

Puerto Rico Post-Hurricane Maria: Origins and Consequences of a Crisis



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CENTRO

Journal of the Center for Puerto Rican Studies

VOLUME XXX • NUMBER III • FALL 2018

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Few Americans will forget the controversy over President Donald Trump's construction of additional sections of a wall separating the U.S. from Mexico and the closing of the federal government for a month at the end of 2018 and into 2019. Yet, few Americans will recall how Puerto Rico's recovery assistance after Hurricane Maria got entangled in that controversy. As in many times in the past, U.S. policies toward Puerto Rico are conjunctural and too often have contradictory impacts on its economy and people. As a territory of the U.S., Puerto Rico is entitled to the benefits of the Stafford Act—the *de facto* national insurance policy to support communities after natural disasters. While private insurance covers most private property, such as housing and commercial buildings, the act covers public assets and damages to community's infrastructure and other assets and aid to individuals. Consistent with this purpose, as the law has provided aid in numerous occasions in the past to other states and territories, Congress appropriated funding for Puerto Rico. With the approval of the \$10 billion in contention, aid would add to about \$40 billion in funding earmarked for Puerto Rico of the estimated over \$100 billion in damages caused by Hurricanes Irma and Maria. Seeking funding for the wall, the White House was intended to cut the aid package for Puerto Rico proposed by the House Appropriations Committee from \$10 billion to \$1.3 billion. Regardless of the reasoning for undertaking this course of action or eventual outcome of the episode, this incidence is illustrative of a much lengthier historical pattern of erratic and at times arbitrary U.S. policies toward Puerto Rico.

This special issue of *CENTRO Journal* is devoted to the Puerto Rico crisis, its origins, and how Hurricanes Irma and Maria further muddled a dreadful situation. The articles by stellar authors included cover a broad range of topics and disciplines and constitute the most in-depth analysis of Puerto Rico's situation published to date in an academic journal. But what crisis are we referring to? The mainstream media often refers to the economic crisis as a catchall concept that is inclusive of many other causes and aspects of the crisis. It is more prudent, however, to refer to the situation using a plural tense and refer to the crises of Puerto Rico. The authors in this volume make such distinctions sharp. Several authors address the underlying economic crisis, which in turn affects public borrowing and the accumulation of debt. But how to separate Puerto Rico's debt crisis from congressional policies toward Puerto Rico or from the political ineffectiveness of local political leaders who borrowed the funds, indebted the country and ultimately contributed to a prolonged economic stagnation? Furthermore, other authors address that the crises are not victimless—vulnerable populations received the brunt of austerity policies, while local and non-resident investors, many of them retirees living in fixed income, will probably recover a smaller share of their investment than speculative investors that bought bonds at a substantially reduced price.

This introduction provides context for the articles in this special issue. We begin with a stylized portrait of the crises. The following section addresses the origins and evolution of the economic crisis and how stagnation and political mismanagement led to the accumulation of debt. In that context, we introduce several articles that refer to the Puerto Rico Oversight, Management and Economic Stability Act (PROMESA) and the unfolding dynamics of austerity and economic recovery. These evolving dynamics of the crises have many faces. In the following section, we address core aspects of the crisis such as the evolving energy and agricultural sectors, and the exodus of Puerto Ricans and its impacts on the diaspora.

The Genesis of the Economic Crises

It is often said that one picture is worth a thousand words. Graphic 1 depicts the Puerto Rico Economic Activity Index (EAI) with a time line of key events over imposed. The EAI, published by the Economic

Development Bank for Puerto Rico (EDB), correlates closely to both the level of economic activity, as measured by the Gross National Product (GNP), and to the rate of growth of the GNP. Graphic 1 summarizes Puerto Rico's economic performance since the inception of the EAI in 1980—the base year for the index (EAI=100).

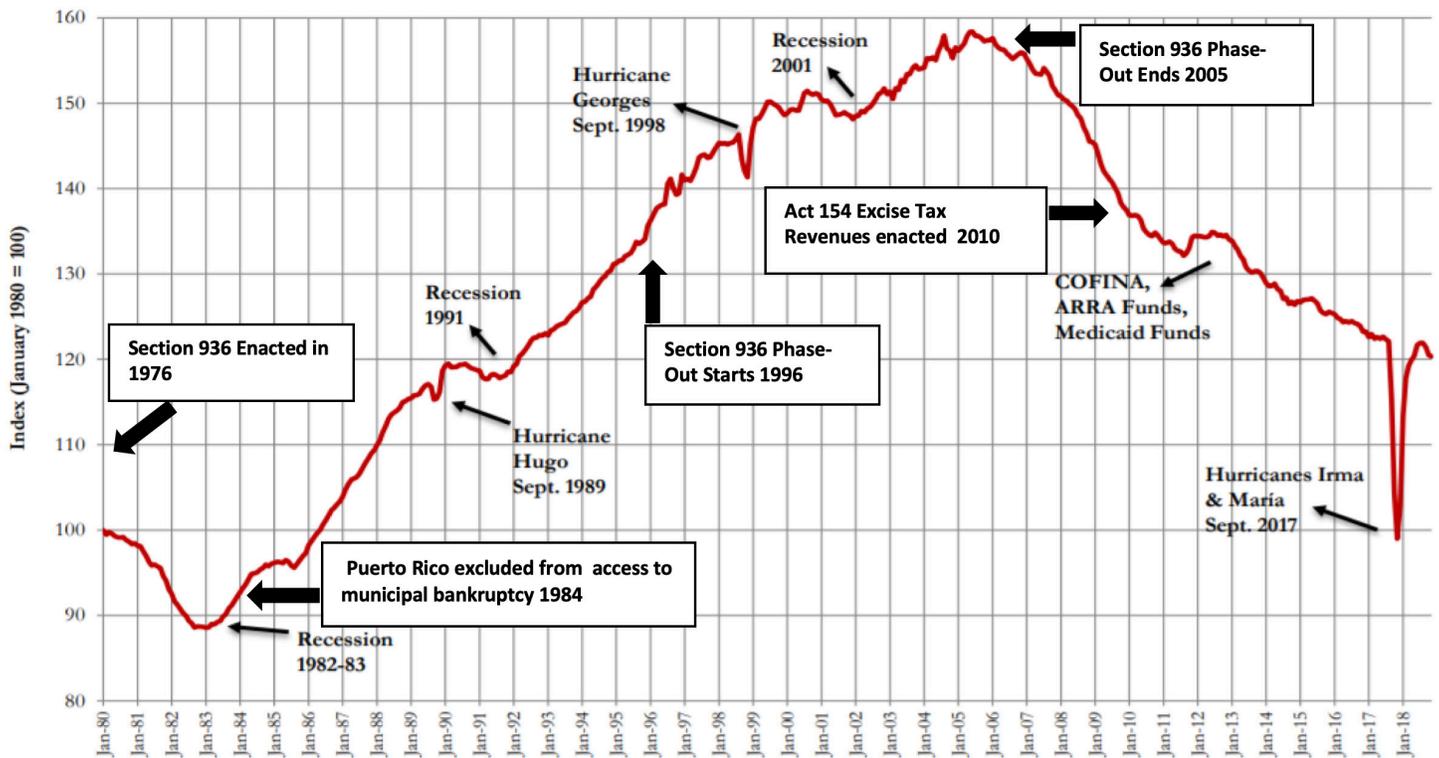
In 1976, Section 936 of the Internal Revenue Code was created to support the island's economic recovery. Puerto Rico had entered in its first prolonged post-WWII recession in the 1970s when the island economy relied on processing oil imports from Arab countries after the Organization of Petroleum Exporting Countries (OPEC) imposed an embargo against the United States as President Nixon decided to support Israel during the 1973 Arab-Israeli War. The oil refinery industry collapsed, and, with it, Puerto Rico's economy went into a recession. Section 936 exempted U.S. companies from federal taxes on repatriated income earned in Puerto Rico. Section 936 worked as intended. By the early 1990s, pharmaceutical and high-tech manufacturing had become the undisputable economic anchors of the island's economy, while Controlled Foreign Corporations (CFCs) were earning billions of dollars in profits exempted from federal taxes. In 1995, President Clinton found in Section 936 federal tax exemptions a source of tax revenues to support legislation favoring U.S. small businesses. Congress began a ten-year phase out of Section 936 in 1996.

The EAI clearly shows that the economic stimulus of Section 936 to manufacturing in Puerto Rico not only led the island out of the 1970's recession but also that, during the time of federal tax exemptions for repatriation of profits, the economy grew at a steady pace up to the end of the phase out period in 2005. Table 1 summarizes employment by major industry sector for three key years: 1995, the year before Section 936's phase out began; 2005, when federal tax exemption ended; and 2017, the most recent data. The table provides a bird's-eye view of the economic restructuring of Puerto Rico over the last two decades. There are several notable patterns. First, the decline of 16 percent in the overall level of employment, from 1.05 million to 887 thousand, corresponding to a decline of an EAI from 158 to 120, a loss of 32 percent of its value, is demonstrative of the economic stagnation of the island since its peak in 2005.

The pattern of economic decline was briefly interrupted when The American Recovery and Reinvestment Act of 2009 (ARRA) funds were injected as a stimulus to overcome the financial crisis of 2008–09. A second pattern of importance is that manufacturing, state government and construction are the industrial sectors showing the greatest losses of employment. Manufacturing employment declined from 153,000 jobs in 1995 to 73,000 in 2017, a net loss of 80,000 jobs over the last two decades. This loss of total employment is followed by state government, with a loss of 76,000 jobs, and construction losing 23,000 jobs during the period.

Losses in employment in key industries are related to numerous causes. The prevalent narrative is that most of the job losses can be traced back to the elimination of Section 936 and the loss of federal tax exemption. Feliciano (2018, 32) finds empirical evidence establishing that “the elimination of Section 936 had a large negative impact on manufacturing employment.” Though the change in policy played a key role, there were other important contributing factors, such as technological change and globalization affecting manufacturing more generally. However, the ruling political parties' inability to respond with effective economic development and fiscal policies to counter the phase out of Section 936 federal tax incentives and other broader factors, and their inability to restructure government to conform to a new fiscal reality were (and are) critical factors inducing the economic crisis (Caraballo-Cueto and Lara 2017; Meléndez 2018a).

Graphic 1. EDB Economic Activity Index



Source: The Economic Development Bank for Puerto Rico (EDB) The Puerto Rico Economic Activity Index (“EDB-EAI”) November 2018.

After Congress enacted the phase-out of Section 936, Governor Pedro Rosselló launched a series of major infrastructure projects such as the Urban Train, a short-lived Superaqueduct, the Coliseum, the Convention Center, and numerous roads and bridges (Márquez and Carmona 2011). These projects required substantial financing through public borrowing, which resulted in over \$24 billion increase in the debt. Of this total, the largest proportion of debt was accrued by public corporations for a total of over \$17 billion. According to Meléndez (2018b, 79), “[i]nfrastructure development by increasing public indebtedness faster than induced economic activity, which would have expanded the commonwealth’s tax base, was not an effective alternative long-term economic development strategy and set the foundation for the increased indebtedness of the country.”

By 2006, when it was evident that the Commonwealth was not generating enough revenues to be able to serve future debt and maintain

government operations without significant structural reforms, the political leadership’s solution was to avoid dealing with the structural factors underlying the accumulation of debt by borrowing more from municipal capital markets. The mechanism to borrow beyond the Commonwealth’s debt servicing capacity at the time was to create COFINA (from the Spanish name Corporación del Fondo de Interés Apremiante). COFINA introduced for the first time in modern history an island-wide 7 percent Puerto Rico Sales and Use Tax (SUT). Of the 7 percent new tax revenues, one-and-a-half percent went to municipalities, and the rest was equally divided between the central government and COFINA bondholders. In 2015, faced with declining revenues, the sales tax was increased from 7 percent to 11.5 percent. Puerto Rico now has the distinction of having the highest sales tax of any other jurisdiction in the U.S., and, by 2018, COFINA bonds accounted for the largest share (over \$17 billion before restructuring) of the public debt in Puerto Rico.

Table 1. Employment by Major Industrial Sector

Year	1995	2005	2017	95/05	05/17
Total Non Farm	912	1,053	887	15.5%	-15.7%
Mining, Logging & Construction	46	68	23	48.3%	-67.0%
Manufacturing	153	117	73	-23.3%	-37.9%
Trade, Transportation & Utilities	181	188	172	3.6%	-8.3%
Financial Industries	42	49	43	15.8%	-12.6%
Services	164	324	353	97.4%	9.1%
Government	304	308	225	1.3%	-27.1%
Federal Government	NA	15	14	NA	-3.1%
State Government	NA	230	154	NA	-32.9%
Local Government	NA	63	56	NA	-11.6%

Source: Department of Labor and Human Resources, Bureau of Labor Statistics, Establishment Survey (Non Farm Employment).

reelection bid in the 2011 general elections. The new governor, Governor Alejandro Garcia-Padilla, inherited the height of the debt crisis when Puerto Rico bonds reached “junk” status in 2014.

The Debt Crisis

Graphic 2 depicts Puerto Rico’s public debt by sectors for three critical benchmark years: 1996, when the Section 936 phaseout began; 2006, when COFINA was enacted; and 2014, the high point of accumulated public debt, when Puerto Rico bonds reached “junk” status. Infrastructure borrowing by public enterprises increased public debt about \$15 billion, from \$12.7 billion in 1996 to \$27.2 billion in 2006—the second largest increase in debt between the selected benchmark years. By 2006 it was evident that many of the public corporations were in financial distress and many of them would have benefited from debt restructuring. A decade later, by the time that Governor Garcia-Padilla declared that Puerto Rico’s public debt was “unpayable” in the summer of 2015, many public corporations were insolvent or near insolvency with mounting debt and no legal recourse to declare bankruptcy. In 1984 Congress adopted Section 903(1) of the Bankruptcy Code which excluded Puerto Rico’s municipalities from access to bankruptcy—an option that was previously granted to municipal debt in Puerto Rico until the law was amended. Exclusion from bankruptcy would prove to be a critical factor later on for the enactment of PROMESA.

By 2014, Puerto Rico’s total public debt reached over \$74 billion. Despite the explosion of public corporations’ debt in prior years, accounting for 46.8 percent of the total debt, the largest increase in public debt belongs to COFINA. Between 2006, when COFINA was enacted, and 2014, COFINA debt stood at \$16.3 billion or 23.5 percent of the total debt. (Graphic 2) By 2014, the Commonwealth’s (or E.L.A. for Spanish Estado Libre Asociado) debt accounted for 20.7 percent of the public debt and the municipal debt for the remaining 6 percent of the debt. According to Meléndez (2018b, 81), “If Puerto Rico had been covered by the U.S. Bankruptcy Code, the bulk of public debt carried by public authorities and municipalities accounting for over 50 percent of the total could have been restructured in federal court as the public corporations became insolvent and potentially avoided PROMESA’s debt restructuring.”

In addition to the public debt, the Commonwealth had nearly \$49 billion in net pensions liability. As Table 2 illustrates, in 2015, Puerto Rico

Retirement Plans included the Puerto Rico Government Employees Retirement System (ERS) with 124,497 retirees, by far the largest of the three systems, followed by the Puerto Rico Teachers Retirement System (TRS) with 40,601 retirees, and the Puerto Rico Judiciary Retirement System (JRS) with 430 retirees. The ERS net pension liabilities totaled \$33.2 billion, the TRS \$15 billion, and the JRS half a billion. Eventually, in 2017, with less than a billion in total net reserves to pay pensions, Governor Ricardo Rosselló instituted, with the consent of the Financial Oversight and Management Board for Puerto Rico (Oversight Board) and the federal court, a pay-as-you-go system in which pension benefits are paid out of the island’s general fund, “to the tune of roughly \$1.5 billion a year” (Valentín Ortiz 2018). Pension reform also included a defined contribution plan for active workers in which every employee will have an individual account manage by a third party and new hires will also become enrolled in social security (Bradford 2017).

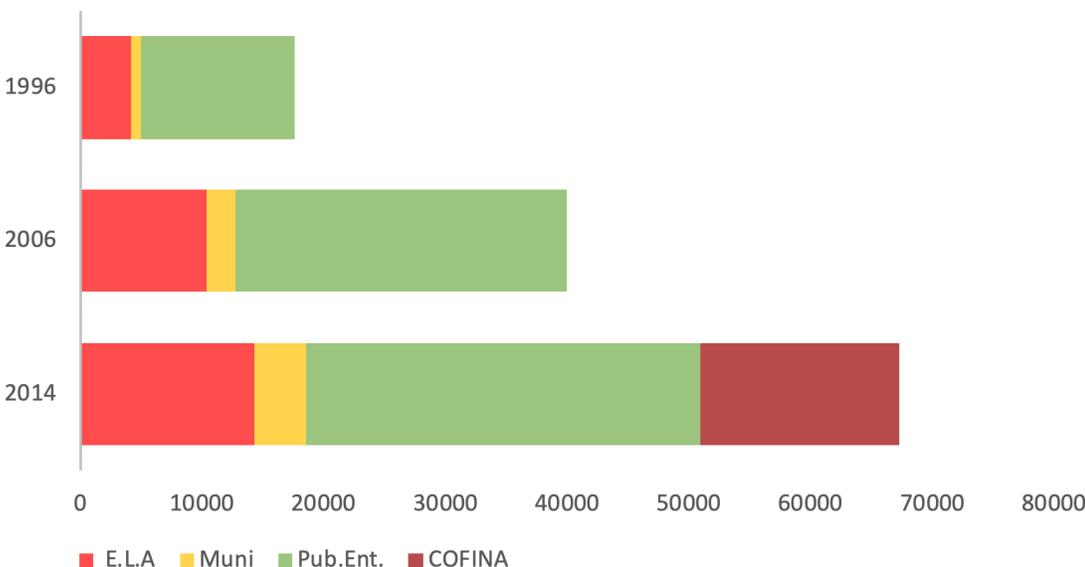
In summary, when pension liabilities are added to the public debt, the actual total Commonwealth’s debt and liabilities add to nearly \$123 billion. The accumulation of debt was partly the result of the prolonged recession that started in 2006 and the concomitant decline in tax revenues, and partly due to the ruling political parties’ inability to respond with effective economic development policies, restructure government operations and implement responsive fiscal policies. But the public debt crisis can also be attributed directly to inconsistent U.S. policies toward the island. For example, the exclusion of Puerto Rico’s municipalities from access to municipal bankruptcy prevented these municipalities from being restructured and possibly sold to private investors under more favorable terms than the ongoing restructuring procedures in federal court under PROMESA Title III provisions. Despite structural reforms on governmental revenues and expenditures, by the summer of 2015 the government sector’s debt crisis was uncontrollable—desperate times called for desperate remedies.

Enter PROMESA

PROMESA was enacted as a rare congressional bipartisan legislation at the height of the debt crisis (Meléndez 2018a). President Barack Obama signed the legislation just hours before the Commonwealth—already strapped for cash, implementing an aggressive revenues claw back from all agencies and public corporations and facing a severe liquidity problem—faced a substantial payment to

bondholders of nearly \$2 billion. PROMESA’s main goals are insuring a string of balanced budgets and to restore Puerto Rico’s access to credit markets under favorable terms, which involves the restructuring of the debt. Modeled after International Monetary Fund (IMF)-like economic reform policies, it should be no surprise to anyone that PROMESA is working for the purpose that was intended. The Oversight Board is overseeing the administration’s controlling of expenditures and boosting revenues through a series of public sector reforms. It has also

Graphic 2: Puerto Rico Public Debt by Sector



Source: Government Development Bank for Puerto Rico.

Notes: In millions of dollars, as of June 30, adjusted for inflation where 2014=0.

Table 2. Puerto Rican Retirement Plans, 2015 (a)

Year	Retirees	Net Pension Liability (in thousands)
ERS	124,497	33,247,795
TRS	40,601	14,994,583
JRS	430	542,583
Total	165,528	48,784,961

Source: Congressional Task Force on Economic Growth in Puerto Rico, Report to the House and Senate, 114th Congress, December 20, 2016.

Notes: Puerto Rico Retirement Plans are the Puerto Rico Teachers Retirement System (TRS), the Puerto Rico Government Employees Retirement System (ERS), and the Puerto Rico Judiciary Retirement System (JRS).

Table 3. Puerto Rico General Fund Budget FY 2016 and FY 2018 (In thousands)

Agency	FY 2016	FY 2018 Rec.	Change	% Change
Education	1,985,496	1,498,497	-486,999	-24.5%
Health (a)	1,372,534	1,203,216	-169,318	-12.3%
Justice (b)	883,680	754,775	-128,905	-14.6%
UPR	869,696	669,713	-199,983	-23.0%
Police	804,946	710,306	-94,640	-11.8%
Pension (c)	407,219	326,188	-81,031	-19.9%
Municipalities	365,700	219,730	-145,970	-39.9%
Budget Office	304,397	2,443,116	2,138,719	702.6%
Other	1,751,640	1,458,459	-293,181	-16.7%
Public Debt	951,210			
Total	9,696,518	9,284,000	-412,518	-4.3%

Notes

(a) Includes: Administración de Seguros de Salud de Puerto Rico; Departamento de Salud Administración de Servicios de Salud Mental y Contra la Adicción; Administración de Servicios Médicos de Puerto Rico; Cuerpo de Emergencias Médicas de Puerto Rico; Salud Correccional

(b) Includes: Departamento de Corrección y Rehabilitación; Tribunal General de Justicia; Departamento de Justicia

(c) Includes: Sistema de Retiro de Maestros; Sistema de Retiro de Empleados del Gobierno y La Judicatura (Sistema Central)

Source: Oficina de Gerencia y Presupuesto, Gobierno de Puerto Rico, PROMESA Requirement #1A, Recommended General Fund Budget by Concept and Source of Funds FY 2018 (rounded to thousands)

proceeded to federal court to restructure the public debt and negotiate with bondholders on behalf of the commonwealth.

Restructuring the Commonwealth's public finances has led to significant austerity measures. The Fiscal Plan mandated by PROMESA, revised in 2018 after Hurricanes Irma and Maria to account for economic recovery federal funding, is severely affecting "essential" services, such as education, health, justice, the University of Puerto Rico (UPR), and police, even in the context of projections of substantial disaster recovery funding. PROMESA has a back and forth review process between the Oversight Board and the governor for the "development, submission, approval, and certification of fiscal plans" (2018b, 76). Table 3 summarizes Puerto Rico's general fund budget for fiscal years 2016—the last budget prior to the enactment of PROMESA and used as a baseline for comparison purposes—and 2018. The two largest budget lines are for education and health programs, accounting for about one third of the budget. Education (-24%), UPR (-23%), and municipalities (-39%) received the largest budget cuts in FY2018 as a proportion of the FY2016 baseline year. These austerity measures were implemented in the context of no debt services or payments to bondholders. In preparation for those payments, among other reasons, the Puerto Rico's government and Oversight Board have concentrated the management of funds in the budget office, which saw

funding under their direct control increase 70 percent, from \$304 million in FY2016 to \$2.44 billion in FY2018.

The FY2018 budget (and in future budgets) assumes a significant injection of recovery related funding and other federal funding, and substantially reduced debt services. The Fiscal Plan (2018) assumes the following in their ten-year projections using FY2017 as a baseline:

- Federal funds for economic recovery are projected to exceed \$100 billion over the next ten years.
- Beginning in 2018, the loss of the Affordable Care Act (ACA) Funding will amount to \$32 billion.
- Federal funds for social programs and operations will increase annually from \$7 billion to \$8.7 billion.
- Projected annual Act 154 Revenues will decrease steadily from \$2.1 billion to \$1.2 billion.
- Cash flow available for debt services would be \$7.87 billion, for an average of \$787 million annually.

Evidently, these projections depend on whether the underlying assumptions withstand the test of time and are not significantly affected by all the intervening political processes at the local and federal levels. For instance, Community Development Block Grant (CDBG-DR) and other recovery-related expenditures greatly depend on the deployment of an infrastructure for economic recovery that Puerto Rico is currently lacking. Though it is likely that recovery efforts will pick up steam soon, at the moment this is an area that requires greater attention by local and federal authorities as much as by the private and civic sector in Puerto Rico. Similarly, ACA funding depends on Congressional action. A strong advocacy coalition in Puerto Rico and the diaspora could influence the legislative process to avoid the so-called Medicaid-cliff in the near future.

By the same token, a strong advocacy coalition could persuade Congress and the current or future administration to support core stimulus policies, which may include solving the structural disparity in Medicaid once and for all, and extending an Earned Income Tax Credit (EITC) and the full federal Child Tax Credit (CTC) to residents of Puerto Rico, among others. These are stim-

ulus policies identified by the Congressional Task Force on Economic Growth in Puerto Rico and subsequently endorsed by the Oversight Board that command broad support in the House of Representatives but, currently, not so much in the Senate or the White House. Finally, the 2018 Fiscal Plan projected that annual Act 154 Revenues will decrease steadily because of the CFCs adjustment in their expected future investment in Puerto Rico given the tax reforms instituted by the Tax Cuts and Jobs Act on December of 2017. This is an area where local policies, whether reforms to the taxation of CFCs or programs to support their operations, could make a difference in encouraging the continuation or expansion of CFCs operations in Puerto Rico and slowing the erosion of tax revenues.

Debt Restructuring

The assumptions and projections about debt service are dependent on the resolution of debt restructuring in federal court. Graphic 3 depicts the projections included in the Fiscal Plan. Debt services in the absence of debt restructuring through PROMESA would have amounted to \$3.283 billion in 2018 and for the ten-year period picked at \$3,828 in 2019, then showing a steady decline to slightly above \$3 billion for the later years of the period. The sum of these payments would exceed \$30 billion in the

ten-year period. However, the projected debt services in the Fiscal Plan average 23 percent of the actual debt services. In other words, the accuracy of cash flows projections to meet debt services projection depend on the court settlement with bondholders. Based on these cash flows projections, the restructuring of the debt and the implicit “haircut” would be substantial, probably in the 70 to 80 percent range.

Gluzmann, Guzman, and Stiglitz (2018) analyze precisely the projections made in the Fiscal Plan of 2017 (prior to the devastation caused by Hurricanes Irma and Maria) in respect to the macroeconomic implications of debt restructuring and sustainability of debt services based on the implicit “haircut” negotiated by the Commonwealth government and the Oversight Board and then to be approved by the courts. They conclude that “the island’s current debt position is unsustainable” (2018, 106), then proceed to estimate debt relief under various scenarios in order to restore sustainability. In their judgement the projections of the Fiscal Plan do not incorporate the dynamics that the plan itself will introduce in the economy—for example, a small haircut will lead to high debt service payments which in turn will induce cut in other government services, which in turn will reduce revenue collections inducing additional austerity measures, and so on. In economics, this policy feedback effect of government economic policies is referred to as a macroeconomic multiplier effect.² In this context, one of the core assumptions that is missing from the fiscal plan projections is exactly how much will be repaid in debt services. Debt restructuring determines debt sustainability and by implication fiscal stability and economic growth.

In addition to the endogenous feedback effects induced by the fiscal plan itself as well as debt restructuring and sustainability, the authors point to some additional key assumptions that deserve further scrutiny:

- GNP projections are based on macroeconomic multipliers that are regarded as overoptimistic;
- The proposed structural reforms focus on the supply side when “Puerto Rico’s economy is a demand-constrained regime,” that is, the core problem is not one of high production costs or labor constraint but, rather, one of declining employment and government expenditures that induce lower consumption;
- Migration is endogenous, to the extent that there is a decline in economic activity the exodus may increase in turn, inducing a lower aggregate demand and potentially skills shortages that further affect economic activity.

Based on the above set of assumptions, Gluzmann, Guzman, and Stiglitz (2018) construct 192 scenarios and conduct sensitivity analysis under alternative assumptions for fiscal multipliers, but maintain the same assumptions of the Fiscal Plan for real GNP growth and the annual inflation rates until 2026. Based on these projections of project real and nominal GNP for each of those 192 scenarios, they conclude:

Our projections strongly suggest that the Fiscal Plan’s projections are overoptimistic. They lie on the most optimistic bound within the range of assumptions on the values of multipliers that are aligned with the empirical evidence. The magnitude of the differences between our range of projections and the projections of the Fiscal Plan is noticeably larger if we dismiss the positive effects that the structural reforms are assumed to have on GNP by the Plan.

And even under those optimistic assumptions, the plan falls into an “austerity trap”: the magnitude of the targets for primary surpluses leads to a decrease in GNP over a decade that is larger than the reduction in the stock of debt, thus leading to an increase in the debt to GNP ratio by 2026. If there was no reduction in the debt principal, and if missed payments either of interest or principal were capitalized at zero interest rate, the total public debt to GNP ratio would rise from 1.09 in 2016 to 1.41 in 2026 in the scenario projected by the Fiscal Plan. (2018, 120–1)

To put the findings from Gluzmann, Guzman, and Stiglitz (2018) macroeconomic simulations in context, we can evaluate the implications of the COFINA restructuring approved by U.S. District Court Judge Laura Taylor Swain (Scurria 2019). COFINA debt of \$17.6 billion represents 24 percent of Puerto Rico’s total bonded debt and was the first debt restructuring in Puerto Rico’s bankruptcy process in federal court. The restructuring reduces total COFINA debt by 32 percent, or \$5.6 billion, to \$12 billion. The settlement “gives senior bondholders 93 percent of the value of the original bonds and junior bondholders 55 percent” (Bradford 2019) and releases to Puerto Rico more than 46 percent of the future sales-tax revenue. It is estimated that COFINA restructuring will require debt service of \$420 million per year and will gradually increase to more than \$900 million per year by 2041.

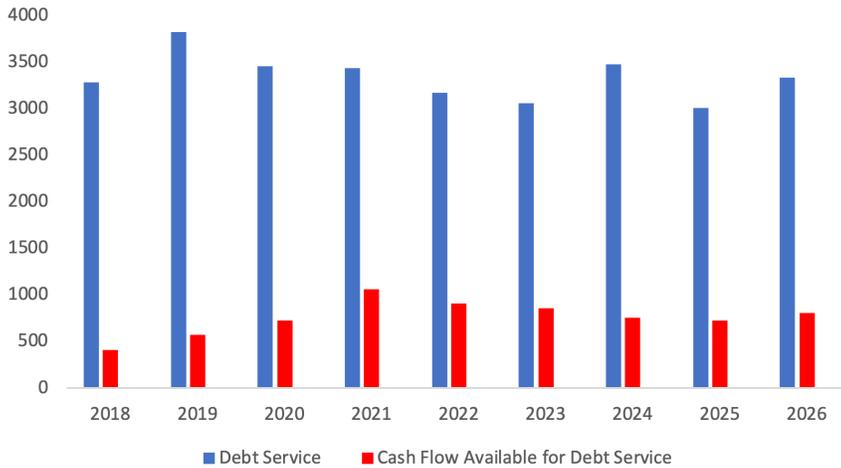
COFINA debt restructuring sets up a baseline with significant consequences for debt service sustainability. The Fiscal Plan accounts for a total annual debt services of \$787 billion, COFINA debt services of \$420 to \$900 billion will account for over half and up to 114 percent of the allocated average amount for debt services in the Fiscal Plan and twice the 24 percent COFINA share of Puerto Rico’s total bonded debt. With a bonded debt legacy of \$12 billion implied by the COFINA deal, and if the primary fiscal balance stabilized in 2026 at the value projected by the fiscal plan, then, the necessary reduction on the remaining stock of bonded public debt would have to be between 85 percent and 95 percent—an unlikely scenario—if the COFINA debt restructuring is used as a benchmark for future negotiations. Depending on Puerto Rico’s economic performance and the effectiveness of structural reforms generating future cash flows for debt services, the Commonwealth’s share of COFINA sales tax revenues may revert to debt payments to bondholders over time. This is the contention from Power 4 Puerto Rico, a coalition of civil rights, faith-based, labor and advocacy organizations that believe that “Puerto Rico will not generate enough revenue to comply with this agreement” (Bradford 2019). When Judge Taylor Swain approved the restructuring deal, Jubilee USA Executive Director Eric LeCompte, who monitors Puerto Rico’s debt for the faith-based coalition, stated, “We are worried that not enough debt is being cut and that Puerto Rico’s people are carrying heavy austerity burdens. The math isn’t adding up. If plans to restructure the remaining debt fail to cut the majority of the island’s debt load, Puerto Rico can’t see sustained economic recovery and growth” (Puerto Rico Deal 2019).

Despite popular skepticism about the merits of the COFINA debt restructuring, the market buoyed when bondholders reached an agreement with the government and endorsed the transaction. In the days that followed, COFINA senior bonds, which were selling for less than half face value, began to trade at close to 80 cents on the dollar, while subordinated COFINA bonds began to trade at about 50 cents. An opinion piece in *The Hill* summarizes the COFINA bondholders view on the restructuring agreement:

Data shows the commonwealth has been running considerable budgetary surpluses in recent years, ranging from \$1.6 billion in 2015 to \$2.9 billion in 2018. The annual surplus available to pay creditors could easily rise to \$4 billion or more by 2020 if reforms sought by the oversight board are expeditiously implemented. This underscores that the COFINA restructuring, which will require \$420 million per year in the near-term, is a very feasible deal. Even when the escalated payment rate of more than \$900 million per year is reached in 2041, the commonwealth should have ample resources to pay the restructured debt while comfortably funding other public initiatives and obligations. (Gregg 2018)³

However, the COFINA debt restructuring is not yet over. Notwithstanding the final decision from Judge Swain after conducting public hearings on the matter, the Oversight Board and a group of

Graphic 3: Debt Sustainability



Source: Commonwealth of Puerto Rico, Fiscal Plan to the Financial Oversight and Management Board for Puerto Rico, October 14, 2016 and March 13, 2017.

unsecured creditors initiated legal action to declare another \$6 billion of general obligation bonds issued in 2012 and 2014 as null and void as they exceed constitutional limits. In a separate filing, the creditors' committee alleged that "the debt also violates a balanced budget requirement in the constitution, because debt proceeds were used to finance deficit spending" (Bradford 2019). These legal challenges, whether completely or partially, are intertwined with COFINA and potentially can alter Judge Swain's decision in federal district court or in appeals.

The Impact of Hurricane Maria on Puerto Rico

Hurricanes Irma and Maria brought great destruction and thousands of dead to Puerto Rico. Undoubtedly, Hurricane Maria devastated the economy with losses estimated to reach and even exceed \$100 billion and deepened the ongoing humanitarian crisis in the island. In this section of the introduction we examine articles included in this special issue addressing two critical areas—energy and agriculture—of the enduring economic and humanitarian crises.

The blackout that affected the whole island for weeks, and remote areas for months, was the aspect most covered by the national media after Hurricane Maria. In the immediate period following the storm efforts concentrated in repairing the affected equipment and lines and restoring electricity across the island. Yet, the disaster unleashed a broad discussion about the future of the energy system. O'Neill-Carrillo and Rivera-Quñones examine the future of the energy sector in Puerto Rico considering the damages caused by the hurricanes, the collapse of the electrical grid, and the archaic oil-based electrical generation and distribution system in place. In the authors' opinion, "transitioning to a different, more resilient and sustainable infrastructure requires much more than just bringing technological gadgets to communities or implementing microgrids" (2018, 148). Despite the financial and physical damages caused by Hurricane María, the authors discuss the potential for true transformative actions such as "the implantation of local distributed energy resources" (2018, 148).

President Trump issued a 10-day Jones Act waiver for Puerto Rico after Hurricane Maria made landfall to help support the emergency relief effort. For many, this was too little, too late. For others it was unnecessary. Besides the fact that the same type of exemptions was granted to other states in similar circumstances, President Trump, by delaying the decision for more than a week after the storm devastated the island and limiting the waiver to ten days, revived the public discussion of an issue of great interest and controversy in Puerto Rico. Cabotage provisions in the Jones Act of 1920 were instituted to protect U.S. maritime commerce. The act requires that all

goods shipped between U.S. ports (including all states and territories) be transported on ships that are built, owned, and operated by U.S. citizens. With the House of Representatives and the chairmanship of the Natural Resources Committee now in the hands of Democrats, it is likely that elements of the four bills currently pending in Congress, some that focus on disaster relief efforts, will be addressed (Lee and Cavanaugh 2017). While liner services operating as monopolies in Puerto Rico claim that the Jones Act has a positive effect on marine transportation, protecting jobs and inducing capital investments in the industry, opponents point to the harmful effects of the act on the local economy.

The importance of cabotage laws restrictions and how these induce Puerto Rico's vulnerability were highlighted after Hurricane Maria with the closure of the sea-land container shipping Horizon Lines in December 2015. Domestic firms did not have enough capacity, especially with the lack of sustainable operations on the ports of Mayagüez and Ponce, to deal with the extraordinary situation and to ensure a continuous flow of cargo to Puerto Rico. Hundreds of containers were left-behind in Florida due to lack of space on cargo vessels. In this context, Suárez (2018) examines the impact of cabotage laws on the agricultural sector in Puerto Rico. Based on a mixed method approach, the author finds that the existing cabotage laws limit local industry capacity and potential development through various regulations such as those for sanitary and phytosanitary restrictions, the weight limits on containers, and the obsolete infrastructure on their terminals for handling agricultural products. In addition, local producers and importers face other internal constraints such as the lack of volume in their market, lack of cash flow, and lack of consolidation services from abroad. As a result of these external and internal factors to the Puerto Rico market, the supply chain of local agribusinesses is affected.

Furthermore, the virtual monopoly of a few large maritime service providers precludes the analysis of impact since rates and other parameters are currently consider private transactions and data is not collected or published by the U.S. or Puerto Rico governments. According to Suarez (2018, 199), "[t]his lack of access to data only allows the shippers to allocate specific routes among themselves at predetermined rates. Those with higher volumes get the better rates and priority." Lack of data makes it difficult to estimate the real cost of cabotage laws on the agribusiness sector in Puerto Rico. Access to transaction data is a first step towards attracting more service providers and inducing a more competitive environment in the industry. The author concludes that "[s]trategic investments in commercial ports' lanes and terminals' infrastructure, automating and digitizing processes, promoting rivalry among maritime firms, strengthening the local industry firms' supporters, and manufacturers' product diversification would be the key to a healthier competitiveness environment" (2018, 200).

The Impact of Hurricane Maria on the Diaspora

La Crisis Boricua is the title of a recent book devoted to the demographic and socioeconomic connections between Puerto Rico and the diaspora—two sides of a unitary process. The recent economic crisis in Puerto Rico has driven hundreds of thousands of people to migrate to the United States, and these processes in turn have reconfigured the stateside Puerto Rican community. Mora, Dávila and Rodríguez (2018) summarize the findings of their book in an article for this special issue. Some of the most troubling aspects of the crisis that preceded the landing of Hurricanes Irma and Maria are the overrepresentation of young people, especially of child-rearing families, in the migratory outflows from the island, and the continuing dispersion to traditional and non-traditional destinations

throughout the United States. Evidently, the advent of an unusually large number of Puerto Ricans increases demand in local school systems and for other social services while the potential increase in the electorate represents a challenge to local political establishments. Though destinations such as Orlando and the state of Florida, more generally, were widely covered by the media, these dynamics were unfolding in many states, whether traditional (New York, Connecticut, Pennsylvania, Texas) or new destinations (New South, e.g., Virginia, the Carolinas).

While the exodus from the island brings a renewed energy and positive socioeconomic and cultural impact to local communities, in many of the traditional destinations Puerto Ricans are concentrated in impoverished areas and the advent of evacuees further accentuates the challenges posed by the exodus from the island to stateside communities. But the recent Puerto Rican population growth may actually benefit the island in terms of mobilizing support for Puerto Rico in Congress. Mora, Dávila and Rodríguez conclude:

Hurricane Maria has increased awareness about Puerto Rico's status and relationship with the mainland, which could result in support and action from Congress to help address Puerto Rico's chronic socioeconomic issues, such as its perennially weak labor market and high rates of impoverishment. This possibility is more likely now than in the past in light of the 5.6 million (and rising) Puerto Ricans on the mainland who have Congressional representation and a vote in Presidential elections. (2018, 225)

Hinojosa (2018) picks up the “Two Sides of the Coin” theme in her article for the special issue. Her focus is assessing the size and dispersion of the post-Hurricane Maria exodus. For the author, the exodus further accelerated the depopulation of Puerto Rico while inducing a revival of the diaspora stateside. Estimating the size and dispersion of the exodus is as much an art as a science. The fact is that the two conventional indicators of migration from the island—the estimates derived from the U.S. Census Bureau’s American Community Survey and population estimates—have a substantial time lag before they are available to the public. A third available indicator—the Net Movement of Passenger (NMP) published by the Bureau of Transportation Statistics—has a shorter lag but greater volatility than the other two. Thus, the challenge for researchers and others concerned about the magnitude of the flow was to identify readily available data that could serve as an indicator of the magnitude of the flow and possibly of the demographic composition and destination of migrants.

Hinojosa (2018) proposes that school enrollment data offers an acceptable migration proxy that can be used as an indicator that is readily available only a few weeks after the beginning of every semester after student enrollment is completed. The School Enrollment Migration Index (SEMI) is based on school enrollment. Given the size of the increase or decline in students registered for the semester one can then extrapolate total migrants based on historical data of the number of adults and non-school children that correspond to a given number of school-age children. Graphic 4 depicts a comparison of the four migration series available. The important observation from the historical data is that over time these indices tend to converge, yet despite relatively high volatility, NMP and SEMI are leading indicators of the level of migration in subsequent years as measured by the U.S. Census Bureau data. A key finding from these indicators is that both NMP and SEMI show a substantial exodus as a result of Hurricane Maria, ranging between 159,415 to over two-hundred thousand, or three times the 2017 ACS figure of 72,521.

A second important question addressed by Hinojosa (2018) concerns the destination of migrants after Hurricane Maria. To estimate flows by state, she uses changes of addresses for FEMA claims from the victims of the hurricanes. Data for one year after Hurricane Maria reveals that Florida had the largest portion of evacuees with 8,873, followed by Northeast destinations that collectively add up to 7,470 evacuees. New York has the largest group of evacuees (2,111) in the Northeast region followed by Massachusetts (1,765), Pennsylvania (1,449), and Connecticut (1,220). These leading destinations roughly correspond to ACS 2017 states rankings for migration flows.

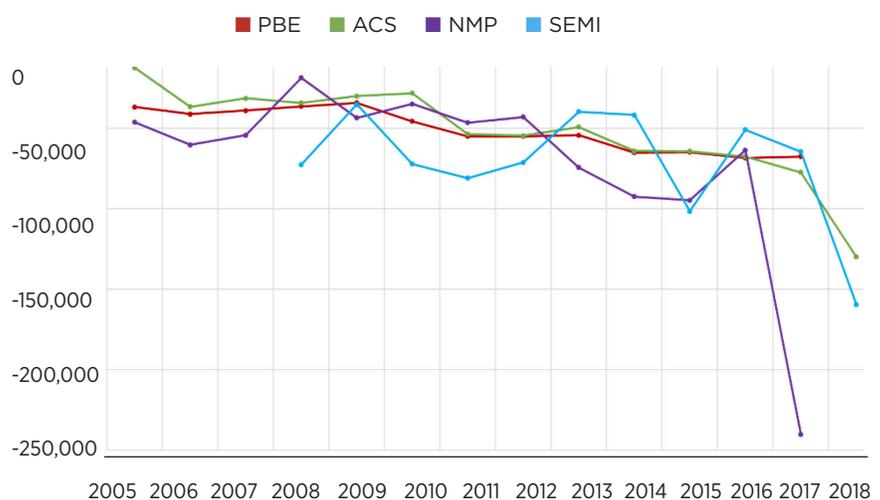
One of the most palpable links between Puerto Rico and the diaspora is how the exodus affects the school systems in the island through the closing of schools and the receiving stateside communities through heightened demand for bilingual education and social services support systems for parents and students. The massive exodus induced by the impact of the economic and fiscal crisis on families and children, as it has been exacerbated by the devastation caused by the hurricanes, is palpable evidence of the humanitarian crisis in Puerto Rico. Irizarry, Rolón-Dow, and Godreau (2018) focus on the impact of the exodus on stateside school systems. Immediately after the storms, many communities opened welcome centers where referrals and information about schools and housing were provided to evacuees. One of the most impressive operations was established at the Orlando, Florida airport—the gateway for the central Florida region, where tens of thousands of families relocated.

A second dimension explored by the authors was the multiple efforts of higher educational institutions inviting fellows from the island and accommodating evacuees in colleges and universities across the country. Many of these students were supported with generous financial aid and other emergency support services. The authors conclude with an examination of the restructuring of the educational system in Puerto Rico. Along with other authors in the volume, they perceive the impact of the exodus in local stateside communities as a call for action to support social reforms in Puerto Rico through Diaspora engagement in the electoral and political process. Given the direct impact of the exodus on both island and stateside communities, education is an area that could unify a common agenda among island residents and stateside Puerto Ricans.

The Crisis of Politics

For better or worse, politics are at the center of almost any issue discussed

Graphic 4. Estimated Migration Flows from Puerto to the U.S. 2005-2017



Source: 1941-2016 Department of Health and U.S. Census Bureau Population Estimates; 1991-2016 Bureau of Transportation Statistics; 2005-2018 American Community Survey; 2008-2018 Puerto Rico’s Department of Education.
 Note: NMP latest data available is September 2018 and PBE’s vital statistics is unavailable for 2018.

about Puerto Rico. And among the most prominent topics are the question of the political status and the recent phenomenon of declining electoral participation in regular elections and the results of recent consultations on the status question. For a context, rates of electoral participation would reach close to 90 percent of eligible voters just a decade back but in the last election voter turnout drop to 55 percent of registered voters. Pundits on the island quickly attributed this significant drop to the exodus since a recent court decision protected the right of voters to not be dropped after missing one electoral cycle. Vargas-Ramos (2018) examines this hypothesis using available electoral data. He concludes that “[b]ased on statistical analyses of aggregate voting and population data, results show that Puerto Rico’s decline in voter participation is not attributable to emigration. Rather, an extant legitimacy crisis of the political system and its political class might be a more proximate and likely explanation for the drop in electoral participation in 2016” (2018, 279).

As significant as the decline in eligible voters’ participation, the 2016 elections marked the advent of a new political phenomena with significant long-term implications if it continues in future elections. For the first time in the Commonwealth era, independent political candidates captured a whopping 17 percent of the vote. Considering that the difference between the elected governor and the runner up was under 3 percent of the vote, the independent vote could in theory become a major force determining electoral outcomes. Political alliances between the independent leadership and either of the contending parties may very well establish a coalition government. By the same token, a coalition of independent candidates could in theory tap into the massive discontent manifested by electoral absenteeism and redefine the electoral landscape in Puerto Rico. However, the prospects for political alliances are always muddled by the thorny issue of the political status.

The status question—whether Puerto Rico will become a state of the United States, evolve into some form of associated state that transcend the Commonwealth, which is widely perceived as a colonial status, or to become independent—has dominated the Puerto Rican political dynamics even prior to the U.S. invasion of the territory in 1898. In the aftermath of Hurricane Maria’s devastation of the island, local and stateside politicians have renewed their call for the territorial incorporation of Puerto Rico. According to Venator-Santiago (2018), these politicians “view Puerto Rico’s territorial incorporation as a pathway to both statehood and parity funding.” Drawing on an analysis of the Congressional Research Index for all legislative sessions between 1898 and 2018, Venator-Santiago examines core legislative debates from the invasion to the present. He concludes:

For more than a century, the United States has relied on this racist constitutional interpretation to legitimate the separate and unequal rule of Puerto Rico. Although upwards of 134 status bills for Puerto Rico were

introduced, and in some cases debated, in Congress, only eleven provide for the creation of a territorial government or the incorporation of Puerto Rico. All but one of these bills were introduced prior to the enactment of the Puerto Rican Constitution of 1952. For more than a century, Congress has refused to enact territorial legislation that expressly incorporates Puerto Rico and repudiates the racist doctrine of territorial incorporation. (2018, 313)

Given the context—a broken economic system and a lack of political consensus in Puerto Rico about status options—the odds that a divided Congress will consider, let alone enact, legislation on Puerto Rico’s status question in the near future are remote, to say the least. However, changes in various of the underlying circumstances, such as the advent of a unified Congress after the 2020 presidential cycle, or an economic uptick induced by the injection of disaster recovery funding, may open a window for a congressional examination of the status question. And, as many of the authors in this special issue have suggested and in sharp contrast to past experiences, this time the diaspora is better equipped, with the experience of recent mobilizations for congressional action on debt restructuring and solidarity for disaster recovery, to affect the stateside political equation.

Conclusions: Implications of Research Findings for the Future of Puerto Rico Paradoxically, we have seen that perhaps the only silver lining in the aftermath of the devastation caused by Hurricane Maria is the injection of recovery funding assigned to Puerto Rico. This injection of capital, though not in ideal circumstances, may serve as the additional economic stimulus that many economists and other policy analysts have touted as necessary to turn the Puerto Rico economy around and induce sustained economic recovery. Yet, based on the Fiscal Plan approved by the Oversight Board, the injection of capital is projected to have only a temporary economic impact.

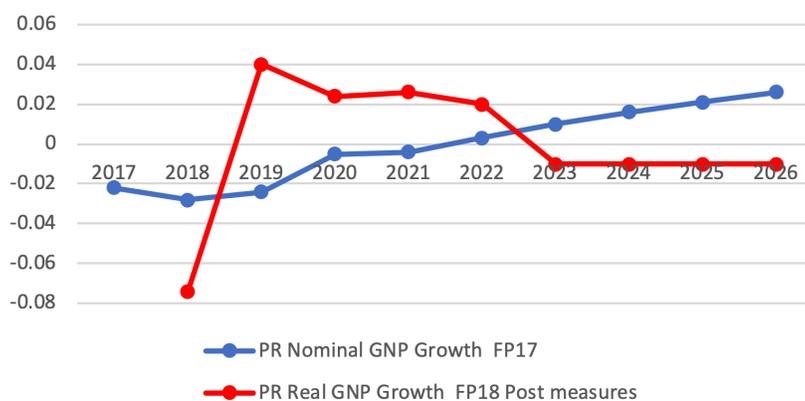
Graphic 5 provides a snapshot of the economic future of Puerto Rico, it illustrates GNP projections from the FY2017 and FY2018 Fiscal Plans. The FY2017 figures were projections made prior to the injection of recovery funding and the FY2018 were made considering the injection of recovery funding. As pointed out by Gluzmann, Guzman, and Stiglitz (2018), the FY2017 GNP projections are based on overly optimistic (and actually faulty) assumptions. Based on those projections, GNP will continue to be negative until 2020 and then uptick into a positive trajectory thereafter. Yet, the post-Hurricane Maria FY2018 Fiscal Plan projects that the injection of recovery funding will have an immediate impact uplifting Puerto Rico’s economy but revert to negative GNP growth rates by FY2023. In other words, official projections suggest that even with the injection of recovery funding Puerto Rico will continue to be stagnant through the near future. In this context, the prospects for ending the

Oversight Board authority over the Commonwealth’s finances granted by PROMESA in the next decade are uncertain.

Economic projections are not destiny. Several factors—in the hands of Congress, local authorities overseeing economic recovery, and the Puerto Rican people through their political engagement and reconstruction efforts—could affect this grim picture of the island’s future. Future scenarios may include several of the following elements:

- PROMESA and the Fiscal Oversight and Management Board’s policies of balanced budgets and fiscal austerity are insufficient and not likely mechanisms for overcoming the economic crisis. It is also questionable whether the federal court debt restructuring will reduce debt services to a sustainable level and provide a pathway to fiscal stability and restoring access to credit markets under

Graphic 5: Fiscal Plan 2017 and 2018 GNP Growth



Source: Commonwealth of Puerto Rico, Fiscal Plan to the Financial Oversight and Management Board for Puerto Rico, October 14, 2016 and March 13, 2017.

favorable conditions as a precondition for and of solving the underlying problems of job creation and economic development. Even the economic projections after the injection of recovery funding after Hurricane Maria indicate a stagnant economy in the next decade. Thus, there is a strong rationale for substantive investment of federal resources and of congressional policies that incentivize private capital investment in Puerto Rico. Congressional action on Puerto Rico's economy could support the fiscal and structural economic reforms proposed by the Oversight Board, stabilize the economy and facilitate a return to credit markets, and slowdown the population exodus. Such potential policies include the long-term or permanent renewal of Medicaid, and extending EITC and the full CTC to residents of Puerto Rico, among others.

- Civic engagement in reconstruction efforts could set up the foundation for a new economic foundation in key industries such as energy, manufacturing, housing and other infrastructure, agriculture, tourism, and restructuring critical services such as education, health and security. The advent of federal recovery funding could lay a foundation for the growth of a social entrepreneurial sector that combines the strength of the nonprofit and private sector to rebuild the economy from the ground up and in a sustainable and inclusive fashion. In addition, the extension of the Opportunity Zone and other federal programs that can be combined with CDBG-DR and other recovery funding offer a unique window for social purpose economic development. The greatest immediate challenge is to build local capacity and the alliances with stateside social purpose financial intermediaries to be able to engage a significant group of social purpose local developers in the economic recovery process and to build a long-lasting and capable civic infrastructure for social purpose enterprise development.

- The realignment of the political forces in Puerto Rico around the implementation of a common long-term recovery agenda led by the growing independent and dissatisfied electorate. This is not to suggest that the existing dominant political parties that revolve around the status question should or would disappear but rather to suggest that the ascend of the independent sector could steer the political debate to focus on issues of effective polices and government, setting the foundations for a shared vision for recovery and the economic future of Puerto Rico, and support heightened transparency and inclusiveness.

- A renewed diaspora engagement movement in solidarity with Puerto Rico and in partnership with the civic sector could be a game changer. The diaspora solidarity movement so far has largely avoided getting entangled with the thorny issue of the political status of Puerto Rico and so far has focused on the solutions to the debt restructuring and economic crisis, and the mitigation of the devastation of Hurricanes Irma and Maria and the humanitarian crisis. This minimalist common agenda has served to engage a broad stateside Puerto Rican coalition and even to spur a renewed effort to better organize the diaspora. The long-term importance of these efforts is enormous to both Puerto Rico and stateside Puerto Rican communities.

As a Puerto Rican common expression says, “*El futuro está en tus manos.*”⁴

NOTES

¹ In debt restructuring agreements, a haircut is a percentage reduction of the amount that will be repaid to creditors.

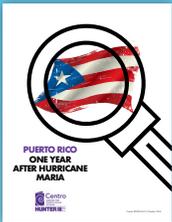
² The multiplier effect refers to the increase in final income arising from any new injection of spending. The size of the multiplier depends upon household's marginal decisions to spend, called the marginal propensity to consume (mpc), or to save, called the marginal propensity to save (mps).

³ Former Sen. Judd Gregg (R-N.H.) previously served as chairman and ranking member of the Senate Budget Committee. He is also the former governor of New Hampshire. He has been an advisor to the COFINA Senior Bondholders Ad Hoc Group.

⁴ From Latin *Mihi cura future* (“The care of the future is mine”).

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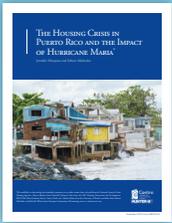
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Puerto Rico One Year After Hurricane Maria

September 20, 2018 marked a year since hurricane Maria wrought havoc on the Island of Puerto Rico. Though the media has reported the crisis in a myriad of ways—for better or worse—our intention here is to provide a timeline of the major occurrences in the aftermath, a meta-analysis of the media’s coverage of the disaster, and an updated account of the exodus of people.

<https://centropr.hunter.cuny.edu/research/data-center/research-briefs/puerto-rico-one-year-after-hurricane-maria>



The Housing Crisis in Puerto Rico and the Impact of Hurricane Maria

By all counts, Puerto Rico’s housing market is in a deep and prolonged crisis. At least 18 percent of Puerto Rico’s housing stock is vacant as a result of the island’s prolonged economic recession. This report examines the housing crisis which commenced in 2006, and how the spike in foreclosures after Hurricane Maria suggests that vacant units are increasing at an accelerated rate.

<https://centropr.hunter.cuny.edu/research/data-center/research-briefs/housing-crisis-puerto-rico-and-impact-hurricane-maria>



Puerto Rico in Crisis Timeline

Since 2006 Puerto Rico has been facing an unprecedented economic and fiscal crisis that shows little signs of ending or abating in the foreseeable future. In this timeline, we summarize the most important milestones and turning points since 1898, and the impacts that United States and local policies have had on Puerto Rico’s Economy.

<https://centropr.hunter.cuny.edu/education/puerto-rico-crisis-timeline>



Rebuild Puerto Rico: A Guide to Federal Policy and Advocacy

The impact of Hurricane Maria will be felt for decades, and long-term recovery and rebuilding efforts in Puerto Rico are expected to take years. This report provides an overview of federal disaster relief policy, dissects the recovery process and the role of federal assistance, and discusses possible entry points for advocacy efforts.

<https://centropr.hunter.cuny.edu/events-news/rebuild-puerto-rico/policy/rebuild-puerto-rico-guide-federal-policy-and-advocacy>



Celebrating 45 Years of Achievements

The Center for Puerto Rican Studies (Centro) has grown considerably over the past forty-five years, fine-tuning our research, archives, pedagogy, and programming so as to evolve with the times. This guide provides an overview of the history and achievements of Centro since its founding in 1973, and a summary of the programs and educational tools available to the public.

<https://centropr.hunter.cuny.edu/centrovoices/current-affairs/celebrating-45-years-guide-centro>

The Center for Puerto Rican Studies (Centro) is the nation’s leading university-based institution devoted to the interdisciplinary study of the Puerto Rican experience in the United States. Centro is dedicated to understanding, preserving and sharing the Puerto Rican experience in the United States. Centro invites Centro Voices contributors to make use of the extensive archival, bibliographic and research material preserved in its Library and Archives.

The Centro Library and Archives is devoted to collecting, preserving and providing access to resources documenting the history and culture of Puerto Ricans. The Centro Library and Archives was established in 1973 as a component of the Center for Puerto Rican Studies. The collections include books, current and historic newspapers and periodicals, audio, film & video, manuscripts, photographs, art prints, and recorded music. The Library and Archives provides services and programs to the scholarly community as well as the general public. Constituents are diverse and come from the United States and abroad. The Library and Archives facilitates access to information on its holdings through the City University’s online public catalog or CUNY+. It also provides research and information assistance via phone and email.

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