borrowing raises the equilibrium interest rate on government bonds. Because most studies on JGB yields are based on these conventional theories, conclusions suggest that the government debt is not sustainable and, unless it is reduced, rates will rise sharply. Akram and Li point out that these studies overlook the fact that in countries with sovereign currencies (like Japan), interest rates on long-term government bonds are largely determined by central bank actions, as first described by Keynes.

In volume II of his *Treatise on Money*, Keynes argues that, in a world of ontological uncertainty, investors form their future expectations based on present information; therefore, the value of bonds is sensitive to short-term fluctuations in known or anticipated profits, and, because the value is often determined by a small number of bondholders who hold them for a short time, it is in every investors' interest to act the same way. Elaborating on this in his *General Theory*, Keynes rejects the loanable funds theory in favor of a view based on the analysis of investors' expectations, confidence, and liquidity preference. Akram and Li employ this framework—in which the current short-term rate, a forward rate (a function of current inflation and growth rates in the Keynesian model), and a government finance variable determine long-term rates—to provide an intuitive explanation for JGB yields, with changes in these variables resulting in changes in long-term rates. Referring to studies on the subject for Japan, India, the United States, and the eurozone, the authors assert that empirical evidence points to the Keynesian framework as superior to the conventional views on bond yields and, in the case of Japan, the BoJ can keep JGBs' nominal yields low by ensuring a low short-term interest rate.

Akram and Li recommend these findings be applied to the ongoing debates around fiscal sustainability and fiscal and monetary policy in Japan and other advanced countries in order to shift the focus to the effectiveness, efficiency, and appropriateness of policies and away from the perils of an activist stance and elevated government debt ratios. They conclude that, given the challenges Japan currently faces regarding their economic prospects amid demographic transformation, policies should focus on fostering economic and social institutions rather than government debt reduction.

[www.levyinstitute.org/pubs/wp\\_938.pdf](http://www.levyinstitute.org/pubs/wp_938.pdf)

## Indian Fiscal Federalism at the Crossroads: Some Reflections

LEKHA CHAKRABORTY

Working Paper No. 937, October 2019

Reflecting on Y. V. Reddy and G. R. Reddy's book, *Indian Fiscal Federalism* (2019, OUP), following the book release lecture in New Delhi on March 28, Research Associate Lekha Chakraborty identifies some of the fundamental changes happening in India as a result of the historically high devolution of the central government's tax pool per the 14th Finance Commission's recommendations, the abolition of the Planning Commission, and the introduction of new laws and institutions related to fiscal devolution. Chakraborty outlines the main challenges facing Indian fiscal federalism today—including the need for a new fiscal federalism framework, concerns about growing spacial inequalities, changes to devolution formulas, the debate on whether to make Finance Commissions permanent, and a lack of trust among states with regards to the Finance Commissions—and addresses what they mean for the future.

Beginning with the 14th Finance Commission's lauded 42 percent tax devolution, Chakraborty points out that it was not without criticism. As the chairperson of the 14th Finance Commission, Y. V. Reddy spoke to these criticisms, indicating their mistake in not assigning conditionality to the recommended grants for local bodies, while arguing that unconditional grants may be superior to one-size-fits-all conditional grants that limit the capacity to implement programs at the local level.

Chakraborty considers the debates regarding entitlement-based federal legislation imposed on the states as one of the highlights of the fiscal federalism issue. The Indian constitution clearly outlines the functions reserved for the state and federal governments, as well as those to be shared concurrently; therefore, new centrally sponsored schemes and the expansion of the concurrent functions represents a transgression of the federal government into state functions that is outside the purview of the Finance Commissions and circumscribes the fiscal autonomy of Indian states. Chakraborty notes this is the most sensitive part of Indian federal-state fiscal relations, given the states' perception that the transfers are arbitrary, regressive, and represent a misuse of constitutional power. To remedy this, experts suggest an institutional mechanism in the form of a fiscal council to act as a check on the federal government's fiscal consolidation and monitor borrowing at the federal level (currently, such a mechanism exists only at the state level).

In response to allegations that the data used by the Finance Commissions is inaccurate, creating unrealistic revenue projections and expenditure compression, Chakraborty points to the importance of systematic analysis of the accuracy with which the various components of public finance can be forecast (known in India as "fiscal marksmanship") to identify budget forecasting errors. However, Reddy and Reddy's data indicate that forecasts were not lacking accuracy and that approaches adopted by various Finance Commissions are based on realistic and uniformly applied macroeconomic assumptions, with errors being mostly random and beyond the purview of policymakers.

Regarding the abolition of the Planning Commission and the vacuum it created with respect to spatial inequalities, Chakraborty asserts that existing institutional mechanisms (such as the Finance Commissions) can provide predictable fiscal relations, and help to distinguish between asymmetric and cooperative federalism to facilitate convergence of outcomes. Evidence on the egalitarian results of fiscal federalism is mixed: there has been convergence in the social sector, but not for the economy as a whole.

On public debt, Chakraborty notes that fiscal rules determine a state's access to debt, subject to federal approval. In the context of shifting perceptions of public debt, she points out that access needs to be evaluated on a case-by-case basis,

and that it can be justified if—like public investment or output gap reduction—it has clear benefits, as temporary fiscal expansion during a crisis has the potential to reduce debt in the long run. With public and private investment suffering at the hands of fiscal consolidation, Chakraborty advocates strengthening tax buoyancy over public expenditure compression as a less detrimental path to growth.

[www.levyinstitute.org/pubs/wp\\_937.pdf](http://www.levyinstitute.org/pubs/wp_937.pdf)

### **Fiscal Reform to Benefit State and Local Governments: The Modern Money Theory Approach**

L. RANDALL WRAY

Working Paper No. 936, September 2019

Arguing that it was well understood in the postwar period, but gradually forgotten as neoclassical theory's household budget constraint was applied to the government, Senior Scholar L. Randall Wray uses Modern Money Theory (MMT) to redevelop our understanding of how the fiscal space available to a currency issuer can have benefits for national social spending, as well as for spending at the state and local levels.

Summarizing the main tenets of MMT, Wray explains that a sovereign government chooses its money of account, then imposes obligations and issues currency in that unit. Doing this implies, among other things, that the sovereign must first issue the currency before it can be collected to satisfy obligations and, importantly, that it cannot run out of its own currency (though it does face real resource constraints and too much untargeted spending can cause inflation). Because payments in modern economies are made through central bank reserve credits and not by issuing paper notes, Wray maintains the process has been obscured, but the logic remains the same—reserves cannot be debited for tax payments until they have been created, and, in the United States, this happens when payments are made by the Fed on behalf of the Treasury, replenishing bank reserves. Here Wray notes a key insight of MMT is that because banks exchange these excess reserves for interest-earning bonds, bond sales by the Treasury or the central bank are functionally equivalent to monetary policy operations used to drain excess reserves.

Beginning in the 1960s, household budget constraint theory was applied to the government budget such that total federal spending was claimed to be constrained by taxes, borrowing, and printing money. In recent years orthodox economists have advocated for the use of “generational accounting,” which forecasts government revenue and spending commitments through an infinite horizon, calculating supposed shortfalls of hundreds of trillions of dollars. Because mainstream theory suggests borrowing and printing money both have drawbacks, higher taxes (and lower spending) are what must fund the predicted deficits. From an MMT perspective, the government budget constraint is an ex post accounting identity (with spending equal to taxes received plus net bonds and net bank reserves accumulated) that does not constrain spending, and government debt is a source of financial wealth for the private sector that does not need to be repaid.

Regarding government debt, Wray turns to Wynne Godley's sectoral balances approach, which recognizes that balances across the government, domestic private, and foreign sectors must equal zero, therefore a government-sector surplus implies a reduction in the nongovernment sectors' financial wealth. Wray contends this illustrates Keynes's theory that it is spending—or injections like investment and government spending—that drive income and leakages such as saving or taxes, therefore fiscal policy can and should have a stronger role in supporting aggregate demand. He adds that research has demonstrated that over the course of the 20th century, slow growth occurred in periods when government spending grew slower than GDP.

The rise of “federalism” in the late 20th century shifted responsibilities to the lower-level state and local governments while lower federal transfers reduced available funding. At the same time, local tax breaks for corporations and failing brick-and-mortar operations reduced revenues, forcing municipalities to raise tax rates and/or cut services. Wray suggests this played into the hands of balanced-budget conservatives, who encouraged the notion that taxpayers should get out of the system what they put into it. However, the federal supply-side tax cuts and the regressive nature of state and local tax systems further constrained budgets, and low growth and secular stagnation compound the problem, creating a situation where local-level governments were forced to do more with less.

Wray concludes that better use of the federal government's policy space could overcome the ills brought on by the austere "fiscal responsibility" of the past 45 years. By providing the necessary funding to overcome fiscal gaps at the lower levels, Wray asserts that MMT provides the justification for well-targeted federal transfers that can revitalize local economies and provide 21st century infrastructure without increasing inflation or crowding out private investment.

[www.levyinstitute.org/pubs/wp\\_936.pdf](http://www.levyinstitute.org/pubs/wp_936.pdf)

## **Evolving International Monetary and Financial Architecture and the Development Challenge: A Liquidity Preference Theoretical Perspective**

JÖRG BIBOW

Working Paper No. 935, August 2019

Against the background of John Maynard Keynes's original Bretton Woods plan, Research Associate Jörg Bibow reviews the evolution of the international monetary and financial architecture, using Keynes's liquidity preference theory to inform his analysis of the policy challenges globalized finance creates for emerging economies.

Outlining the Keynesian view on labor and financial markets, Bibow notes that Keynes recognized the financial system's role in facilitating (or constraining) economic activity, employment, capital accumulation, and development, while mainstream employment theory overlooks money's role and omits effective demand from the equation. In this context, he also notes Keynes's objections to both the quantity theory of money and the loanable funds theory of interest—the former because it was out of touch with the realities of bank money and organized securities markets, and the latter because monetary production economies require advance finance, not prior savings, to fund productive activities.

Instead, Keynes's liquidity preference theory of interest rates argues that interest rates are determined by the financial system to balance the desires of those who wish to become more liquid with those who are willing to become less so. Applied globally, Bibow contends that Keynes's theory offers a different perspective on financialization: while the loanable funds theory sees it as a way for developing countries to catch up using developed countries' savings, Keynes says that the

terms of liquidity provision as determined by the financial system condition the production of new capital assets and, hence, employment and development.

By putting money back into the equation through his "own rates" analysis, Keynes highlights monetary policy's role at the center of the structure of asset prices. As the asset with the highest liquidity premium, Keynes suggests money is an attractive store of value in an uncertain world, with the desire to hold money an indicator of investors' trust in the future—but, Bibow says, at no time are prices guaranteed to reflect a true underlying reality as the efficient market theory of finance suggests. Instead, they are self-referential and prone to excess and fragility and, under globalized finance, the worldwide structure of asset prices is expressed in a common standard of value, with the US dollar serving that role in the postwar era.

Bibow contends this is in contrast to the monetary order Keynes envisioned, which pegged national currencies to a supranational unit of account, allowing for semiautomatic exchange rate adjustments to maintain balanced trade and payment positions. An international order to tame global finance based on such symmetry would prevent beggar-thy-neighbor strategies and allow space for national-level policies to focus on full employment. However, the plan was rejected at Bretton Woods in favor of granting hegemonic status to the US dollar. Though the plan was symbiotic at the outset, when Europe needed resources for reconstruction and the US needed an outlet for its exports, it ultimately created asymmetry in international affairs.

US weakness in the 1970s created a policy vacuum at the same time as developed-country banks began extending loans to the developing world. When the dollar surged back in the 1980s with the help of neoliberal policies, the expanding financial system based on dollar liquidity replaced the old Bretton Woods monetary system. For many developing countries, the period was a "lost decade" that left them insolvent. The launch of the euro and spread of the Washington Consensus in the 1990s coupled with crises of the late 1990s and early 2000s led to defensive macroeconomic policies in emerging markets, and the financial easing following the dot-com bust brought easy money, fueling investments in the developing world until the collapse in 2007.



As bubbles in the developed world burst, Bibow asserts that the developing world was affected as an innocent bystander, while the hegemon was free to implement expansionary macro policy, creating fresh challenges for less-developed economies in the form of renewed capital flows that caused a surge in asset prices, credit booms, and appreciating currencies. With China emerging as the new global growth engine after the crisis, Bibow argues that the developing world is in a precarious situation of reconciling their policies between the two dominant poles in the world economy, with dollar hegemony and hyperglobalized finance precluding them from establishing a structure of asset prices and financial conditions that might suit their needs.

To remedy this, Bibow recommends a Keynesian policy mix geared toward mobilizing local resources paired with sustainable external finances to augment the acquisition of foreign capital goods and technology, with liquidity produced locally under the auspices of the national monetary authority. [www.levyinstitute.org/pubs/wp\\_935.pdf](http://www.levyinstitute.org/pubs/wp_935.pdf)

### **Defaultnomics: Making Sense of the Barro-Ricardo Equivalence in a Financialized World**

LORENZO ESPOSITO and GIUSEPPE MASTROMATTEO  
Working Paper No. 933, July 2019

Contending that the 2008 crisis created the need to rethink the role of public intervention in the economy, Lorenzo Esposito, Bank of Italy and Catholic University of the Sacred Heart, Milan, and Giuseppe Mastromatteo, Catholic University of the Sacred Heart, Milan, present their arguments for using public debt default as an economic stabilizer. The authors frame their argument around the Barro-Ricardo equivalence (BRE), suggesting that its faulty and often contradictory assumptions played a decisive role in molding the policies that created the crisis.

Mainstream theory—which the authors note lacks a proper place for money, banks, or finance, and considers all financial innovations good—often blames public debt for economic ills. In his 1974 article, “Are Government Bonds Net Wealth,” Robert Barro asserted it was futile to use public money to support the economy because it crowds out private investment and stifles innovation. However, in the 45 years

since Barro’s article, the financial system has grown and crises are more frequent. While many endorse laissez-faire solutions, Esposito and Mastromatteo assert they are founded on assumptions that ignore modern economic realities. In particular, some of the BRE’s main assumptions—no voluntary unemployment or idle resources, a strong reliance on the representative-agent hypothesis (RAH), an economy with no demographic or technological change, and no central bank—are recognized as implausible, even by its supporters; however it continues to be employed to explain government debt’s influence on growth, with enormous policy consequences.

Arguing against Barro’s assertion that public and private debt are perfect substitutes, and therefore public debt crowds out private investment, the authors note that public bonds are what allow private debt to become social wealth (money) through the projective and liquidity conventions. To keep markets liquid, the state must be willing to act as the lender of last resort. Without the “visible” public hand giving investors the illusion of liquidity, the authors contend that financial assets are in default.

The BRE’s extreme assumptions make public debt default the efficient outcome, therefore the authors find no reason to issue public debt. Though removing the assumptions that deliver this outcome does change the results, the authors consider some issues of the underlying hypotheses, particularly the RAH. In the real world, where the RAH does not hold and preferences are not aggregable, they argue default becomes a practical issue to be evaluated on a case-by-case basis. Finding default is generally a better long-run option than austerity or inflation, the authors claim it is often met with resistance from a public that fears loss of services and financial disruption. Additionally, in the current era of financialization, Esposito and Mastromatteo suggest the increasing power of the financial system allows creditors to impose their will on the government—even though the state’s lending-of-last-resort functions ultimately make private debt public debt.

Given that public debt is a political issue, strategies to handle it require cooperation from stakeholders to find the solution that will offer the best outcome for the greatest number. It is here Esposito and Mastromatteo maintain that the BRE is most dangerous because its assumptions allow policymakers to ignore private debt leverage as the driver of economic fragility that leads to increased public debt. Default

will not seem like the best option for those who own public debt and post-default outcomes will vary based on the specifics of the situation. If government signals its willingness to use the opportunity to reorient policy while keeping credit flowing, the more accepted the default will be. Framing it as a preemptive restructuring where small savers will be protected can foster confidence, delivering results that provide market stability and shorter periods of market exclusion. Esposito and Mastromatteo offer Italy as one example of where policy space is limited and public debt is concentrated in the financial system, but debt default could put the economy back on a growth path and, with buy-in from the banks, would have fewer long-term consequences than a crisis.

The authors conclude that the BRE's conflicting ideas about debt make it unsuitable for guiding policy, as both public and private debt have the potential to increase growth depending on their economic function, and public debt default followed by well-managed public investment can raise long-term potential output. They recommend that future policy be guided by theories that allow the public budget to fulfil its allocative and stabilizing roles while recognizing the size of the overall leverage in the financial system matters more than its composition.

[www.levyinstitute.org/pubs/wp\\_933.pdf](http://www.levyinstitute.org/pubs/wp_933.pdf)

## **Rethinking China's Local Government Debt in the Frame of Modern Money Theory**

ZENGPING HE and GENLIANG JIA

Working Paper No. 932, June 2019

With a Chinese Minsky moment a growing concern among researchers, Zengping He and Genliang Jia, Renmin University of China, look at the role of China's local government debt—particularly the unregulated implicit debt—in fostering economic instability, arguing that the central government should play a more active role in relieving local-level debt burdens.

Zengping and Genliang trace the origins of the debt growth, beginning in 1994 with a trio of legal changes that restricted local governments' ability to borrow and issue bonds, creating the need to bypass restrictions with innovations, such as local government financial vehicles, that vastly

increased the amount of implicit debt. As their use drew regulators' attention and supervision tightened, new financing channels opened and made regulations ineffective. Motivated by the "promotion tournaments" in which local GDP is used as a metric in promotion considerations, the authors suggest that local officials will use the resources available to them to achieve higher growth, including increasing spending and, in places where there are no clear rules, they will often take risks with new policies. To meet their goals, higher-level governments will shift the burden onto lower levels. Because revenues are concentrated at the central level, while expenditures are concentrated at the lower levels, local governments are again incentivized to increase their implicit debt, perpetuating the cycle of local-level innovation and central-level regulation.

Asserting that China is attempting to achieve economic growth, stabilized central government debt, and stabilized local government debt, the authors note the conflicting nature of these goals, as economic growth requires government debt and debt targets limit policy space, with the trade-off between the two negatively affecting local government debt levels. To provide a solution to the conflict, the authors propose a Modern Money Theory (MMT) framework in which the central government abandons its fiscal balance targets and bears more of the burden in fiscal policy. As a country that issues its own sovereign currency, China does not finance its activities at the central level through taxation and can afford any expenditures denominated in its own currency, while lower-level governments must finance their activities through revenues that are often inadequate. The authors argue that the central government should therefore provide the necessary funding for local-level governments—which are often better at selecting and managing projects for their populations—to achieve their policy goals.

By situating the Chinese economy in an MMT framework, Zengping and Genliang reason that assertions that fiscal revenue distribution is a zero-sum game between the central and local governments are voided. Therefore, the central government would no longer need to collect revenues from the lower levels to increase its policy space, but could instead distribute more revenue to local governments to increase their policy space without raising debt levels. Given the exigencies of the Chinese promotion tournaments and other

social institutions, without additional funding in downturns, local governments are incentivized to take on implicit debt to achieve policy goals, adding fragility to an already fragile economy; abandoning fiscal balance targets would allow the central government to more easily conduct countercyclical policy without further burdening local budgets.

In addition to a reform of its tax-sharing policy (established while policy space was limited by a floating exchange rate), a more dynamic regulatory system that can keep ahead of innovations, and more comprehensive indicators (measuring social as well as economic progress) for the promotion tournaments, Zengping and Genliang conclude that the Chinese economy would benefit from a reconsideration of its economy in an MMT framework, where the central government uses its role as an issuer of sovereign currency to stabilize fragility and decrease local-government debt.

[www.levyinstitute.org/pubs/wp\\_932.pdf](http://www.levyinstitute.org/pubs/wp_932.pdf)

## Program: The Levy Institute Measure of Time and Income Poverty

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### Macroeconomic and Microeconomic Impacts of Improving Physical and Social Infrastructure: A Macro-Micro Policy Model for Ghana and Tanzania

AJIT ZACHARIAS, THOMAS MASTERSON,  
FERNANDO RIOS-AVILA, MICHALIS NIKIFOROS, KIJONG KIM,  
and TAMAR KHITARISHVILI

Research Project Report, September 2019

Building on their previous research revealing employed women are more prone to time deficits in meeting their unpaid household care and reproduction work and that taking account of these deficits alters the picture of consumption poverty, Senior Scholar Ajit Zacharias, Research Scholars Thomas Masterson, Fernando Rios-Avila, Michalis Nikiforos, and Kijong Kim, and Research Associate Tamar Khitarishvili investigate the costs and benefits of policies that can lower household time requirements to alleviate their impoverishing effects. Focusing on policies to improve roads and early

childhood education (ECE) in Ghana and Tanzania, the authors develop a disaggregated and fully articulated macroeconomic model based on social accounting matrices (SAMs) to account for intersectoral linkages and external constraints, such as balance of payments, that are particularly important for many developing nations. The macroeconomic outcomes are linked to a microsimulation model to assess their impact on the time and consumption poverty of individuals and families.

The authors begin their study by looking at the current state of roads and ECE in Ghana and Tanzania and identifying policy goals appropriate for the two countries. The impact of physical infrastructure on gendered dimensions of well-being is documented in studies within and outside the realm of feminist economics, with all-season access to roads having a positive impact on women's health and ability to work outside of the home. ECE's impact is less explored, but the authors assume it will reduce household reproduction time requirements by directly lowering time spent on childcare and indirectly by reducing time spent on tasks (i.e., cooking, cleaning, etc.) that accompany caring for young children. Using data available from public sources, as well as data collected from their own field work, they estimate the public expenditures required to achieve these goals and econometrically assess the relationship between the policy interventions and time allocation. Specifying their macroeconomic model, the authors note that previous studies using input-output data focus mainly on changes in employment. Instead they use recent SAMs for each country to ensure their model provides a full assessment of the macroeconomic impact of the additional public expenditure required for the policy interventions.

Using an identical measurement framework as employed in their previous study on time and consumption poverty in Ghana and Tanzania (Research Project Report, August 2018), the authors examine the impacts of the policy interventions on the framework's parameters and variables. As in their previous study, the information on individuals and households is derived from synthetically matched files using time use and household budget surveys from the two countries, making modifications to their previous methodology with regards to thresholds of household production, changes in household consumption expenditures, and job assignment considerations. Focusing on time deficits and their impact on

a household's ability to attain a minimum standard of living, they amend the official poverty line to uncover the "hidden poor" (i.e., households facing a time deficit and lacking the financial resources to replace household production shortfalls) before turning to a discussion of the policy interventions' impacts.

Distinguishing between the direct and total effects of the policy interventions on time and consumption poverty, the authors find that in both countries road improvements have the direct effect of lowering commuting time for all employed individuals. Expanding ECE availability reduced time spent on household production by individuals in households with young children, with the direct effect of lowering their threshold of household production. The direct effects of these policy interventions reduce the time deficits of time-poor individuals, facilitating a transition out of time poverty for some. The decline in time deficits also reduces the consumption poverty line (which includes the monetized value of the prior time deficits), enabling a transition out of consumption poverty as well.

The total effects of the interventions combine the direct effects with the employment effects generated as households take new jobs created by the interventions. As households alter time allocation between paid and unpaid tasks, the authors suggest the shifts in the intrahousehold division of labor have the potential to be impoverishing, though the income increases can potentially offset these impoverishing effects. The total effects of the policy interventions in both countries are a lowering of women's time poverty rate and a reduction in the number of women facing the double bind of time and income poverty, with the net effect of higher employment reducing consumption poverty.

[www.levyinstitute.org/pubs/rpr\\_9\\_19.pdf](http://www.levyinstitute.org/pubs/rpr_9_19.pdf)

## Program: Gender Equality and the Economy

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### The Macroeconomic Loss Due to Violence against Women and Girls: The Case of Ghana

SRINIVAS RAGHAVENDRA, KIJONG KIM, SINEAD ASHE, MRINAL CHADHA, FELIX ASANTE, PETRI T. PIIROINEN, and NATA DUVVURY

Working Paper 939, October 2019

Srinivas Raghavendra, Mrinal Chadha, Felix Asante, Petri T. Piironen, and Nata Duvvury, NUI Galway, Research Scholar Kijong Kim, and Sinead Ashe, University of Edinburgh, present their findings from a study on the macroeconomic impact of violence against women and girls (VAWG) in Ghana, undertaken as part of the UK Department of International Development's "What Works to Prevent Violence against Women and Girls" project. Employing data from a 2016 representative survey of 2,002 women in Ghana's ten main provinces, the authors develop a comprehensive framework for analyzing VAWG's impact on the Ghanaian economy.

VAWG is a human rights violation that affects women in the home (with one-in-three ever-partnered women experiencing physical or sexual violence), at work, and in public spaces, impacting their physical, mental, and reproductive health, as well as their earning potential through income and employment loss. However, rational agent macroeconomic models are gender neutral and therefore the costs of VAWG do not enter macroeconomic and development policy considerations. To fill the gap in the existing literature, the authors use the social accounting approach to assess VAWG's cumulative economic impact by considering its transmission through the economy's circular linkages.

Presenting some stylized facts about Ghana, the authors note that while the country boasts a high female labor force participation rate, it is a traditional and patriarchal society, resulting in gendered social norms and widespread VAWG. They also note that the impacts of such violence manifest in different ways. Immediate impacts include absence from work (absenteeism), reduced on-the-job performance (presenteeism), inability to carry out household reproduction tasks, and poor physical and mental health status, with medium- to

long-term impacts such as reduced human capital formation, chronic disability, and loss of quality of life, among others. These direct and indirect costs have been evaluated using different methodologies that aggregate specific individual-level monetary costs (including direct accounting, willingness to pay/contingent valuation, and gender responsive budgeting), but none have considered VAWG's multiplier effect across various economic sectors.

Using the data from the 2016 women's survey, the authors estimate the losses in the dimensions of absenteeism, presenteeism, and lost household reproduction and care work. Survey data collected directly (by asking women how many work days they lost due to violence) was assumed to be under-reported, therefore the authors used an indirect method to establish the number of missing days, as well as the number of days of diminished productivity, in the past 12 months. To establish the monetary value of the days lost to absenteeism, they multiplied the missing days by the inflation-adjusted average daily earnings for women from the 2012–13 Ghana Living Standards Survey (GLSS). Though presenteeism and lost hours of household reproduction are implicit losses that are not directly estimable, the authors employ the same methodology used for costing absenteeism, with the GLSS average wage as the unit price of presenteeism, but substituting Ghana's legal minimum daily wage as the unit price of household care work.

The authors next trace the indirect (multiplier) loss due to absenteeism through the economy using a simplified accounting matrix (SAM), linking the microeconomic activities of individual households to the macroeconomy to illustrate the distribution of total income across factors and households. They find that more than 40 million work days were lost by 2.4 million workers who reported absenteeism due to violence, representing lost earnings of over \$284 million or 0.6 percent of Ghana's 2017 GDP, with the loss across all three dimensions (absenteeism, presenteeism, and lost household reproduction) totaling close to 1.1 percent of GDP. Using Ghana's 2015 SAM to account for the multiplier loss to the economy as a whole, they find that the Ghanaian GDP could have been close to 1 percent higher in the absence of VAWG, and tax revenues could have been nearly 0.5 percent higher. Considering the cumulative effects of inaction for the period between 2010 and 2024, the authors estimate that over

three-quarters of Ghana's projected GDP for 2024 is lost over the 14-year period due to the effects to VAWG.

To make visible the invisible leakages caused by VAWG, the authors advocate the use of a framework, such as the one outlined in their study, in which VAWG is viewed not as an issue of the "private" sphere of the household, but as one that has ramifications for the economy and society as a whole.

[www.levyinstitute.org/pubs/wp\\_939.pdf](http://www.levyinstitute.org/pubs/wp_939.pdf)

### **29th Annual Hyman P. Minsky Conference**

Levy Economics Institute of Bard College  
Annandale-on-Hudson, New York  
April 16, 2020

The 29th Annual Hyman P. Minsky Conference on the State of the US and World Economies will take place on April 16, 2020 at Blithewood on the Bard College campus.

More details will be provided on our website, [levyinstitute.org](http://levyinstitute.org), as they become available.

### **The Hyman P. Minsky Summer Seminar**

Levy Economics Institute of Bard College  
Annandale-on-Hudson, New York  
June 7–13, 2020

The Levy Institute's 11th annual Hyman P. Minsky Summer Seminar will be held on the Bard College campus, June 7–13, 2020. The Summer Seminar provides a rigorous discussion of both theoretical and applied aspects of Minsky's economics, and is geared toward recent graduates, graduate students, and those beginning their academic or professional careers.

For application and other information, please visit our website.

### **Intensive Course in Gender-Sensitive Macroeconomic Modeling for Policy Analysis**

Levy Economics Institute of Bard College  
Annandale-on-Hudson, New York  
July 8–14, 2020

In collaboration with American University's Program in Gender Analysis in Economics and support from the William and Flora Hewlett Foundation, the Institute's intensive course in gender-sensitive macroeconomic modeling for policy analysis will engage with fellow economists to enhance capacity building in research and teaching of gender-sensitive

economic analysis, with a focus on care and macroeconomic policy aspects.

The program is accepting applications through March 8, 2020 and will be hosted at Blithewood on the Bard College campus from July 8–14, 2020. For application and other information, please visit our website.

### **New Research Fellow**

The Institute welcomes Research Fellow Luiza Nassif Pires, who joins the Gender Equality and the Economy program. A graduate of the Federal University of Rio de Janeiro and The New School for Social Research, her recent research relies on statistical equilibrium and game theory to formalize the impacts of gender and racial segregation in the labor movement with an application to the United States. She will collaborate with other Levy researchers on an ongoing research project examining issues of intrahousehold power relations and poverty in sub-Saharan Africa using the framework of the Levy Institute Measure of Time and Income Poverty.

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Editors: Elizabeth Dunn and Michael Stephens

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Inquiries regarding contributions could be sent to Dimitri B. Papadimitriou, President, Levy Economics Institute of Bard College, Blithewood, Annandale-on-Hudson, NY 12504-5000. Phone: 845-758-7700 Fax: 845-758-1149 E-mail: [info@levy.org](mailto:info@levy.org) Website: [levyinstitute.org](http://levyinstitute.org)

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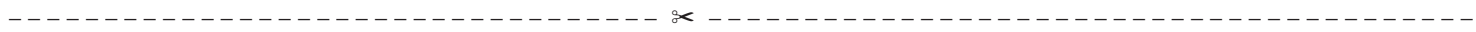
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