



Summary

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LETTER FROM THE PRESIDENT

Dear reader,

Among the unsettling aspects of the COVID-19 crisis has been the way in which it has laid bare and even exacerbated some of the lingering weaknesses in our socioeconomic structures and policy regimes. A number of our recent projects featured in this issue of the *Summary* explore just such phenomena. Luiza Nassif Pires, Laura de Lima Xavier, Thomas Masterson, Michalis Nikiforos, and Fernando Rios-Avila team up to produce a public policy brief illustrating how the crisis is worsening already-worrisome levels of income, racial, and gender inequality in the United States—with the disparate public health risks demonstrating that we are not in a meaningful sense “all in this together”—and how high levels of inequality are in turn prolonging the pandemic and weakening the chances of a robust economic recovery.

A policy note extending the insights of our January Strategic Analysis for the US economy explains from a Minskyan perspective how the pandemic shock arrived in the context of an economy already plagued by fragility in household and corporate balance sheets. In the May Strategic Analysis for Greece, Nikiforos, Gennaro Zezza, and I demonstrate that the European Commission’s Recovery Fund, if implemented without significant delays or strict conditionalities (which is now looking increasingly unlikely), could make the difference as to whether Greece’s pandemic recovery looks more U-shaped than L-shaped—although it would still be insufficient to return the economy to its pre-pandemic growth trend. In a related policy brief, Nikiforos investigates the effects of the past decade’s austerity strategy imposed on Greece and the vicious cycle of recession and austerity it engendered, as well as the impact of dramatic cuts to its healthcare system, which have undermined the country’s ability to respond to the pandemic.

A policy note in the Monetary Policy and Financial Structure program by Alex Williams, a recent graduate of the Levy Institute’s Programs in Economic Theory and Policy, explores the reform of fiscal federalism in the United States. His proposed intergovernmental automatic stabilizers would avoid harmful, procyclical cuts at the state and local levels and tie fiscal transfers to macroeconomic conditions rather than the whims of federal legislators (a reform whose urgency is made ever clearer by the spectacle of congressional negotiations over this critical policy issue). A policy note by Martha Tepepa investigates how the Trump administration’s “zero tolerance” policy on immigration encumbers the public health response to the crisis by discouraging noncitizens

from seeking care, with the public charge rule implemented in February adding a new layer of stigmatization. Pavlina Tcherneva focuses on the crisis’s employment impact in a policy note in the Employment Policy and Labor Markets program. She predicts the provisions in the Coronavirus Aid, Relief, and Economic Security (CARES) Act will not go far enough to prevent the “social catastrophe” of mass unemployment and suggests the government implement policies, such as the job guarantee, to protect jobs now and create full employment when the crisis has passed.

Turning to issues outside of the pandemic, in a public policy brief under the Monetary Policy and Financial Structure Program, Jan Kregel and Paolo Savona discuss both the threats and the opportunities represented by cryptocurrencies and related technological innovations, and propose a public monopoly on the issuance of cryptocurrency, governed by a Bretton Woods-type model of international coordination, to promote financial stability.

Working papers in this issue include Francesco Zezza and Gennaro Zezza’s contribution of a stock-flow consistent quarterly model for Italy, detailing the over two-hundred equations that address the missing links between the real and financial sectors of the economy to better detect fragility before a crisis; Tanweer Akram continues his investigation into the short-term interest rate’s impact on the long-term rate with two papers on the subject, the first focusing on a general model and the second, coauthored with Syed Al-Helal Uddin, provides an empirical analysis for Brazil; Sameh Hallaq analyzes the impact of various institutional factors on educational outcomes in the West Bank; and Özlem Albayrak applies James Dusenberry’s relative income hypothesis to assess how much the “keeping-up-with-the-Jonses-effect” is responsible for Turkey’s rise in debt-driven consumption. Ruth Badru’s contribution considers income distribution’s effect on aggregate demand and growth by class and gender, emphasizing the role of power dynamics between labor and capital. Also focusing on labor-capital dynamic, Nassif Pires incorporates feminist theory in a Marxist framework to illuminate the noneconomic sphere’s role in creating the necessary conditions for a properly functioning economic sphere. Finally, a two-part contribution from Nikiforos presents some theoretical and empirical issues on the accumulation and utilization of capital, highlighting utilization’s role in bridging the gap between mainstream and alternative theories of growth and distribution.

As always, I welcome your comments.

Dimitri B. Papadimitriou, *President*

Program: The State of the US and World Economies

Strategic Analysis

Greece's Economy after COVID-19

DIMITRI B. PAPADIMITRIOU, MICHALIS NIKIFOROS, and
GENNARO ZEZZA
Strategic Analysis, May 2020

In this strategic analysis of the Greek economy, Institute President Dimitri B. Papadimitriou and Research Scholars Michalis Nikiforos and Gennaro Zezza explain how Greece's fragile recovery has been derailed by the COVID-19 pandemic. While there has been some support for the economy coming from public sector interventions (funded by the European Commission [EC] and the European Stability Mechanism), the authors argue these programs have been implemented too slowly and at too small a scale to avoid what are expected to be significantly negative trends in Greek GDP, employment, exports, and investment. Contrary to some projections of a rapid V-shaped recovery for Greece, the authors' simulations using the Levy Institute's tailored macromodel are less optimistic—and these simulations assume the government rapidly implements all the support programs that have been announced (as of May 2020). As such, Papadimitriou, Nikiforos, and Zezza assess that it will take at least three years to return to pre-COVID levels of GDP and employment. In an optimistic scenario, in which the €750 billion EC Recovery Fund is implemented (consisting of an approximately €32 billion share for Greece disbursed over a four-year period), the real GDP growth rate accelerates over the baseline in both 2021 and 2022: to 8 percent and 6.5 percent, respectively. However, they note this would still be insufficient to reestablish the pre-pandemic growth trend.

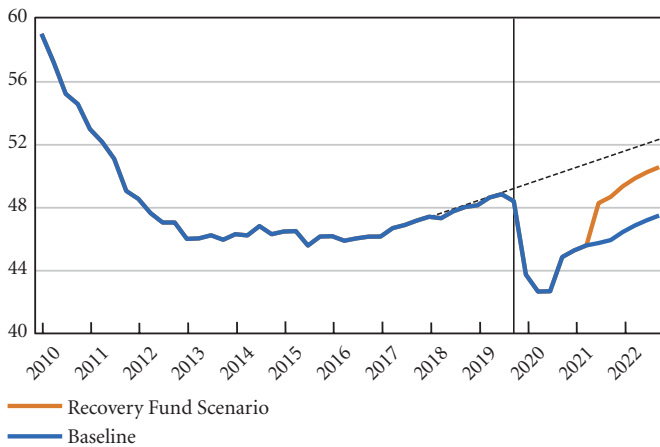
The growth rate in 2019Q4 was in line with projections made by the authors in their previous (January 2020) analysis

and showed Greece's economy growing by 1.9 percent for the third year in a row. The unemployment rate, while still elevated at 16.4 percent, recorded its lowest level in the last 105 months; inflation was kept in check; there were positive signs in business and consumer confidence; and public sector borrowing was dramatically decreased. Other the other hand, investment still languished: both gross and net fixed capital formation were negative.

The authors observe that the COVID-19 crisis has disproportionately impacted Greece's frail recovery, which had still been struggling under the effects of austerity measures imposed by international creditors, while facing a surge of refugees due to regional instability. Looking ahead, they caution that providing estimates of the economic consequences of the COVID-19 pandemic entails a higher-than-normal degree of uncertainty. In their projections for Greece, they analyze the effects of various assumptions about the fall in different sources of aggregate demand. For their baseline simulation, they assume the number of tourists visiting the country drops by 90 percent through the first three quarters of 2020 and 25 percent in the last quarter (tourism will resume in 2021 but only at 80 percent of its 2019 level). They rely on the EC's forecasts to project the income growth of Greece's trading partners and assume a combined fall in consumption and investment (from the level they would have reached) of nearly 7.5 percent of 2019 GDP. On fiscal policy, the authors assume an increase (€600 million) in government expenditure on goods and services, an increase (€600 million) in social benefits in 2020Q1 and 2020Q2, postponement of payment of direct taxes and social contributions until 2021, and an additional stimulus (totaling €4.5 billion) that starts in September and continues through the first two quarters of 2021. The results for real GDP growth under this baseline scenario are represented in Figure 1. In this scenario, Greek public debt rises to 207 percent of GDP in 2020 and then falls to 192 percent of GDP by the end of 2022 as the economy recovers.

Papadimitriou, Nikiforos, and Zezza also analyze a scenario where the Recovery Fund is implemented, which allows the government to increase public expenditure with support from EU grants and loans. The program is assumed to begin in 2021Q3, adding €2 billion in public expenditure per quarter. As illustrated in Figure 1, the growth rate accelerates significantly above the baseline. As a consequence, the public debt ratio

Figure 1 Greece: Real GDP under Alternative Assumptions (€ billion, 2010 prices)



falls to 177 percent of GDP by the end of 2022. The authors point out that, without the Recovery Fund, Greece’s recovery is more likely to display an L-shaped pattern, and although the Recovery Fund is projected to secure a more U-shaped recovery, this would still result in the Greek economy failing to return to its trend growth rate (represented by the dotted line in Figure 1).

In addition to the rapid implementation of the Recovery Fund, the authors applaud what appear to be serious discussions about an increase in the EU budget—which at least suggest the possibility of moving toward a “union of growth” rather than a “union of austerity,” as they put it.

www.levyinstitute.org/pubs/sa_may_20.pdf

Crisis, Austerity, and Fiscal Expenditure in Greece: Recent Experience and Future Prospects in the Post-COVID-19 Era

MICHALIS NIKIFOROS

Public Policy Brief No. 151, June 2020

This policy brief provides a discussion of the relationships between austerity, Greece’s macroeconomic performance, debt sustainability, and the provision of healthcare and other social services over the last decade. Nikiforos illuminates the vicious cycle in which austerity and recession reinforce one another and the harmful impact of these austerity policies on the Greek

healthcare system—which rendered the country more vulnerable to the COVID-19 pandemic. The pandemic, in turn, will lead to a significant increase in the public debt ratio. Breaking this cycle, in Nikiforos’s view, requires renewed consideration of a restructuring of Greek public debt.

The Greek government, he observes, met its primary budget surplus targets through a nearly 10 percentage point increase in the average tax rate (including social contributions) and drastic cuts to public expenditure—notably, significant reductions in healthcare expenditure. Healthcare spending was cut nearly in half between 2009 and 2014 (as Nikiforos notes, Greece’s healthcare spending as a percentage of GDP was already below the EU average) and, in 2018, health expenditures were still down 42 percent from their 2009 level. The result was a drastic deterioration in the quantity and quality of healthcare coverage. This includes, he emphasizes, significant attrition in hospital bed capacity—weakening Greece’s ability to handle the COVID-19 pandemic.

The official justification for imposing these austerity policies, Nikiforos observes, was that Greece’s public debt would thereby be rendered sustainable. However, he argues that the European Commission’s analyses of the sustainability of the Greek public debt were flawed. Rooted in optimistic baseline projections and an unwavering assumption of a return to a healthy growth trend in the medium run, even slight deviations from these baseline assumptions would cause Greece’s public debt to become unsustainable.

Greece’s actual growth rate, he points out, has been consistently below the rates forecast by its international lenders, resulting in a public debt ratio that has been well above lenders’ projections (even despite the 2012 debt restructuring). The fiscal targets, as Nikiforos puts it, were incompatible with the growth targets. Austerity was imposed in the name of debt sustainability, yet each round of austerity measures led to slower GDP growth, which in turn increased the debt-to-GDP ratio—therefore undermining the goal of debt sustainability and leading to yet another round of austerity. As Nikiforos emphasizes, hitting the fiscal targets thus required deeper and deeper cuts to deal with the second-order budgetary damage resulting from prior rounds of austerity.

He concludes that Greece’s public debt is unsustainable and a major restructuring is needed. Nikiforos explains that the pandemic places further pressure on the austerity strategy.

Depleted healthcare capacity undermines their ability to contain and treat the virus's spread, and as debt and deficits rise due to the economic fallout from the pandemic, more cuts will be required if the austerity strategy is not abandoned—further crippling not only the country's general ability to deal with a downturn using fiscal policy, but also the healthcare system's already-weakened capacity to manage the pandemic.

Moreover, the COVID-19 crisis will put pressure on other vulnerable eurozone countries' public finances, necessitating financial assistance from the European Stability Mechanism—assistance, Nikiforos points out, attached to conditionalities that will launch these countries into the cycle of austerity, recession, and deeper austerity that Greece experienced. To avoid this outcome, he advocates limited debt mutualization (with respect to the debt increases certain to result from the pandemic) and the issuance of a common bond, along with policies to address the structural imbalances within the euro area. www.levyinstitute.org/pubs/ppb_151.pdf

When Two Minskyan Processes Meet a Large Shock: The Economic Implications of the Pandemic

MICHALIS NIKIFOROS

Policy Note 2020/1

Writing in the early stages of the pandemic, Nikiforos argues that the coronavirus shock “did not arrive in the context of an otherwise healthy economy.” Nikiforos explains that in order to understand the economic impact of COVID-19, we need to explore two Minskyan processes that had been operating in the US economy for a number of years before the pandemic.

Beginning from the central insight that capitalist economies are defined by production and investment being financed by borrowing, Nikiforos explains that Hyman Minsky's approach is centered on the feedback effects between current flows and outstanding stocks (of real and financial assets). As such, a Minskyan analysis would focus not just on the direct supply and demand effects, but also on the ways in which the COVID-19 crisis impacts the ability of households and firms to finance production, employment, and expenditure. Within this framework, Nikiforos illuminates two interrelated tendencies toward instability. First, in Minsky's analysis equity prices are validated by output prices through the generation of increasing

sales earnings; thus, there cannot be a perpetually widening divergence between these prices. Second, periods of economic stability lead to increasing fragility in corporate and household balance sheets.

Nikiforos observes that along both these dimensions (evolution of equity prices and corporate debt), there were signs of significant weakness in the run-up to the COVID-19 crisis: the Shiller PE (price–earnings) ratio was comparable to its September 1929 level and higher than the level seen before the 2007–9 crisis (and surpassed only by the level it reached in the late '90s); the ratio of market capitalization to nominal GDP was above even its 1990s levels; gross leverage of the corporate sector was higher than both its late '90s and pre-2007 levels; the share of issuers of corporate debt that have issued BBB bonds increased from 25 percent in 2000 to 36 percent by 2019; and the share of BBB bonds in investment-grade corporate bond mutual funds increased from 18 percent in 2010 to 45 percent. Finally, Nikiforos notes that the share of firms whose cash flows were not sufficient to cover the interest payments on their debt increased, despite very low interest rates. Relatedly, the share of “zombie firms”—defined as a firm that has an interest coverage ratio that has been less than one for at least three years in a row—has grown.

With respect to the diverging evolution of goods prices and equity prices before the COVID-19 crisis—of the increasing inability of output prices to validate equity prices—Nikiforos explains that the demand or supply shocks created by the pandemic have merely hastened an inevitable adjustment process. At the same time, increasingly fragile corporate balance sheets have made the US economy particularly vulnerable to a shock. The debt issued by corporations, Nikiforos argues, was incapable of validation even before the shock. Referencing previous strategic analyses using the Levy Institute's US macromodel, Nikiforos observes that a stock market correction combined with private sector deleveraging could result in a loss of real GDP of roughly 12 percent over a three-year period—and that, given the scale of the pandemic shock, this should be considered an optimistic scenario.

As for what needs to be done, while Nikiforos allows that monetary policy has a role to play in tamping down instability in the financial system, monetary policy is not sufficient. Reducing interest rates will not boost spending or solve firms' liquidity problems (more direct intervention on the part of

the central bank is necessary to address the latter problem, he states—suggesting that the then–recently announced commercial paper funding facility represented a step in that direction). To raise aggregate demand, fiscal policy is necessary—particularly an increase in public spending, in his view. Nikiforos recommends providing access to healthcare for all, guaranteeing paid sick leave, and supporting household incomes and firms that face permanent closure. After the pandemic has passed, he adds, broader structural reforms will be necessary to deal with the processes contributing to the fragility of the US economy. www.levyinstitute.org/pubs/pn_2020_1.pdf

A Stock-Flow Consistent Quarterly Model of the Italian Economy

FRANCESCO ZEZZA and GENNARO ZEZZA

Working Paper No. 958, June 2020

In the tradition of Distinguished Scholar Wynne Godley, Research Associate Francesco Zezza and Research Scholar Gennaro Zezza develop a quarterly stock-flow consistent (SFC) model of the Italian economy, proposing that such a model, which addresses the missing links between the real and financial sectors in a Post-Keynesian framework, is able to more accurately detect fragility. Following the New Cambridge approach, they expand their analysis to consider interactions between households, nonfinancial corporations, financial businesses, and the central bank separately.

The Bank of Italy uses its quarterly model, developed in the 1980s, as the main tool for running medium-term policy analysis, as well as the Italian block of the European Central Bank's (ECB) Multi-Country Model (itself a smaller part of the ECB's Area-Wide Model) and others developed by research departments and public institutions. Though each model is different, Zezza and Zezza claim that they all describe—to their detriment—a full employment economy that ignores hysteresis effects in labor markets, and suggest that models in the Post-Keynesian tradition (that are demand-led in both the short and long run) could address this oversight. Arguing against the existing models' use of the aggregate production function, they cite the centrality and endogeneity of money that is present in many theoretical discussions but absent in existing models.

In modeling consumption, it is the representative-agent permanent income hypothesis, which ignores shifts in credit constraints, that informs existing Italian models, where all components of financial and housing wealth are lumped into a single measure. The authors find this problematic because consumption reacts differently to changes in these two forms of wealth. Furthermore, the missing role for the effect of debt on spending and different propensities to consume financial assets based on their liquidity, as well as the disconnection of each institutional sector's net stock of financial wealth from the same sector's lending, are oversights that leave these models unable to detect fragility. Zezza and Zezza instead build their SFC model exploiting information from the accounts of institutional sectors to establish detailed who-to-whom relationships that capture the interrelations in expenditure and savings decisions and their implications for the health of financial markets. The model's level of detail is defined by the available data, as well as the research question it is intended to address—in this case, the outcomes of various policy scenarios.

The authors begin by considering the exigencies of the Italian economy and disaggregating the balance sheet of their sectors to determine the income flows between sectors. They define their model in a series of over 200 accounting identities and behavioral equations for each sector and validate the model's performance by using it to replicate historical data. Their tests indicate it performs well with respect to tracking GDP, interest rate, labor market, unemployment, productivity, and nominal wage data, as well as the dynamics of most financial flows and stocks. Not as satisfactory are their results for aggregate financial balances, such as the net lending position of institutional sectors, but they assume this can be corrected using better econometric estimates in future research.

Pointing to the inability of structural models that incorporate microfoundations and rational expectations (with their separate treatment of monetary and financial markets) to detect fragility, Zezza and Zezza assert that their SFC methodology represents a more robust alternative that is flexible enough to handle regime changes (for Italy, the ECB's quantitative easing policy). In a comprehensive appendix, they show that the model's accounting structure can improve the quality of financial and nonfinancial statistical data that are currently subject to large measurement discrepancies, but defer further

policy experiments until macroeconomic data on the effects of the COVID-19 pandemic shock are available.

www.levyinstitute.org/pubs/wp_958.pdf

Program: Monetary Policy and Financial Structure

The Impact of Technological Innovations on Money and Financial Markets

JAN KREGEL and PAOLO SAVONA

Public Policy Brief No. 150, June 2020

According to Senior Scholar Jan Kregel and Paolo Savona, CONSOB, attempting to maintain the status quo in the face of the introduction of recent technological innovations surrounding cryptocurrencies will create risks that increase instability and threaten national financial systems. In this policy brief, they analyze the impacts of these innovations on the present institutional environment and outline an appropriate regulatory framework. Kregel and Savona argue that a public monopoly on the issuance of cryptocurrency could promote financial stability and help repair the dissociation between finance and the real economy.

Kregel and Savona explain that changes in financial regulation are often driven by responses to current failures, but end up generating additional unforeseen risks. A better approach, they argue, would be informed by Minsky's view that the creation and maintenance of a robust financial system capable of supporting the economy's capital development requires dynamic macroprudential regulation that accounts for the evolving practices and technologies that continuously alter the financial structure. Kregel and Savona suggest such a Minskyan approach in response to recent innovations such as cryptocurrencies and associated instruments based on distributed ledger technology, the deployment of artificial intelligence, and, more generally, the use of data science in financial markets.

As with many innovations, they note that this new technology has had an impact beyond its original purpose. While regulators are still mainly focused on potential disruption to traditional deposits as means of payment, Kregel and Savona

warn that this underestimates the potential for instruments based on distributed ledger technology to have much wider, systemic effects. The authors observe, for instance, that initial coin offerings represent an alternative mechanism for underwriting investment and allocating financial resources, while the proliferation of cryptocurrencies complicates the exercise of monetary policy as currently designed.

Kregel and Savona warn that a single, unregulated, private cryptocurrency platform could come to supplant other cryptocurrencies and even the official payment system. What would effectively be a private monopoly on the payment system would imply loss of control over the money supply and thus debilitate monetary policy. Moreover, the dominance of a single cryptocurrency would disrupt the intermediation process, interfering with the traditional functions of banks and capital markets.

While noting that some monetary authorities seem to be inclined toward regulatory solutions that involve the coexistence of privately issued cryptocurrency alongside traditional money, Kregel and Savona contend that a public monopoly on the issuance of cryptocurrency would be the superior alternative. For instance, with a public platform, the stability of the payment system would be the central bank's responsibility, while the protection of savings would be the domain of securities regulators. Regulation would no longer be forced to serve "two masters," as Minsky put it—that is, to secure the stability of both credit and purchasing power—removing a significant source of instability.

Ultimately, Kregel and Savona envision that these technological innovations, if surrounded by the right institutional framework, could promote financial stability and help repair the disconnection between finance and the real economy. Furthermore, given the proliferation of various proposals at the national level, they argue that the manner in which these technological innovations impact integrated regulatory systems in the context of the globalized digital economy dictates a similarly integrated response, with a degree of uniformity necessary between countries. As such, the authors advocate a process reminiscent of the Bretton Woods model, with an international monetary conference aimed at establishing coordination in order to secure the potential benefits of these new technologies while enabling the formation of a more resilient financial system.

www.levyinstitute.org/pubs/ppb_150.pdf

Stabilizing State and Local Budgets through the Pandemic and Beyond

ALEX WILLIAMS

Policy Note 2020/2

Alex Williams identifies one of the critical factors that could worsen the already-damaging COVID-19 economic crisis. Due to the absence of a comprehensive response to the pandemic on behalf of the federal government, state and local governments have been forced to mount their own individual response plans; this, combined with the increase in healthcare expenditures necessitated by the pandemic and the already-fragile condition of state and local finances, portends a significant budgetary crisis among state and local governments. Although the Coronavirus Aid, Relief, and Economic Security (CARES) Act contained some limited support for these governments, it will not be sufficient to forestall significant cuts to public services and employment, Williams argues. His solution to this problem—in relation to both the current crisis and future macroeconomic crises—is to institute a program of intergovernmental automatic stabilizers.

For a successful public health response, most of the service sector needs to be effectively frozen (without damaging capacity in that sector) until the pandemic has passed, while production and distribution of necessities has to continue (under direct public administration if needed). These responses “require financial time to be effectively stopped,” Williams writes. To maintain liquidity for firms and workers, either all payments, such as rent and wages, would have to be suspended or direct cash transfers would have to be delivered so that households could make payments without goods trading hands (the latter, he observes, is the direction in which the CARES Act moved).

Williams explains that state governments have only a limited capacity to issue debt. Although some have used securitization and the creation of off-budget enterprises to bypass statutory or constitutional balanced budget requirements, such financial engineering is limited, particularly given significant market volatility, he adds. Thus, without grants from the federal government, states are forced to choose between lockdown measures and the tax revenues that would flow from keeping businesses open—revenues that are necessary to support the states’ public health expenditures. As Williams

points out, state governments draw the majority of their revenues from tax sources (sales and income taxes, as well as user fees) that are disrupted by COVID-19 and the necessary public health measures.

A funding backstop from the federal government is essential to avoid harmful cuts at the state and local level. While the Federal Reserve’s limited actions in supporting the municipal bond market are helpful, Williams insists that a Treasury appropriation is necessary. He proposes a system of automatic stabilizers that would replace missing state and local tax revenues in a downturn. Williams outlines two options. The first would involve the provision of block grants to states whose unemployment rates exceed a predetermined baseline: Williams suggests transfers amounting to 8 percent of a state’s previous year’s own-source tax revenues, multiplied by the number of percentage points the state unemployment rate exceeds the given baseline. Alternatively, transfer payments could be linked to the size of each state’s revenues from sectors affected by the downturn. In this scenario, an Office of Fiscal Harmonization would be created to identify these sectors’ contributions to state tax revenues and administer the stabilizers to maintain trend growth in tax receipts, ensuring states do not cut expenditure or raise taxes in the context of a macroeconomic downturn. In the case of the pandemic’s impact on various sources of tax and fee revenues, Williams’ back-of-the-envelope calculation estimates \$63–70 billion per month in lost state and local revenues due to social distancing measures. In that light, he observes that the support allocated in the CARES Act would delay significant state and local budget cuts for only a little over two months.

Without substantial support along the lines he proposes, state and local governments will be forced to cut public employment and raise taxes in the middle of a deep recession. www.levyinstitute.org/pubs/pn_2020_2.pdf

An Empirical Analysis of Long-Term Brazilian Interest Rates

TANWEER AKRAM and SYED AL-HELAL UDDIN

Working Paper No. 956, May 2020

Tanweer Akram, General Motors, and Syed Al-Helal Uddin, College of Saint Benedict and Saint John's University, analyze the dynamics of Brazilian government bond yields to ascertain if John Maynard Keynes's argument that a central bank's policy rate has decisive influence on the long-term interest rate holds in the case of an emerging economy. The authors contend their study contributes to the debates on bond yield dynamics and adds to the literature by econometrically modeling the Keynesian view for an emerging market economy that can be used to guide policy not only in Brazil, but in other countries at similar levels of development that also exercise monetary sovereignty.

Following a brief review of the literature in which the authors list studies that adhere to the mainstream loanable funds view, as well as those that follow the Keynesian view that the interest rate is a "reward for parting with liquidity for a specified period," they describe the Brazilian economy between 2007 and 2018, which was marked by political uncertainty, weak growth, elevated inflation, and currency depreciation. Several figures illustrate the evolution of relevant macroeconomic variables related to Brazilian government bond yields, such as interest rates, policy rates, and GDP, while scatterplots of the long- and short-term bond yields demonstrate the two are positively correlated over the period under investigation.

Akram and Uddin summarize the sources for their 12 years of monthly time-series data, and employ a vector error correction model (VECM) to understand the relationships among their variables of interest. Prior to running their model, they validate their choice of a VECM through unit root and cointegration tests, and determine optimal lag lengths. Their empirical exercise demonstrates a positive relationship between the yields of various tenors of government bonds and the short-term interest rate (as measured by the 30-day swap rate) that is statistically significant in the front, but not the back, of the yield curve, asserting this provides some qualified support for Keynes's theory. Using an alternate specification with a different set of independent variables, the authors again find support for a positive relationship between the short-term

rate (as measured by the SELIC rate) and government bonds' long-term yields in Brazil.

Given that the policy rate on Brazilian government bonds has a demonstrated effect on their nominal yields, Akram and Uddin argue that though they are limited by statutory mandates, inflationary pressures and expectations, and overall economic and financial conditions, the Banco Central do Brasil can effectively control yields in local currency as necessary. They suggest their findings can be useful in ongoing macroeconomic debates on the effects of monetary policy, quantitative easing, and fiscal austerity, among others, and can contribute to promoting sound and welfare-enhancing public policy.

www.levyinstitute.org/pubs/wp_956.pdf

A Simple Model of the Long-Term Interest Rate

TANWEER AKRAM

Working Paper No. 951, April 2020

Building on previous studies in which he employs the Keynesian logic that the central bank's actions influence the long-term interest rate on government bonds through the short-term interest rate, Akram constructs a model of the long-term rate relying on geometric Brownian motion—widely used in quantitative finance to model interest rate dynamics—to formally model Keynes's conjecture.

Akram explains that Keynes's views on government bond yields, as described in his *Treatise on Money* (1930) and *General Theory* (1936), were based on his analysis of central bank policy rates, open market operations, and balance sheet policies, as well as his own theory of interest rates and liquidity preferences, while the empirical basis for his conclusions comes from studies of the American and British money and bond markets in the 1920s. Akram notes that the Keynesian approach has not been applied to theoretical work on interest rate modeling and stands in contrast to mainstream models that rely on the loanable funds theory, which holds that increased fiscal deficits and higher deficit and debt ratios (which increase the likelihood of sovereign debt defaults) put upward pressure on bond yields. By overlooking Keynes's insights on how expectations and institutional features of advanced capitalism influence long-term interest rate dynamics, Akram suggests that investors are missing valuable information.

Program: Distribution of Wealth and Income

Pandemic of Inequality

LUIZA NASSIF PIRES, LAURA DE LIMA XAVIER,
THOMAS MASTERTSON, MICHALIS NIKIFOROS, and
FERNANDO RIOS-AVILA

Public Policy Brief No. 149, April 2020

In this policy brief, Research Fellow Luiza Nassif-Pires, Laura de Lima Xavier, Harvard Medical School, and Research Scholars Thomas Mastertson, Michalis Nikiforos, and Fernando Rios-Avila present a range of evidence that the costs of the COVID-19 pandemic—in terms of both the health risks and economic burdens—will be borne disproportionately by the most vulnerable segments of US society. The COVID-19 crisis is likely to widen already-worrisome levels of income, racial, and gender inequality in the United States. Moreover, as the authors note, there is an element of a vicious cycle at work here: not only will the pandemic and its fallout worsen inequality; inequality will exacerbate the spread of the virus, not to mention undermine any ensuing economic recovery efforts.

In order to make visible the asymmetric impacts of the spread of the coronavirus, the authors develop an index that measures the clinical risk of developing a severe case of COVID-19. Examining data at the census tract level, they demonstrate that as the share of individuals living below twice the poverty line rises in a given locale, so too does the incidence of chronic diseases and risk of developing serious complications. Likewise, as the share of a census tract's minority population rises above 60 percent, the health risk increases precipitously above the national average. And to make matters worse—in a perverse feature unique to the United States—they find that those most likely to develop severe infections are also more likely to lack health insurance. Furthermore, the authors note that communities with higher poverty rates are also more likely to be exposed to the virus in the first place (due, for instance, to lack of paid sick leave, dependency on public transportation, inability to afford quarantine, and residency in smaller dwellings sharing space with more people).

Alongside these health risks, the economic disruptions caused by the distancing and shutdown measures deployed to

To illustrate Keynes's argument that the interest rate is a reflection of investors' liquidity preferences, Akram cites several passages in the previously mentioned works that describe the critical roles business investment, financing, and financial speculation play in a capitalist economy. The central bank enters the equation because it sets the policy rate, which, Akram asserts, has a direct and seemingly outsized influence on the short-term interest rate. Keynes explains this apparent anomaly in terms of an economy's various characteristics and institutional attributes, but suggests that, above all, fundamental uncertainty prevents investors from having well-defined expectations about the future on which to base their decisions. Reviewing well-known interest rate models in the quantitative finance literature, Akram notes they all omit Keynes's observations on the relationship between central bank policy and long-term interest rates; he attempts to fill this gap with a new model by incorporating Keynesian insight into the Heston (1993) model.

Akram defines his model in four equations. Presenting a series of figures plotting the evolution of key interest rates, he demonstrates how, in support of the Keynesian perspective, the short-term interest rate closely tracks the central banks' policy rates in both advanced economies and emerging markets, though some random variations in trends arise due to factors such as the business cycle, policy changes, and uncertainty. He contends that his model, where a higher (lower) short-term interest rate is associated with a higher (lower) long-term interest rate on government bonds, is relevant for informing not only macroeconomic and finance theory, but also monetary and fiscal policy. Because in his model the central bank is the key driver of the long-term interest rate and the shape of the yield curve, he points to several existing studies where it can be extended to illuminate issues related to government debt management and fiscal sustainability, as well as assess the efficacy of monetary policy and the monetary transmission mechanism.

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fight the pandemic also most heavily affect those least able to withstand them or make adjustments. Job losses, for instance, are likely to be concentrated in the social expenditure sector—a sector dependent on socialization and close contact. This is also a sector in which workers are more likely to be poor in the first place: 37 percent of those working in the social expenditure sector are living below twice the poverty line (17 percent are below the poverty line, and 20 percent are between one and two times the poverty line), which is well above the poverty rates for the employed population as a whole. These workers are also more vulnerable than average to income loss due to illness, on account of a lack of paid sick leave.

Beyond loss of income and employment, the COVID-19 crisis is more likely to lower economic well-being more broadly for those who are at the bottom of the distribution. For instance, government expenditure plays a crucial role in supporting the least well-off. School closures reduce the benefit of such expenditures, taking a greater toll on the overall material well-being of the poor. And as production then shifts into the household—with extra childcare and meal preparation required—the necessary household work time increases. Due to a combination of time and income constraints, those at the bottom of the distribution are less able to adapt to this increase in required labor inside the home (those among the least well-off who find themselves with more available time due to having lost their job or had their hours reduced are also seeing their incomes plummet). Moreover, the overall increase in household production time is likely to fall mostly on women, further widening the gender gap in contributions to household work—a key source and marker of gender inequality.

The authors underscore that our policy approach to the COVID-19 crisis must be responsive to these unequally shared burdens. Among other measures that can help blunt the regressive impact of the pandemic, they recommend provision of spaces to quarantine outside of the home, robust paid sick leave, and expanded access to healthcare, as well as a moratorium on evictions. Ignoring the regressive impact or refraining from taking action to mitigate these harms is not just an affront to principles of fairness, it can also prolong the pandemic and worsen its severity, as the authors explain. Moreover, rising income inequality has been one of the US economy's key structural weaknesses—serving to dampen aggregate demand, slow productivity growth, and increase financial fragility—and was

part of the reason the expansion ended by the COVID-19 crisis was the weakest in the postwar period. At a time when the United States will require a monumental recovery, the authors conclude, this pandemic may leave the country with an even more structurally unsound economy.

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Class Size, Cognitive Abilities, Bullying, and Violent Behavior: Evidence from West Bank Schools

SAMEH HALLAQ

Working Paper No. 955, May 2020

The importance of education in shaping human capital is well accepted in the literature, and one indicator of school quality that has demonstrated direct effects on students' achievement and well-being, as well as indirect effects on the trajectory of their continued education and future wages, is class size. Assessing class size's impact in Palestine, Research Associate Sameh Hallaq employs data on students in the West Bank's public and UN Relief and Works Agency (UNRWA) schools, considering not only students' cognitive test scores, but also their exposure to violence and bullying.

Advocates for small classes point to more individualized attention translating into increased student achievement, while opponents see class-size reduction as an expensive policy with no guarantee of improved cognitive outcomes. Less-often considered are the consequences for bullying and violent behavior, which, Hallaq points out, are detrimental to academic performance, especially given the West Bank's already-averse circumstances. In spite of evidence from developed countries demonstrating the correlation between bullying and larger class sizes, UNRWA schools (with already-large classes by Western standards) raised the maximum class size after finding the costs of smaller classes outweighed the (academic) benefits, focusing instead on teacher training to improve educational quality.

Class size is an endogenous variable that may correlate with other factors, such as a family's choice of school district or administrators sorting weaker students into smaller classes. Controlling for this, the existing literature finds any effect on student achievement too small to justify the cost—though effects are greater for low-income, minority students and those

with behavioral issues, as well as in developing versus developed countries. Hallaq notes the shortcomings of several of the studies, for example, they only employ secondary school data, where students are more self-sufficient than in primary grades, or fail to account for sorting across schools in response to changes in enrollment. They also fail to account for the impact of violence on student achievement.

Hallaq draws his data on cognitive ability from his own survey of randomly selected students in grades 5–9 during the 2012–13 academic year who completed a culturally adapted standardized test to measure verbal, numerical, and figural competency; this survey also collected self-reported data on household characteristics. His data on violent behavior comes from the Health Behavior in School-Aged Children (HBSC) survey, which asks students if they have been the victim and/or perpetrator of bullying in the recent past, and if any resulting injuries required medical attention; the HBSC also provides self-reported information on students' overall physical and mental health. Administrative data on average class sizes, student demographic characteristics, and grade point averages are obtained from the Palestinian Ministry of Education and Higher Education, with information on a school's access to resources gleaned from a survey of principals. Regressing the data to account for class size variation within and between schools, he finds that the separation wall, poverty rate, and residence in the area under Israeli control (Area C) negatively impact class size.

Given the aforementioned endogeneity, to overcome any biased estimates of the class size effect, he creates an exogenous source of variation by exploiting a maximum class-size rule to create a regression discontinuity (RD) relation between cohort enrollment and class size, restricting the sample to those that follow the class-size rule. Addressing threats to validity, Hallaq's introduces a school resource index capturing school characteristics and climate to limit influence from unobserved school choice; sorting across regions and near cutoffs between school levels are found to not violate the RD assumptions.

Hallaq's results suggest that reducing average class size by one pupil has no significant effect on cognitive test scores, except in grades 6 and 9, which represent the final year of the primary and preparatory levels, respectively, and therefore may have underlying social factors driving this difference. Looking at the effect by subgroup, he finds while low-income

and low-achieving students do benefit academically from reduced class size, it is not enough to justify the added costs. Turning to violent behavior, he finds a significant role for class size in the incidence of being bullied and cites (lack of) teacher support and mental health attributes as possible transmission mechanisms for this outcome. Because this violent behavior can affect school performance, he concludes that the long-run returns to mitigating them could offset the incremental costs of increasing class sizes in the West Bank.

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Household Consumption, Household Indebtedness, and Inequality in Turkey: A Microeconomic Analysis

ÖZLEM ALBAYRAK

Working Paper No. 954, April 2020

Research Associate Özlem Albayrak presents a microeconomic inquiry into behavior in the “consumer age” from the perspective of James Dusenberry's relative income hypothesis, which incorporates the household's position in the income distribution in the analysis. She focuses her analysis on Turkey to investigate the debt-driven consumption that has been evident there since the early 2000s.

In the decade between 2003 and 2012, in defiance of both mainstream and Keynesian consumption theories, financial deregulation and expanded access to credit allowed consumption in all segments of Turkish society to outpace income growth. Albayrak explains that these aforementioned theories only account for own income levels and omit what Thomas Palley calls “socially determined preferences,” where sensitivity to other's income adds a social dimension to consumer behavior (sometimes known as the “keeping-up-with-the-Joneses effect” or “spending cascades”). Though the assumptions derived from the Keynesian consumption function underlie the postwar policies aimed at full employment and a more egalitarian income distribution, the demand drag expected from today's stagnating incomes and growing inequality has not materialized. The author suggests that the literature on the relative income hypothesis, with its role for socially determined preferences (usually defined by geographic proximity and income level), demonstrates that relative income is more important than absolute income in the decision making process and

provides a more complete picture of consumer behavior in developed economies.

Albayrak expands the sparse literature on consumption in developing countries by applying this theory to Turkey, where suppressed real wages in pursuit of export-oriented growth have negatively affected domestic accumulation, growth, and employment, and increased inequality since the 1980s. Starting in the early 2000s, however, the author notes an increase in domestic demand over the previous period that was accompanied by a sharp growth in consumer credit and a decrease in household savings rates to record lows. Supply-side factors that facilitated credit access over the period allowed nearly all segments of society to increase consumption beyond their income levels, with household leverage reaching a peak of 56.8 percent by 2013.

Building an empirical model to ascertain if what Thorsten Veblen called “conspicuous consumption” is behind the increase, Albayrak creates a synthetic dataset using constrained statistical matching of the Turkish Statistical Institute’s two micro-level nationally representative surveys—the Household Budget Survey and the Annual Survey of Income and Living Conditions—for data on demographic, economic, and social characteristics of Turkish households in 2005, 2008, 2009, and 2012, using 2005 as a baseline against which she measures the impact of the expanded credit opportunities on households’ consumption preferences in the subsequent periods. Results indicate that in all households but the poorest, overconsumption began in 2003 and escalated through 2012, with high levels of borrowing evident in employed households, indicating credit was compensating for stagnating real wages.

Albayrak defines her reference group by geographic area and age, and specifies her model of income inequality and relative income’s effects on consumption behavior with three dependent variables: namely, total household expenditure net of education expenses, education expenses, and expenditures on status (or positional) goods, noting that as a developing economy, education expenses are considered positional goods in Turkey. Assuming households compare themselves to their peers, the Gini coefficient within the reference group is used to measure inequality and two relative income indicators are defined: one to indicate the household’s rank according to their within-reference group disposable income per capita and another that accounts for the income difference between

the household and those above as a measure of relative deprivation (RD). Albayrak reports estimates based on the Gini coefficient as a measure of income inequality strongly support the relative income hypothesis as a determinant of consumer behavior after controlling for absolute income level and other household characteristics; estimates based on other inequality measures show similar patterns. The rank indicator demonstrates that lower-ranked households spend a higher share of their net income on conspicuous consumption and the RD indicator supports the notion that average living standards set in the reference group affect consumption behavior.

Albayrak concludes that though the analysis is limited by data availability, her findings indicate a need for progressive tax policies and more egalitarian income distribution to promote stable consumption for low- and middle-income households without resorting to debt.

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Program: Employment Policy and Labor Markets

Guaranteeing Employment during the Pandemic and Beyond

PAVLINA R. TCHERNEVA

Policy Note 2020/4

The pandemic crisis is setting the stage for persistent mass unemployment, according to Research Associate Pavlina Tcherneva. When the CARES Act’s provisions expire, layoffs will mount, and in the post-pandemic economy workers will be competing for scarce jobs that are poorly paid and offer no benefits or employment protections. The lending to firms and cash transfers to households enabled by the CARES Act may help pay the bills, but they are not reliable safeguards against mass job losses and are inadequate for the task of job creation, Tcherneva argues.

According to Tcherneva, it is important to emphasize that these job losses and the widespread unemployment to follow are the result of our policy choices—and there is an alternative. Instead of guaranteed unemployment, we can guarantee

employment through policies that both protect jobs during the pandemic and create full employment after the pandemic has passed. Tcherneva outlines three policies—a version of an employer of last resort to backstop existing payrolls during the pandemic, mass mobilization, and a job guarantee (JG)—to achieve these ends.

The government can backstop existing employment by promising to pay the wages of workers whose jobs are at risk due to COVID-19. She notes some members of Congress have proposed providing direct grants to firms that would either cover the wages of all workers earning up to a given amount, or cover the wages of workers who have been furloughed or fired due to the pandemic, plus subsidies for operating expenses (on the condition these workers are retained or rehired). Tcherneva explains that funding for such programs is not at issue, and that the federal government could have covered the entire wage bill of the US economy for three months with the amount authorized in the CARES Act. A backstop—either covering a proportion of all wages or the wages of furloughed/fired workers—could have protected existing employment through the end of 2020 or longer.

In addition to protecting existing jobs, Tcherneva advocates for the government to implement policies to directly create jobs in order to address the “social catastrophe” of mass unemployment. We cannot, she stresses, wait for the private sector to deliver full employment on its own—as jobless recoveries have become the norm. Large-scale public investment (with a Green New Deal–type focus the obvious place to start, according to Tcherneva) could create millions of jobs at all wage and skill levels.

Finally, in addition to backstopping existing payrolls and implementing mass mobilization, the government should ensure decent jobs are available to anyone willing and able to work. Tcherneva describes the JG as a “public option for jobs.” A public service job offering a minimum living income with benefits, along with assistance with transitioning to other employment opportunities, would be available to all.

Tcherneva notes that a JG would effectively establish the minimum wage and working conditions in an economy, enabling the elimination of precarious and poorly paid work by increasing competition for workers in the labor market. In the presence of a JG program, private firms will face pressure to improve their pay and benefits offers in order to attract and

retain employees. The resulting pay raises, Tcherneva argues, will boost spending, growth, and profits. Business models that depend on paying poverty wages and predatory employment practices (such as wage theft and harassment) will no longer be viable, she adds, as vulnerable workers will have an alternative. Mass unemployment, she stresses, is avoidable. The JG ensures that the right to a decent job will be secured for all—during good times and bad.

www.levyinstitute.org/pubs/pn_2020_4.pdf

Program: Gender Equality and the Economy

Immigration Policy Undermines the US Pandemic Response

MARTHA TEPEPA
Policy Note 2020/3

Research Scholar Martha Tepepa argues that the US response to the COVID-19 crisis will be hindered by the country’s approach to the intersection of immigration policy and social welfare policy. In the context of the pandemic, she explains that the administration’s “zero tolerance” immigration campaign creates a public health risk, and that the recent implementation of the public charge rule will further restrict access to treatment and encumber the fight against the coronavirus.

Tepepa frames these shifts in immigration policy within a history of heightened attacks on marginalized groups occurring during disease outbreaks—accusations that racial or ethnic groups are to blame for spreading disease and draining public resources.

She notes that individuals apprehended crossing the border are placed in detention facilities under conditions that will lead to the spread of infection. “English-only” policies place migrants and those for whom English is a second language in danger, as well as all those in the broader community, when it hinders the dispersion of critical public information and guidance regarding precautions related to COVID-19.

The administration’s zero tolerance immigration policy—which includes prioritizing and elevating the prosecution of

immigration offenses, and which has led to family separations—creates obstacles to mounting an effective public health response to the pandemic. Undocumented immigrants, she observes, may be even more reluctant to seek medical care for fear of deportation, thus resulting in an increase in the risk of spreading infection.

The problems, she points out, are not limited to undocumented immigration policies, but can be found in the administration's policies toward authorized immigration as well. Here Tepepa focuses on the implementation of the "Inadmissibility on Public Charge Grounds" final rule, which penalizes noncitizens for using certain social services. Tepepa asserts that the public charge rule more generally creates a model that stigmatizes and excludes. More narrowly, the new rule, which was implemented on February 24, 2020, makes it more difficult for noncitizens to maintain or adjust their immigration status if they have used or are likely to use public benefits over a given threshold—with the new rule including noncash benefits, notably medical benefits such as Medicaid. Previous versions of the rule had excluded food stamps, Medicaid, and a number of other noncash benefits.

In the context of a pandemic, Tepepa contends, all individuals—citizens and noncitizens—should be encouraged to access medical care. If segments of the population fear obtaining necessary testing, treatment, or vaccines due to concerns about deportation or other negative impacts on immigration status, considerable harm will occur not only to those families, but to the broader community as well, given the increased risk of infection. Although the government has provided more specific guidance on the public charge rule regarding COVID-19 testing and treatment, Tepepa argues that a lack of clarity is still likely to leave a significant deterrent for noncitizens considering seeking available care—even where it is legally available to them.

The end result of these immigration policy shifts, she explains, is an increased public health risk at the same moment a pandemic has struck the country. Deterring access to public healthcare benefits for both the undocumented and authorized immigrants increases the risk of spreading COVID-19, particularly as public benefits may be the only option for many noncitizens. As Tepepa observes, this exacerbation of the public health risk makes a mockery of the claim that the public charge rule is designed to "defend and protect Americans' health."

This policy note represents an abbreviated version of Working Paper No. 950 ("Public Charge in the Time of Coronavirus," April 2020).

www.levyinstitute.org/pubs/pn_2020_3.pdf

Distribution and Gender Effects on the Path of Economic Growth: Comparative Evidence for Developed, Semi-Industrialized, and Low-Income Agricultural Economies

RUTH BADRU

Working Paper No. 959, June 2020

Employing structuralist macroeconomic models that highlight equity concerns and emphasize the role of power dynamics between labor and capital, Ruth Badru, University of East Anglia, examines the effects of income distribution on aggregate demand by class and gender, as well as its impact on growth. Using panel data from a sample of 31 countries over the period 1970–2011, she contributes to the literature on demand-led growth by tying together changes in the functional and personal income distribution and aggregate demand.

Highlighting two key features of gendered economic outcomes—namely women's lack of resources and larger share of unpaid labor responsibilities compared to men—she adapts the Kaleckian demand-led growth model by assuming a role for gender as a key determinant of aggregate demand and situates it in a Marxist-leaning framework that attributes the gendered distribution of wages to relative bargaining power in an attempt to explain how an economy can display wage- and profit-led characteristics simultaneously. Disaggregating the wage bill by gender and reporting the results for economies at various stages of development (namely, high-, middle-, and low-income countries), Badru is able to account for the role economic structure plays in influencing gender equality and macroeconomic outcomes, as well as the persistence of this association.

Kaleckian demand-led growth models assume a significant role for aggregate spending, which, at a structural level, depends on the functional distribution of income between labor and capital. Omitted from these models, Badru explains, is a role for the size distribution of income (or personal income distribution), which reflects how wages are distributed within

households; incorporating this in her theoretical model, she is able to discern the gendered distribution of wages' impact on aggregate demand. Describing the model's specifics, she notes it assumes an open economy with no government intervention where production encompasses investment goods, goods for domestic consumption, and export goods. Consumption is a component of aggregate demand that is assumed to depend on both the functional and personal income distribution, such that an increase in either of the latter should induce an increase in the former. The author posits this will vary by gender, as women have a higher marginal propensity to consume, generating an inverse relationship between gender inequality and aggregate consumption. This relationship, however, can be influenced by the level of economic development, with higher wages for women in middle-income countries producing economic contraction through dampened investment and exports, with the opposite effect in low-income economies. Given these relationships, Badru expects her model to demonstrate that an increase in gender wage equality stimulates aggregate demand and therefore is growth enhancing.

After dealing with limitations in the data and controlling for potential econometric and structural issues, the author specifies her model within a heterogeneous dynamic panel data setting based on a standard panel autoregressive distributed lag model, allowing income distribution and gender equality's effects on both the short-run dynamics and long-run (quasi-) equilibrium to be separately identified while taking account of the nonstationarity and unobservable factors present in the dataset.

Her findings suggest a long- and short-run relationship between functional income distribution and aggregate demand, with growth observed to be profit-led in the short run and wage-led in the long run, though results vary by degree of openness and development. With respect to gender inequality's relative contributions to macroeconomic outcomes, Badru accounts for the role of economic structure in the relationship, finding that results for the entire panel point to gender equality's pressures on economic growth that are generally contractionary in the short run, but expansionary in the long run; however, the magnitude of these effects depends again on the level of development.

Badru concludes that though further research is needed to fully understand the macroeconomic responses to increases

in women's wages, evidence suggests that wage moderation is unlikely to stimulate long-run growth, therefore a redistribution of income in favor of labor may provide a more sustainable path.

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Program: Explorations in Theory and Policy

Notes on Intersectional Political Economy: The Long Period Method, Technical Change, and Gender

LUIZA NASSIF PIRES

Working Paper No. 957, June 2020

Contending that the structure of capitalism creates identity categories that are subject to expropriation and therefore need to be accounted for in a full understanding of the laws that govern the accumulation of capital, Nassif Pires incorporates a Marxist framework into feminist theory to shed light on how the noneconomic sphere produces the conditions necessary for the functioning of the economic sphere.

Nassif Pires notes class struggle, as defined in the *Communist Manifesto*, only refers to the struggle between capitalists and labor. She proposes an intersectional political economy theory that accounts for the heterogeneity of the working class and the impact it can have on the aggregate outcomes (i.e., the value of labor power and bargaining power) in a capitalist system. Employing the classical long-period method, where complexity is abstracted and then added in layers, she discusses determinants of the long-run profit rate and profit share, beginning with the most basic layer—where the profit motive is capitalism's driving force—separating the short-run fluctuations from their long-run tendencies as she adds complexity. At the most basic layer, there is a long-run tendency of the profit rate to fall, recognized by classical economists as a stylized fact that Nassif Pires says omitted the role of technical progress, until Marx incorporated it in a theory that was compatible with the growing surplus value rate. In this theory, individually interested capitalists compete against each other,

employing production-enhancing techniques that allow the innovator to extract a “super profit” in the short run, but disadvantaging the class as a whole in the long run as capital shifts to the more profitable sector, driving supply up and prices down (driving real wages up/profit down). It is this process, often called “Marx-biased technical change,” where a capital-using, labor-saving change increases labor productivity while reducing that of capital, that the author asserts is consistent with Marx’s basic explanation of the falling rate of profit (though added layers of complexity may counteract these tendencies).

Turning next to Marx’s theory of exploitation—where capitalists pay for the value of labor power, extracting a surplus from labor’s actual productivity—she explains that the value of labor power is socially and historically determined, thereby placing class struggle at the center of the analysis. In the short run, workers need capital to reproduce themselves; this creates a relationship with a power imbalance in favor of capital that is only tempered in the long run when this relationship is reversed. With important implications for the gendered division of labor, this, according to Nassif Pires, is the source of the within-class struggle among workers that determines both the value of labor power and the wage deviations from that value. Bargaining power in Marx is understood in relation to the size of the economy’s “reserve army of labor,” and the author explains this dynamic through Goodwin’s predator-prey model as a cycle in which progress begets accumulated profits, followed by an expansion in production that decreases the reserve army’s size, driving up labor’s bargaining power and decreasing profits.

Following from Nancy Fraser’s argument that not all aspects of life are marketized, Nassif Pires proposes that the nonmarketized aspects of this “hidden layer” are subject to expropriation and the separation between commodity production and social reproduction, which facilitates the fabrication of identity categories (such as race and gender) and relegates social reproduction to women without remuneration, is necessary for capitalism to function properly. In the mid-1800s, the “breadwinner” model replaced the dual-income household, with male laborers reinforcing the idea that the female wage is a “compliment” to the male wage, thereby reducing the value of women’s labor power and pushing down wages for women who enter the labor market. Nassif Pires claims that this puts pressure on male labor power and eventually wages equalize

at lower rates, with the capitalists benefitting from the surplus value; any technical change during this process also benefits capital more than labor. It is here that the author highlights the role of within-class struggle over the time devoted to nonwage labor as the mechanism behind this equalization. She suggests that the struggle between labor’s reserve army and the active workforce decreases bargaining power for the whole working class to the advantage of capital.

To reconcile Marxist theory with social reproduction theory, Nassif Pires asserts the need to incorporate this within-class struggle in our understanding of the historically and socially determined value of labor power and the process of capital accumulation, calling on workers to overcome individual interests to build a social order that favors all strata of the working class.

www.levyinstitute.org/pubs/wp_957.pdf

Notes on the Accumulation and Utilization of Capital

MICHALIS NIKIFOROS

Working Papers No. 952 and 953, April 2020

In this two-part paper, Nikiforos outlines the relationship between capital accumulation, distribution, and capacity utilization, highlighting utilization’s role in bridging the gap between mainstream and alternative theories of growth and distribution. Working Paper No. 952 focuses on the theoretical issues around this relationship and Working Paper No. 953 reflects on the empirical issues.

Defining its role and importance through the Cambridge equation, Nikiforos asserts that the rate of capacity utilization, as the connecting link between capital accumulation and the distribution of income, determines if accumulation is (neo-) classical (constrained by available savings and established through social and institutional norms) or Keynesian (exogenous, not constrained by savings, and originating from the demand side). When accumulation and utilization are exogenous, distribution necessarily becomes endogenous and bears the burden of adjustment, in what the author claims is the essence of the neo-Keyensian theory of growth and distribution proposed by Nicholas Kaldor and Joan Robinson in the mid-1900s. Nikiforos compares this to several examples from classical theory and suggests that mainstream arguments

for the utilization rate's endogeneity do not hold in the long run, when, as he demonstrated in previous studies, a firm will adjust its normal utilization rate to respond to changes in demand. Refuting studies based on only technological and cost factors to determine utilization, he uses the model from his 2013 study to show how utilization becomes endogenous to demand when economies of scale are incorporated into the story. Evidence from Nikiforos's new model points to the entrepreneur increasing utilization as demand increases, if the degree of returns to scale, which arise mainly from the indivisibility of capital, decrease as the scale of production increases.

With evidence indicating that demand influences utilization at the micro level, he poses the question at the macro level by distinguishing between levels and growth rates, noting that when output grows at the warranted rate, the demand increase will be covered by new entrants, leaving the individual firm's level of demand unchanged until the actual growth rate deviates from the warranted. Pointing to studies that argue it is unrealistic to assume the average firm's demand does not increase over time, Nikiforos maintains utilization is not the only variable that changes in the long run and the adjustment occurs through several channels that were omitted from his model, namely technical change, which accounts for a large part of the increase in output. Additionally, the firm's investment decisions are made not by considering current or expected *levels* of demand, but the expected flows of demand over the lifetime of the invested capital, therefore it is the *growth rate* of demand that influences the investment decisions and links utilization changes at the micro level to the macro adjustment.

Turning to the empirical issues, Nikiforos begins with a look into issues around the Federal Reserve Board's (FRB) widely used measure of capacity utilization, which fluctuates around the same level for long periods of time and suggests an exogenous-to-demand utilization rate. As he has argued elsewhere, Nikiforos suggests that due to its construction, the FRB's measure does not capture changes over time and is closer to a cyclical indicator of economic activity than a measure of long-run variations in normal utilization; he proposes here, and in previous studies, that the average work week of capital (AWW), with its fixed and unambiguous basis of a 168-hour week, is an imperfect but more appropriate measure. The US Census Bureau's national emergency utilization rate—a ratio between actual and national emergency production that represents an engineering,

rather than economic, measure of production—is also put forth as a useful tool for evaluating long-run normal utilization to capture variations in intensity that are missed by the AWW.

Nikiforos concludes his investigation posing two questions: Should utilization be stationary? and How long is the long run? Regarding utilization's stationarity, he cites influencing factors beyond demand (i.e., technology, costs, and market structure) that are unlikely to move in tandem but cause utilization to vary in the long run as further evidence of the unfitness of the FRB's relatively stationary measure. Attempting to define the length of the long run, the author looks beyond the traditional definitions based on the business cycle to propose a longer horizon (of nearly 30 years) when positions at the firm level are fully adjusted, making the long run irrelevant in the analysis of many economic problems.

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INSTITUTE NEWS

In Memoriam

Senior Scholar John F. Henry

On September 26, 2020, Senior Scholar John F. Henry passed away after a brief illness. As a long-time associate and professor in the graduate programs, Henry was a mentor and a friend to many at the Institute.

Born in Red Hill, PA, Henry earned an A.B. from Muhlenberg College in 1965, and studied economics as a graduate student at McGill University, earning an M.A. degree in 1967 and a Ph.D. in 1974. Spending most of his career as a professor of economics at California State University, Sacramento, he was also on the faculty in the University of Missouri–Kansas City's (UMKC) Department of Economics for more than a decade. Henry joined the Levy Institute Graduate Programs in Economic Theory and Policy's faculty during its inaugural year, offering his history of economic thought lectures to several cohorts of graduate students.

In 2016, Henry won the prestigious Veblen–Commons Award from the Association for Evolutionary Economics in

recognition of his outstanding scholarly contributions to evolutionary institutional economics and a festschrift was published in his honor in 2015 (Jo and Lee eds., Routledge).

He was also a highly appreciated lecturer in the Institute's Minsky Summer Seminar, where he annually opined on the relation between Veblen and Minsky. Former students will remember it as heavily influenced by his unique appreciation of Veblen, although much to the satisfaction of the organizers, his last presentation managed to include the institutional linkage to Minsky. As the Levy expert in the history of economic and political thought, he was an avid collector of books on the subject, filling most of the basement of his house, which was shared by an impressive model train set that most visitors found more interesting than the books.

He leaves behind his wife and daughters, as well as all who had the honor of knowing him, learning from him, and spending time with him.

Institute Receives Gift of Galbraith Library Collection

This summer, the Institute received over 1,000 volumes from the private collection of John Kenneth and Kitty Galbraith. The books, acquired from the 1950s through the early 2000s, cover economics, political science, and history, and also include non-academic titles, such as spy novels and children's books. Many are dedicated and signed by the author, including Jacqueline Kennedy and William F. Buckley Jr.

Previously housed at Marlboro College in Vermont, the collection is now on view across two rooms on the Institute's ground floor.

For more information, contact the Institute Librarian, Bill Walker, at wwalker@levy.org.

Online Conference in Honor of Distinguished Scholar Wynne Godley

In collaboration with Università degli Studi di Cassino e del Lazio Meridionale (Italy), an online conference was held in honor of Distinguished Scholar Wynne Godley on May 13th to mark the 10th anniversary of his passing. Gaining his reputation through his research on the British economy during his time as head of Cambridge's Department of Applied Economics and

considered by some as "the most insightful macroeconomic forecaster of his generation," he continued his work on the US and world economies at the Institute in the early 2000s.

His books with Francis Cripps (*Macroeconomics*, OUP 1983) and Marc Lavoie (*Monetary Economics*, Palgrave Macmillan 2007) laid the foundations for the stock-flow consistent (SFC) approach to macroeconomics. Embraced by a growing number of scholars and practitioners for analyzing the interactions of real and financial markets, the SFC approach provides a robust alternative to the mainstream approach based on microfoundations and market clearing.

Hear from those who were closest to him about his life and work, and how they are both still impacting economics today in the conference video, available on our website at: www.levy.org/news/godley-conference-2020.

Scholars by Program

The State of the US and World Economies

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MARSHALL AUERBACK, Research Associate
EMILIOS AVGOULEAS, Research Associate
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MICHAEL HUDSON, Research Associate
ROBERT W. PARENTEAU, Research Associate
ANDREA TERZI, Research Associate
FRANCESCO ZEZZA, Research Associate

Monetary Policy and Financial Structure

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L. RANDALL WRAY, Senior Scholar
PETER BOFINGER, Research Scholar
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The Distribution of Income and Wealth

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EDWARD N. WOLFF, Research Associate

Gender Equality and the Economy

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YANA VAN DER MEULEN RODGERS, Research Associate
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Immigration, Ethnicity, and Social Structure

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Economic Policy for the 21st Century

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Editors: Elizabeth Dunn and Michael Stephens

The *Summary* and other Levy Institute publications are available on the Institute's website.

To comment on or inquire about publications, research, and events, contact the Institute online at levyinstitute.org.

Inquiries regarding contributions could be sent to Dimitri B. Papanimitriou, 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 Website: levyinstitute.org

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