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Contemporary Socioeconomic and Political Determinants of Puerto Rican Emigration to the United States

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“The abrupt loss of population in Puerto Rico recently, mostly due to emigration, puts us at a crossroads with respect to our viability as a people”

Professor Judith Rodríguez-Figueroa
Demographer
University of Puerto Rico

Introduction

Over the past two decades Puerto Rico has been facing one of the most significant emigration experiences of its contemporary history. Demographers had previously found that at the beginning of the industrialisation programme promoted by the government (by the end of the 1940s and the entire decade of the 1950s), the country expelled nearly one third of its population, in what was then described as the most dramatic emigration phenomenon within the Caribbean region until that period. Indeed, several states of the eastern coast of the United States—namely New York, New Jersey, Pennsylvania, and Connecticut, among others—received hundreds of thousands of Puerto Rican families and individuals, looking for jobs and, presumably, for better living standards. At the turn of the twentieth century, it seemed that such a massive population lost could never be surpassed.

Nevertheless, several socioeconomic and political factors explain why during the first two decades of the twenty-first century emigration figures have exceeded those of the mid twentieth century. This research paper is aimed at analysing the underlying aspects of emigration in the recent Puerto Rican scenario. Several scholars have produced revealing research focused on the history and characteristics of Puerto Rican emigration throughout the past and the present century. Much of that research points out the colonial nature of the political relationship between Puerto Rico and the United States as a fundamental factor behind such a massive emigration experience.

The departure of hundreds of thousands of Puerto Rican families and individuals had its genesis at the beginning of the twentieth century, followed by the immense flow of emigrants to the United States during the subsequent decades, in different waves of emigration. The following stages stand out:

1. Emigrations of sugarcane workers and their families to Hawaii, Cuba and the Dominican Republic during the first three decades of the twentieth century. Simultaneously, departure of thousands

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of families and individuals to the United States. Since 1917 they emigrated as citizens of that nation.²

2. The great wave of emigration of the 1950s until mid-1960s, followed by the beginning of a process of return migration from the second half of the 1960s.
3. Emigration of mostly professionals and technicians during the last three decades of the 20th century.³
4. The migratory processes (both emigration and immigration) that have taken place during the first two decades of the 21st century and at the beginning of the third decade as well.⁴

There is an intrinsic relationship between the stages described and the political situation of Puerto Rico since the U.S. invasion of July 1898⁵ Thus, emigration of Puerto Ricans to the U.S. must be analysed from the perspective of political economy. In that sense, some relevant questions should be answered: To what extent the failure of the so-called "Puerto Rican development model" has been the main factor in the perpetuation of structural poverty, a socioeconomic factor that has promoted emigration? To what extent the development strategy followed over the past 80 years has sustained a pattern of accumulation that makes it unacceptable as a central component of a political project for the lower and middle-income classes, the main characters of that emigration experience? How persistent inequality in the distribution of income has been related to the emigration dynamics?

Although the development strategy that began at the end of the 1940s led to better socioeconomic conditions, the price paid for this achievement has been high. The most adverse consequences of the political-economic settlement that has prevailed in Puerto Rico can be summarized as follows:

1. Deterioration of the material living conditions of large sectors of the population. According to the 2015 Puerto Rico Community Survey, almost 47% of the country's residents lived below the poverty line.⁶
2. The impossibility of articulating and implementing a development strategy that would favour the interests of low and middle-income families, as well as of local capital owners and community-based economic activities.
3. Lack of a collective scheme that would result in a Puerto Rican society in which solidarity, respect and tolerance would prevail, as well as objectives

such as economic, social and political development.

4. Perhaps the most striking manifestation of the collapse of Puerto Rico's economic and political model – certainly the one most discussed recently – is the fiscal crisis that the country's central government is going through, and which has become more evident since the beginning of the third decade of the millennium. This is not a cyclical or temporary crisis, but a phenomenon of a structural nature.
5. As usually repeated by Governor Muñoz-Marin during the 1940s and 1950s, emigration was (indeed, has been) the "escape valve" always at hand to the people of Puerto Rico.⁷

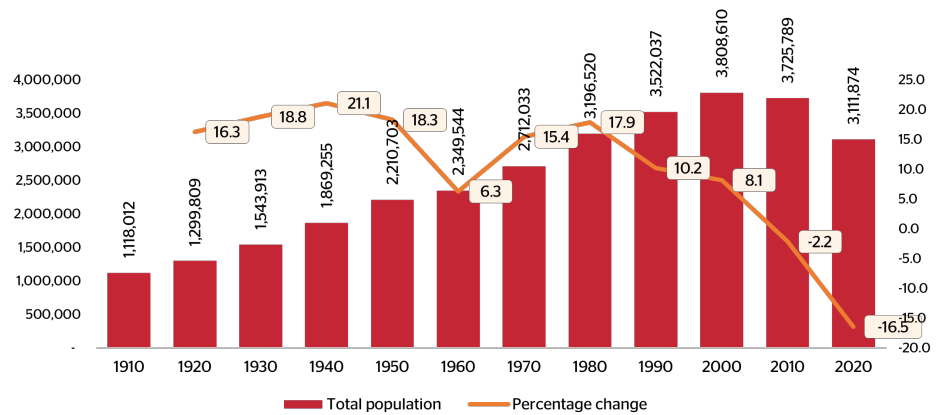
As a consequence of the emigration waves of the twentieth century and those of the first twenty-three years of the present century, Professor Jorge Duany has concluded that "no other Caribbean country – and possibly in the world – has such a large proportion of its population residing abroad".⁸ He adds that "... the

magnitude and persistence of the Puerto Rican diaspora have few contemporary parallels and historical precedents, except for Ireland during the second half of the nineteenth century... Puerto Rico has become a transnational nation, that is, a community divided between two territories, two languages and two cultures, beyond the physical and symbolic limits of political sovereignty".⁹

Demographic Evolution of Puerto Rico: Recent Trends of Key Variables

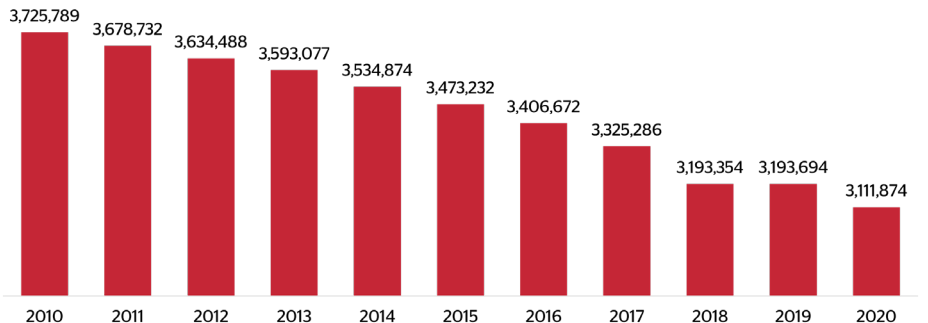
A glance at the demographic evolution of Puerto Rico is helpful in the task of defining the connection between the economic depression experienced over most of the first two decades of the twenty-first century, the government's bankruptcy, and the latest emigration waves to the United States. Graph 1 shows the historical tendency of Puerto Rico's total population for the period 1910 to 2020¹⁰. A sustained increase in total inhabitants across the whole twentieth century is evidenced from the figures plotted. However, after 1940 the rate of population

GRAPH 1:
TOTAL POPULATION AND PERCENT OF CHANGE PUERTO RICO: 1910-2020



Sources: Data from <https://jp.pr.gov/wp-content/uploads/2021/09/Informe-Economico-al-Gobernador-2020-8.16.21.pdf>, pp. 81-116. Also, data from <https://jp.pr.gov/wp-content/uploads/2021/09/Plan-de-Reto-Demografico.pdf>.

GRAPH 2:
TOTAL POPULATION OF PUERTO RICO: 1910-2020



Sources: Data from <https://jp.pr.gov/wp-content/uploads/2021/09/Informe-Economico-al-Gobernador-2020-8.16.21.pdf>, pp. 81-116. Also, data from <https://jp.pr.gov/wp-content/uploads/2021/09/Plan-de-Reto-Demografico.pdf>. Also, data from <https://censo.estadisticas.pr/EncuestaComunidad>

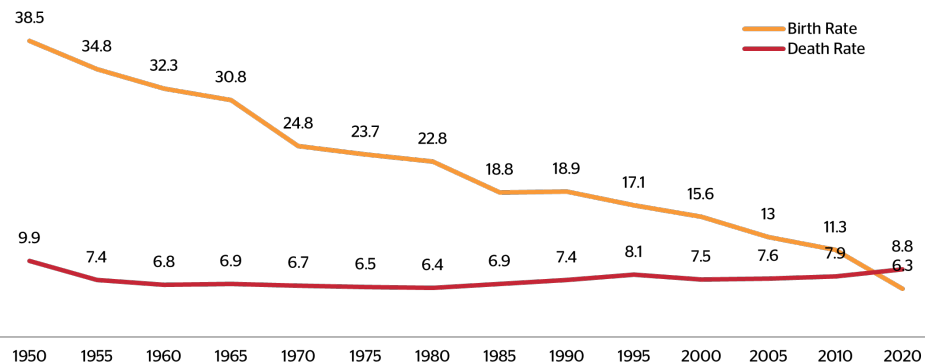
growth decreased until 1960, increased again until 1980, and has consistently decreased to negative rates from 2010 to the present. This last propensity has been more drastic during the past few years. As shown in Graph 2, between 2010 and 2020 the net population loss was 613,915 inhabitants or a 16.5% reduction. If we add this figure to the drop of 82,821 people registered during the 2000-2010 period, total population decline accounted for 696,736 over the first twenty years of the twenty-first century; that is an 18.3% reduction.

A close look at the birth and death rates registered during the second half of the twentieth century (Graph 3) reveals a constant decline in births, which is a direct consequence of a decrease in fertility, as well as a stabilisation –and most recently, rise– in the number of deaths. Between 1950 and 1960 the birth rate fell from 38.5 to 32.3 per 1,000 inhabitants¹¹. As shown in Graph 4, that falling trend continued steadily until 1985 (with a meager increase of 0.1 in 1990), reaching barely 5.7 births per 1,000 inhabitants in 2021.

Graph 5 reveals that the number of births in 2021 was nearly 19,000, as compared to over 42,000 in 2010; that is a 54.8% decline in just eleven years. The historical record shows that in 1950 there were 21,917 deaths (a 9.9 death rate), as compared to nearly 33,000 deaths in 2021 (a 10.0 rate). The sudden rise in the number of deceases in 2021 is closely related to the death toll claimed by the Covid-19 pandemic. Thus, the natural increase of Puerto Rico’s population –the difference between birth and death rates–revealed positive numbers up to 2016; from that year onwards, it has been negative. As shown in Graph 4, by the end of 2021 the natural population decrease was 4.3 per 1,000 inhabitants, or 14,000 fewer people due to the larger number of deaths as compared to the lower number of births in that year (see Graph 5).

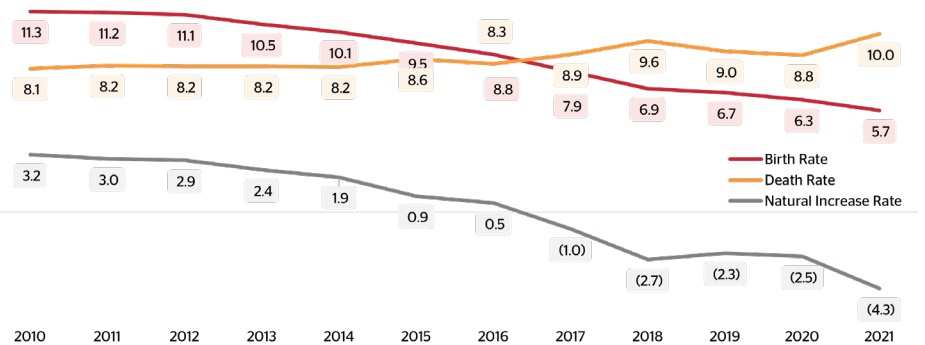
Graph 6 summarizes the net population change for each year plotted in Graph 2, that is, for the second decade of the present century. The negative slope of the trend line confirms that, apart from a meager increase of 340 inhabitants in 2019, Puerto Rico has been losing population at a remarkable rate. Note that the most drastic reduction was registered in 2018 (131,932), a direct consequence of the impact of Hurricane María, a storm that destroyed a vast proportion of the country’s infrastructure, including thousands of homes, a large proportion of the electric system, almost 100% of agricultural crops, and a substantial portion of the production capacity of the private sector. As already mentioned, because of such unprecedented trend Puerto Rico’s total population declined, due mainly to emigration, by 613,915 people, between the two censuses period (2010 and 2020).¹²

GRAPH 3:
BIRTH AND DEATH RATES: PUERTO RICO 1950-2020 (SELECTED YEARS, PER 1,000 INHABITANTS)



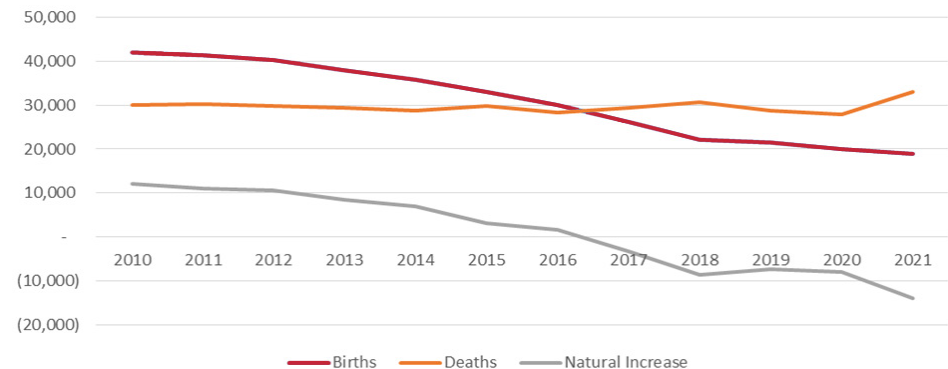
Sources: Data from <https://jppr.gov/wp-content/uploads/2021/09/Informe-Economico-al-Gobernador-2020-81621.pdf>, pp. 81-116. Also, data from <https://jppr.gov/wp-content/uploads/2021/09/Plan-de-Reto-Demografico.pdf>.

GRAPH 4:
BIRTH RATE, DEATH RATE AND NATURAL INCREASE RATE: PUERTO RICO 2010-2021 (PER 1,000 INHABITANTS)



Sources: Data from <https://jppr.gov/wp-content/uploads/2021/09/Informe-Economico-al-Gobernador-2020-81621.pdf>, pp. 81-116. Also, data from <https://jppr.gov/wp-content/uploads/2021/09/Plan-de-Reto-Demografico.pdf>. Also, data from <https://censo.estadisticas.pr/EncuestaComunidad>

GRAPH 5:
BIRTH RATE, DEATH RATE AND NATURAL POPULATION INCREASE/DECREASE: PUERTO RICO 2010-2021



Sources: Data from <https://jppr.gov/wp-content/uploads/2021/09/Informe-Economico-al-Gobernador-2020-81621.pdf>, pp. 81-116. Also, data from <https://jppr.gov/wp-content/uploads/2021/09/Plan-de-Reto-Demografico.pdf>. Also, data from <https://censo.estadisticas.pr/EncuestaComunidad>

Graph 7 illustrates how the Puerto Rican population is aging at a rapid speed, a demographic feature also common in most industrialised countries, but also present in middle-income economies. By mid-twentieth century, with a very high fertility and birth rates, a large proportion of the population was young, so median age was 18.4. That figure did not change in 1960, but from then onwards, it started to boost consistently, arriving at 41.7 years in 2019.

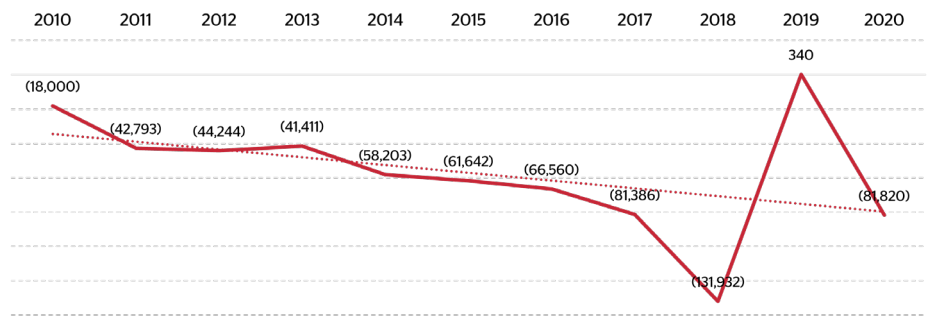
Graph 8 plots net migration data for the second half of the XX century. The balance was negative for most of the period. Except for 1964, the rest of the years in the 1950's and 1960's registered higher emigration than immigration. During the 1970's, only 1972 and 1976 registered net immigration, as well as 1994 and 1997 during the decade of the 1990's. Nevertheless, total population of Puerto Rico increased during the five-decade period quoted.

As already explained, the U.S. Census Bureau updates migration data, on a yearly basis, through the Puerto Rico Community Survey¹³. The most recent publication shows that the number of migrants from Puerto Rico to the U.S. increased steadily over the 2011-2018 period. It was 133,451 people in 2018, 57,233 more than in 2011¹⁴. Between 2018 and 2019 the number of emigrants was 66,021, which constituted a decrease of 50.5 percent¹⁵. On the other hand, the number of registered migrants arriving from the U.S. to Puerto Rico during the period 2011-2019 also increased: there were 19,771 immigrants in 2014, raising to 31,144 in 2019. The net migration figures over this period are plotted in Graph 9. The trend line, as well as the data line, shows a negative tendency up to 2018, with a positive balance in 2019. Graph 10 plots the migration rate for the same period. The 2019 figure does not necessarily mean a shift in the negative net migration rate recorded in previous years.

In 2018, the percentage of immigrants to Puerto Rico at ages 20 to 59 was estimated at 62.0, while people over 60 were 17.8 percent. On the other hand, emigrants to the United States in the 20 to 59-year-old group were estimated at 55.6 percent, and those over 60 were 15.4 percent¹⁶. Regarding young emigrants, according to the Community Survey, 52% of those who emigrated during the past decade were professionals, technicians, and young people with some university education. This finding contrasts with the conclusions of previous studies, which did not find that those who emigrated were more educated than the average residents of Puerto Rico.¹⁷

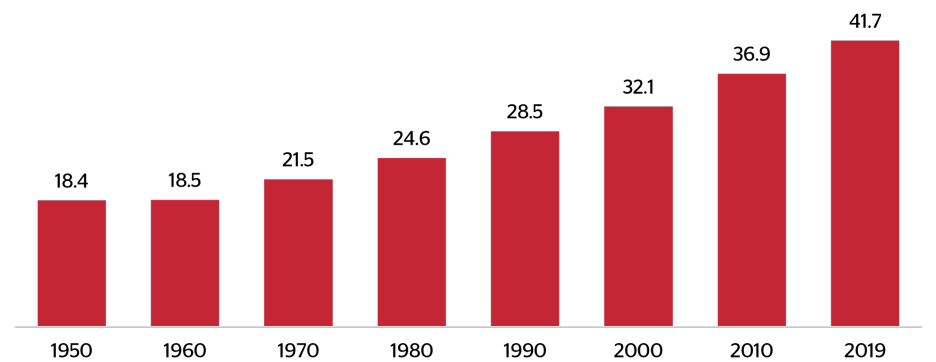
Of the total emigrants from Puerto Rico to the U.S. in 2019 (66,021 people), 14,657 people, just over one-fifth of emigrants (22.2 percent) settled

GRAPH 6:
NET POPULATION CHANGE IN PUERTORICO: 2010-2020



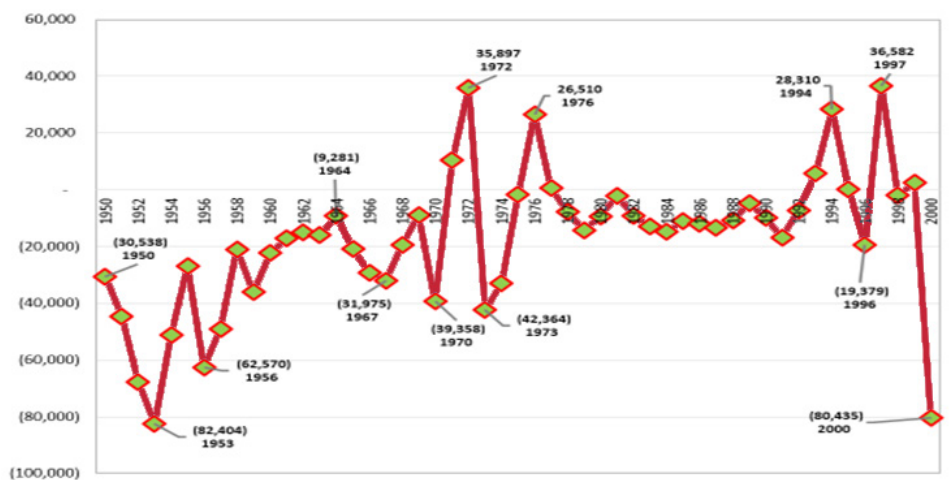
Sources: Data from <https://jp.pr.gov/wp-content/uploads/2021/09/Informe-Economico-al-Gobernador-2020-8:16.21.pdf>, pp. 81-116. Also, data from <https://jp.pr.gov/wp-content/uploads/2021/09/Plan-de-Reto-Demografico.pdf>. Also, data from <https://censo.estadisticas.pr/EncuestaComunidad>

GRAPH 7:
MEDIAN AGE OF PUERTO RICAN POPULATION: 1950-2019 (SELECTED YEARS)



Sources: Data from <https://jp.pr.gov/wp-content/uploads/2021/09/Informe-Economico-al-Gobernador-2020-8:16.21.pdf>, pp. 81-116. Also, data from <https://jp.pr.gov/wp-content/uploads/2021/09/Plan-de-Reto-Demografico.pdf>.

GRAPH 8:
PUERTO RICO: NET MIGRATION DURING THE SECOND HALF OF THE XX CENTURY



Source: Puerto Rico Community Survey, December 2019. Population Estimates, Federal Census Bureau.

in the state of Florida, the highest number of immigrants from Puerto Rico per state. Texas was the second state with the highest number of immigrants from Puerto Rico, with 9,352 people, which represented 14.2 percent of immigrants from Puerto Rico.¹⁸ In other words, New York is no longer the favourite destination of Puerto Ricans, according to Census data.¹⁹ In fact, this state went on to occupy the eleventh place among the destinations of Puerto Rican migrants.²⁰ In the case of Florida, the Census Community Survey estimated the total number of Puerto Ricans at 1.19 million.²¹

Graph 11 confirms that in 2010 there were more Puerto Ricans (up to third generation) residing in the U.S. than in the 78 municipalities of the country. In 2018, almost 5.8 million Puerto Ricans were residents in the U.S. mainland, while nearly 3.2 million were residing in Puerto Rico. In other words, by the end of the second decade of the present century, almost two thirds (64.4%) of people from a boricua²² origin were residents of the U.S.

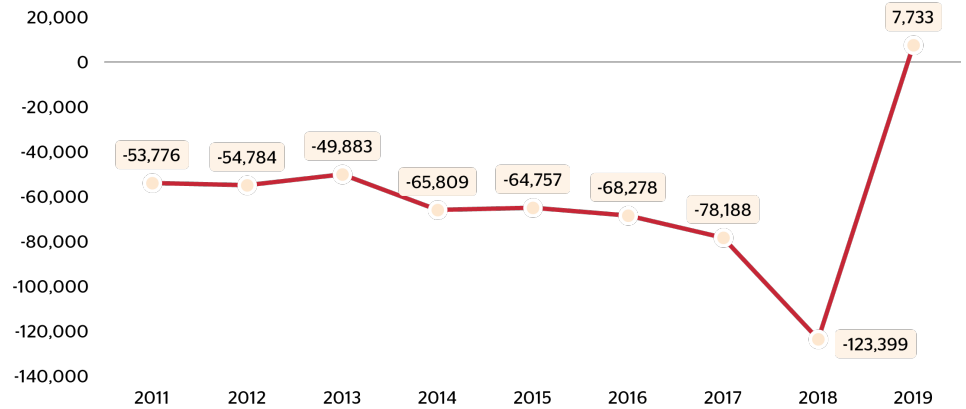
Salary Gap Between the United States and Puerto Rico: a Key Variable in the Analysis of Emigration

The so-called “Puerto Rican model of development” has been based on an unequal relationship with the U.S. From 1940’s onwards, the economic strategy was grounded on an industrialization by invitation approach, which implied the arrival of huge amounts of capital investment from U.S. manufacturing firms.²³ In 1952, with the inauguration of the Commonwealth of Puerto Rico status, the political arrangement allowed a pattern of wealth and income distribution that warranted social and economic stability for the benefit of the U.S. interests.²⁴ Tax exemption, low salaries and “common market” within the U.S. were among the features of the “model”.

A comparison of average salaries in manufacturing in Puerto Rico vis-a-vis the U.S. reveals that, by the beginning of the twentieth-first century, the gap between the two countries continued narrowing, a trend initiated during the second half of the twentieth century. Graph 12 plots the average wage in manufacturing in both nations for selected years during the 1949-2007 period. It also shows the ratio U.S./ Puerto Rico (Ratio US/PR).

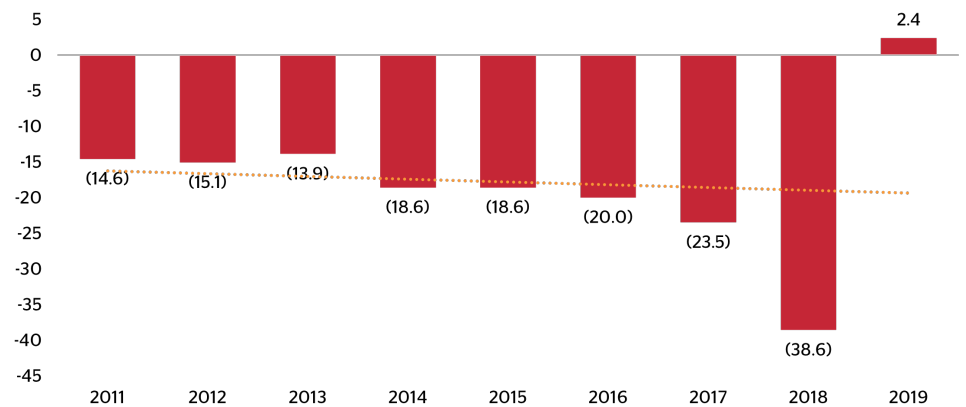
In 1949 manufacturing’s average salary in Puerto Rico was \$0.37, while in the U.S. it was \$1.38, that is, 3.73 times higher. The difference narrowed over time: in 1967 it was only double. In 1998 the U.S. economy paid an average

GRAPH 9:
PUERTO RICO: NET MIGRATION IN PUERTO RICO: 2011-2019



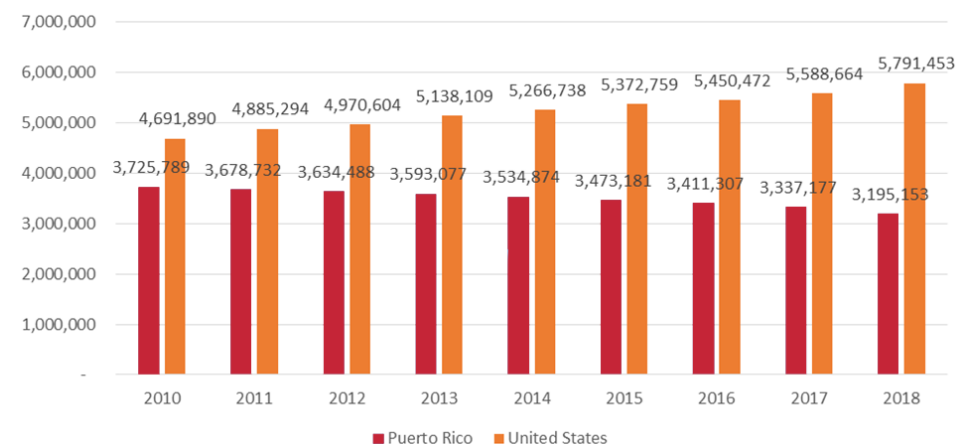
Sources: Data from <https://jppr.gov/wp-content/uploads/2021/09/Informe-Economico-al-Gobernador-2020-81621.pdf>, pp. 81-116. Also, data from <https://jppr.gov/wp-content/uploads/2021/09/Plan-de-Reto-Demografico.pdf>. Also, data from <https://censo.estadisticas.pr/EncuestaComunidad>

GRAPH 10:
PUERTO RICO: NET MIGRATION IN PUERTO RICO: 2011-2019



Sources: Data from <https://jppr.gov/wp-content/uploads/2021/09/Informe-Economico-al-Gobernador-2020-81621.pdf>, pp. 81-116. Also, data from <https://jppr.gov/wp-content/uploads/2021/09/Plan-de-Reto-Demografico.pdf>. Also, data from <https://censo.estadisticas.pr/EncuestaComunidad>

GRAPH 11:
PUERTO RICANS RESIDING IN PUERTO RICO AND THE UNITED STATES: 2010-2018



Sources: Data from <https://jppr.gov/wp-content/uploads/2021/09/Informe-Economico-al-Gobernador-2020-81621.pdf>, pp. 81-116. Also, data from <https://jppr.gov/wp-content/uploads/2021/09/Plan-de-Reto-Demografico.pdf>. Also, data from <https://censo.estadisticas.pr/EncuestaComunidad>

Continued on page 6

wage of \$13.49 per hour to its manufacturing workforce, while in Puerto Rico the average wage reached \$8.35. In that year the gap had closed to 1.62 times. In 2007 the average wage in manufacturing in the U.S. was \$20.09, while in Puerto Rico it was \$11.87. This means that, compared to 1998, the gap widened a little, to 1.69 times.

Although the salary gap in the manufacturing sector has closed in relative terms, there is no doubt that during the 1950s and 1960s the absolute difference in wages was an attraction for Puerto Rican emigrants. This happened even though over the past seven decades manufacturing consistently generated around half of total income and production in the economy of Puerto Rico.²⁵

Graph 13 plots average annual salary rates for the U.S. and Puerto Rico in 1990, both for their respective economies and for selected industrial sectors. A significant difference is apparent for each of the categories. Graph 14 plots the same variables for year 2000. Note that the absolute distance in key sectors is kept and, in some cases, it amplifies.

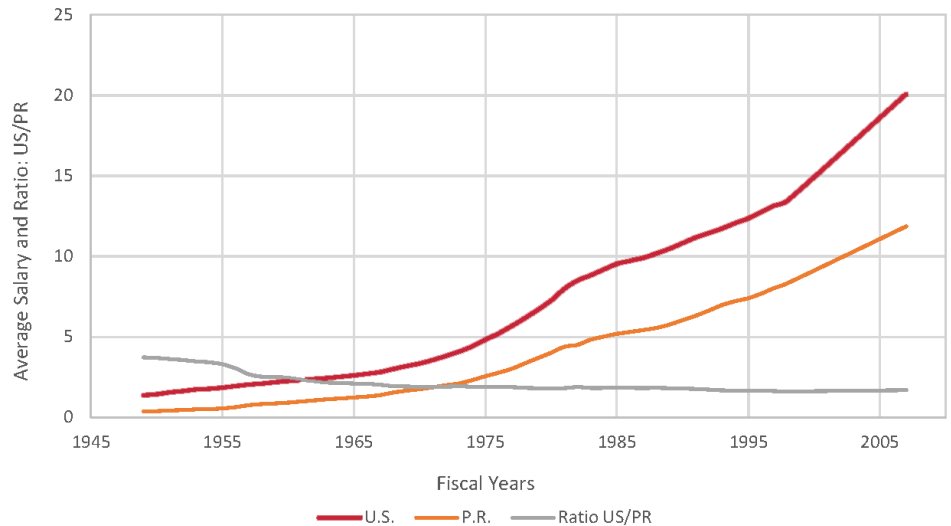
The absolute difference between the two countries enlarged in 2010, particularly in finance and professional services sectors (Graph 15). However, it is in 2022 (Graph 16) that the most significant increase is evident. For the entire economy, the median salary in the U.S. was \$71,448, while in Puerto Rico it was \$30,108. In the manufacturing sector the difference was almost double: \$81,120 in the U.S., vis-a-vis \$42,380 in Puerto Rico. The biggest difference was in the finance sector, where average salary in the U.S. was \$153,972, while in Puerto Rico it was \$44,096. Thus, the absolute distance between the two countries broadened during the past 12 years, a relevant finding for the purposes of this paper.

Graph 17 shows the relative increase in wages during the period 1990-2022, in both countries. While in the U.S. average wages increased by 202.6% during the thirty-two years period, in Puerto Rico the rise was 157.3%. The only sector in which Puerto Rico experienced a greater increase was in manufacturing (212.3% in Puerto Rico vis-a-vis 189.4% in the U.S.). Nevertheless, in the remaining industrial sectors the relative increase is much higher in the U.S., highlighting the surge of 440.3% in the finance sector, in comparison with a 171.8% rise in Puerto Rico.

Graph 18 summarises data plotted in previous graphs. It compares average annual salaries in Puerto Rico as percentage of average annual salaries in the U.S. for the whole economy and for selected industrial sectors during the 1990-2022 period. The most relevant finding is that, except for manufacturing, the lowest

GRAPH 12:

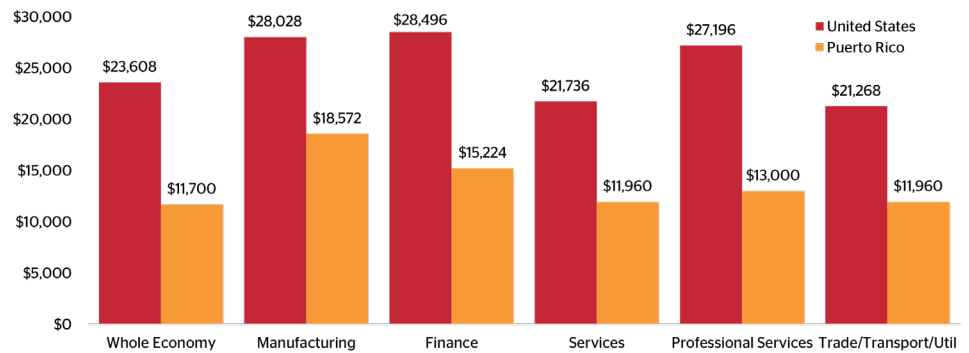
AVERAGE SALARY IN MANUFACTURING UNITED STATES AND PUERTO RICO, 1949 - 2007 (SALARY AT CURRENT PRICES IN THOUSANDS U.S. DOLLARS) (RATIO IN ABSOLUTE NUMBERS)



Source: Edwin Irizarry Mora, *Economía de Puerto Rico*, McGraw Hill, Mexico, 2011, p. 275.

GRAPH 13:

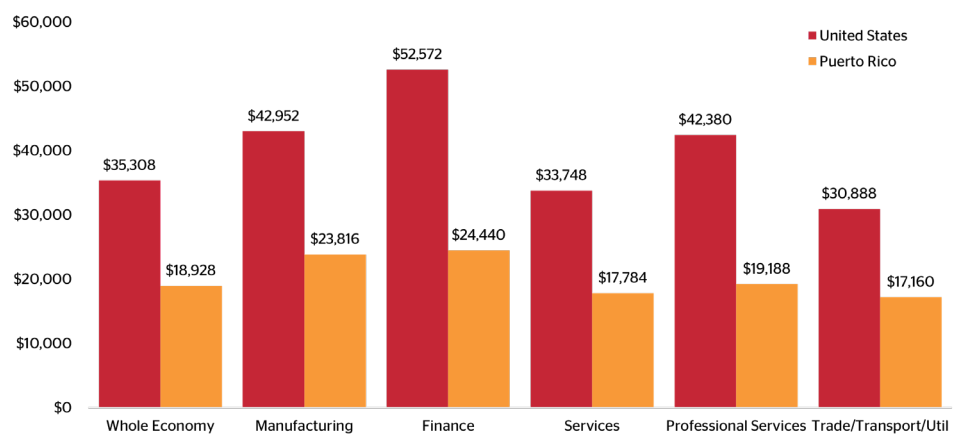
AVERAGE ANNUAL SALARIES: UNITED STATES AND PUERTO RICO, 1990



Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages, <https://www.bls.gov/cew/downloadable-data-files.htm>. Estimates by the author.

GRAPH 14:

AVERAGE ANNUAL SALARIES: UNITED STATES AND PUERTO RICO, 2000



Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages, <https://www.bls.gov/cew/downloadable-data-files.htm>. Estimates by the author.

proportion of salaries paid in Puerto Rico vis-à-vis salaries paid in the U.S. was registered in 2022. In other words, the biggest gap in salaries between the two countries is taking place currently, in contrast with previous periods. Note that, in the case of the financial sector, salaries in Puerto Rico are just a bit over one fourth of salaries paid in the U.S. For the whole economy, average salaries in Puerto Rico are 42.1% of those paid in the U.S. This single fact motivates more people to emigrate.

Graph 19 shows the same pattern revealed in the previous graph. The data plotted present how many times have salaries been larger in the U.S. than in Puerto Rico. Note that the upper line is year 2022, confirming that it is currently that, except for manufacturing, average salaries in the metropolis exceeds average salaries in the colonial territory more than in the previous 30 years.

Precisely, Graph 20 confirms that, during the past twelve years, registered wages in the U.S. has been increasing much more than in Puerto Rico. In other words, there has been a greater rise in average salaries for the entire economy of the U.S. (52.8%), than the meager growth in 13.1% in Puerto Rico (i. e., 4 times more). Even manufacturing, which was the industrial sector with the best outcome in the Puerto Rican economy during the period 1990-2022, registered a 21.1% increase over the past twelve years, while in the U.S. the rise was almost double (41%). Again, the most outstanding difference took place in the finance sector, with 108.1% in the U.S. versus 19.6% in Puerto Rico, that is, 5.5 times larger in the former than in the latter.

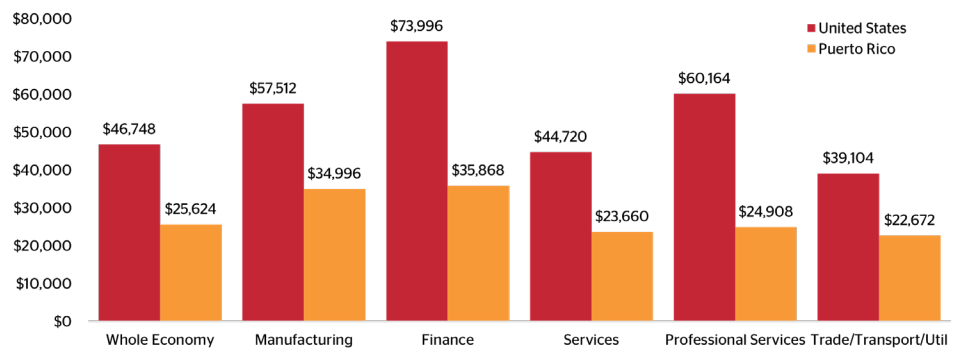
The Current Socioeconomic and Political Setting

The empirical record examined in the previous pages is quite persuasive. From a political economy perspective, numerous fundamental factors have been playing a crucial role in the emigration experience of Puerto Ricans. Our analysis of critical variables suggests that it has been the unequal political relationship—the colonial territory status of Puerto Rico—the main element behind the facts discussed in the first sections of this research. Indeed, any rigorous analysis of the country’s socioeconomic reality must consider this. The “last chapter” in the recent history of such and unequal political relationship started with the approval of the PROMESA Act.

In June 2016, U.S. President Barak Obama signed the PROMESA Act, which set the legal framework for a new fiscal regime aimed at managing Puerto Rico’s huge public debt.²⁶ In accordance with Title 111 of the PROMESA

GRAPH 15:

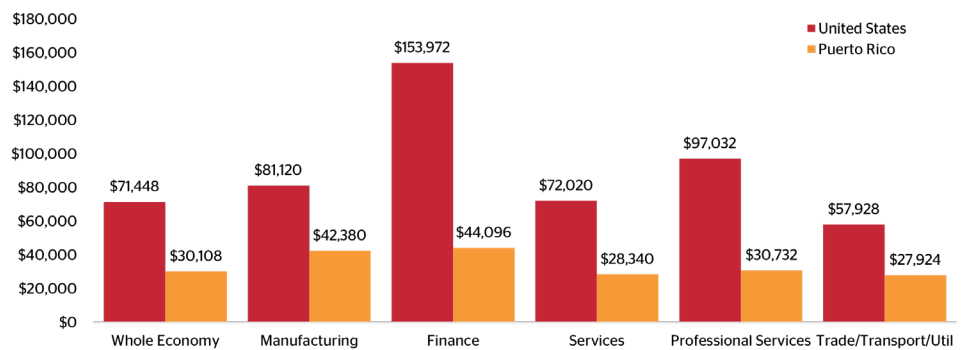
AVERAGE ANNUAL SALARIES: UNITED STATES AND PUERTO RICO, 2000



Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages, <https://www.bls.gov/cew/downloadable-data-files.htm>. Estimates by the author.

GRAPH 16:

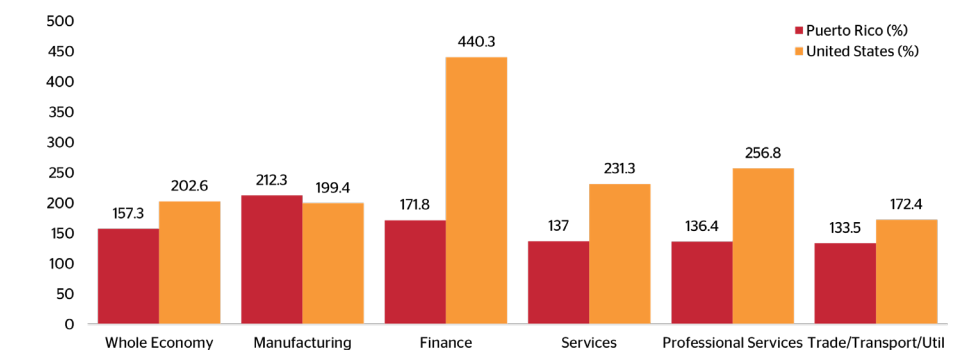
AVERAGE ANNUAL SALARIES: UNITED STATES AND PUERTO RICO, 2022



Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages, <https://www.bls.gov/cew/downloadable-data-files.htm>. Estimates by the author.

GRAPH 17:

RELATIVE INCREASE IN SALARIES: PUERTO RICO AND THE UNITED STATES 1920-2022 (%)



Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages, <https://www.bls.gov/cew/downloadable-data-files.htm>. Estimates by the author.

Act, in January 18, 2022, the Debt Adjustment Plan (PAD for its Spanish acronym) of the Government of Puerto Rico was confirmed, with a projected effective date of March 15, 2022. In total, the agreements included in the PAD reduce the public debt by approximately 50%. In other words, public debt would be reduced from approximately \$70 billion to \$34 billion. This represents the largest municipal debt restructuring in the history of the U.S.²⁷

In the opinion of former U.S. Treasury adviser Antonio Weiss, although PROMESA gave Puerto Rico a tool to renegotiate its debt, there is very little achieved in economic development²⁸. According to Weiss, when Puerto Rico was examined, it was clear that the island's debt levels were not comparable to any state or municipality in the U.S. Puerto Rico's financial situation was so terrible that the idea was to provide the island with a comprehensive mechanism to deal with its debt and with some oversight mechanism given the state of its public finances.²⁹

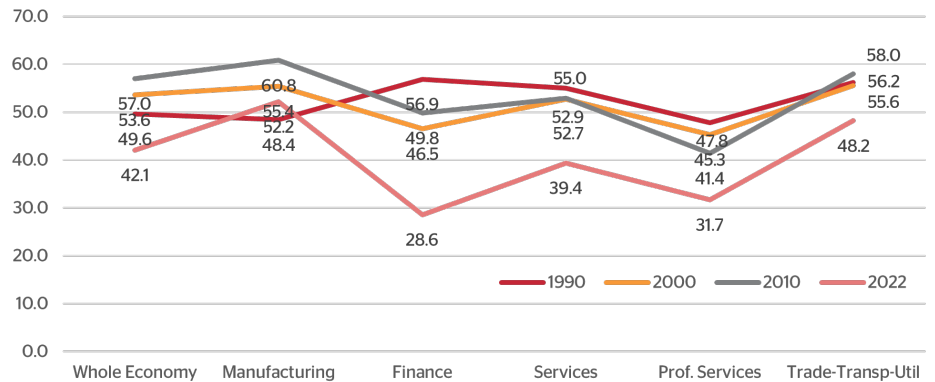
The Economic Depression of the 2006-2021 Period, Income Inequality, Poverty and Unemployment

Seventeen years after the beginning, in 2006, of the longest recession in Puerto Rican history, it seems obvious that such a macroeconomic instability pushed out of the country a huge amount of people. High unemployment rates and extremely low labour force participation have also contributed to explain why so many people have emigrated over the most recent period of Puerto Rico's contemporary history. Thus, besides the examination of recent data, our analysis takes into consideration the impact of the 2006-2021 economic depression and its consequences over income inequality, poverty and unemployment.

There is a consensus among economists and other social scientists on the fact that the deterioration of the Puerto Rican society has contributed most to the high rates of emigration experienced so far. Differences emerge when discussing whether emigration is primarily motivated by a lack of job opportunities or by differences in compensation received by workers in Puerto Rico and the U.S.³⁰ Professor José Alameda suggests that emigration is not due so much to jobs scarcity, but because of the precariousness of working conditions. Based on data from the Migrant Profile of the Institute of Statistics, that found that about 80% of those who emigrate have income, and a good part of it is presumed to be from salary sources, he stresses on the fact that about 60% of emigrants are in the labour force. "Empirical evidence supports the fact that emigration to

GRAPH 18:

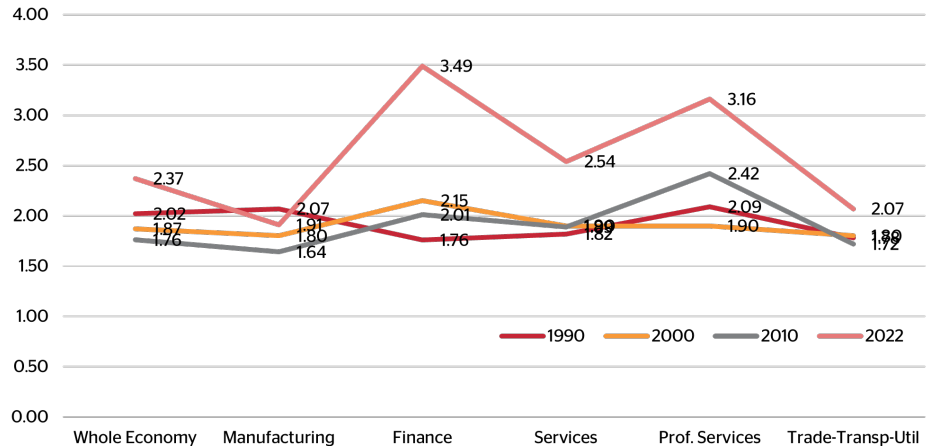
AVERAGE ANNUAL SALARIES IN PUERTO RICO AS PERCENTAGE OF AVERAGE ANNUAL SALARIES IN THE UNITED STATES, 1990 - 2022



Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages, <https://www.bls.gov/cew/downloadable-data-files.htm>. Estimates by the author.

GRAPH 19:

NUMBER OF TIMES SALARIES IN THE U.S. ARE LARGER THAN SALARIES IN PUERTO RICO, IN SELECTED INDUSTRIAL SECTORS, 1990 - 2022



Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages, <https://www.bls.gov/cew/downloadable-data-files.htm>. Estimates by the author.

GRAPH 20:

INCREASE IN AVERAGE SALARIES IN THE UNITED STATES AND PUERTO RICO, IN SELECTED INDUSTRIAL SECTORS 2010-2022 (%)



Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages, <https://www.bls.gov/cew/downloadable-data-files.htm>. Estimates by the author.

the U.S. is associated with wage differentials and not unemployment...however, many of the emigrants are on the lowest income scales.³¹ Alameda's conclusions coincide with the empirical findings presented in Section III of this paper.

According to the Planning Board, the percentage of Puerto Rico's net domestic income that goes to workers has been reduced from 38.1% in 2006 to 29.8% in 2020. In other words, the functional distribution of income has increasingly favoured more property owners than labour force. "Ten years ago, retail trade, one of the largest activities of the economy, distributed 65% of its net income among workers. In 2020, that percentage decreased to 56%."³² Despite the fact that in Puerto Rico the people who work receive a smaller and smaller slice of national net income, the collections of the Treasury Department reveal that citizens have always contributed more than companies. In 2018, individuals contributed 60% of government revenues versus 40% contributed by corporations and partnerships.³³

On the other hand, the differences in the cost of living are not so abysmal. The Consumer Price Index covering the period from January to March 2021 shows that the cost of living in the San Juan metropolitan area is just 0.2% lower than the average for the U.S.³⁴ Then, a Puerto Rican emigrant faces a similar price structure in any city of the U.S, but with a higher salary, a factor that boosts emigration.

Indeed, job elimination was a main consequence of the 2006-2021 economic depression. The Household Survey of the Department of Labor and Human Resources (DTRH for its Spanish acronym) reveals that in June 2007 the number of people employed was 1,263,000³⁵. Fourteen years later, in June 2021, total employment was 1,038,000, that is, 225,000 fewer job posts, a 17.8% reduction during the most recent period.³⁶ The obvious consequence has been the drastic increase in emigration documented in this paper.

Anthropologist Ismael García-Colón has pointed out that "emigration is the silent cry of our workforce that hooked the gloves with a country where it is almost not worth working. Among other socioeconomic factors, "people migrate because of the scarcity of well-paid jobs"³⁷. But also... "emigration is due to an increase in prices, the deterioration and reduction of public services, especially in schools and public health"³⁸.

Official data confirm that Puerto Rican wages have remained unchanged for more than a decade. The Puerto Rico Community Survey reflected a decrease in household income of 0.8% for the period 2017-2021, compared to

the period 2012-2016. Demographer Judith Rodríguez has pointed out that [the survey] reflects that "only 44.3% of the population aged 16 or older is economically active...and of that, only 37.7% are employed."³⁹

Concerning the prevalence of poverty, according to a 2015 study by the Puerto Rico Institute of Statistics, about 33.2% of the population in the country faces food insecurity. This has become a reality particularly in the disadvantaged sectors of our society. "Hurricane Maria... uncovered poverty... There is no doubt that the [COVID-19] pandemic has exacerbated social inequality and the need for food."⁴⁰

Recent data on inequality levels and the persistence of poverty in Puerto Rico are alarming. In 2018, 43% of families (1,377,111 people) lived below the poverty line. While 5% of households received 25% of the total income generated in the country, the two quintiles of households in the lowest income levels (the poorest 40%) received only 9% of income.⁴¹ In the context of the U.S., Puerto Rico has arrived at the first place, with the highest number of households with minors participating in the Nutritional Assistance Programme, with 44.7%.⁴²

Professor Yarimar Bonilla, Head of the Puerto Rican Studies Center (Centro) at the City University of New York (CUNY), recently concluded that "... in Puerto Rico, acute poverty rates have faced systemic disinvestment in public infrastructure due to austerity measures leading to school closures, defunding of the university system, and privatization of essential infrastructure such as roads, tolls, and energy distribution... Puerto Rico... has a poverty rate of 40.5%, the second highest for any federal jurisdiction after American Samoa".⁴³

The U.S. Census Bureau's 2019 Puerto Rico Community Survey⁴⁴ reveals significant inequality in household income between states and territories of that nation. The highest household income was registered in Maryland, with \$86,738, while the lowest was in Mississippi, with \$45,792. Household income in Puerto Rico was \$20,296, less than half of Mississippi⁴⁵. In addition, the poverty level in Puerto Rico in 2019 was well above the poorest state. The survey shows a 19.6% of the population of Mississippi living below the poverty line, while the proportion in Puerto Rico was almost 45%⁴⁶.

People under the age of 18 below the poverty level were estimated at 57.1 percent, while people over 65 were 39.3 percent. "Child poverty costs the state at least \$4.418 billion annually... [so] in three years child poverty costs about \$13,200 million"⁴⁷ Nevertheless, a recent study by the Youth Development Institute

(IDJ for its Spanish acronym) projected a 16 percentage point reduction in child poverty rates as a result of the impact of the Child Tax Credit received by hundreds of thousands of families in Puerto Rico for the 2021 tax year. The projected impact among children living in extreme poverty –estimated at 202,534– would be 21 percentage points: from 35% to 14%.⁴⁸ However, Professor José Alameda found that, "clearly, the reduction [in poverty] is the result of temporary events ([federal] checks, food coupons, etc.) and other structural events, such as the reduction in family size. Therefore, this reduction is not created by an improvement in the economy but by particular events [of] temporary nature".⁴⁹

On the link between emigration and poverty, the latest data from the Migrant Profile 2018-2019, show that in 2017 the median income of Puerto Rican emigrants fell by 10.5% compared to the previous year.⁵⁰ In that year, the poverty rate among Puerto Ricans living in all 50 states was the highest among the Latino population⁵¹: Twenty-three percent of Puerto Ricans lived below the poverty level while, for the rest of the 'Hispanic' population, the proportion was 19%.⁵² These data strongly suggest that Puerto Rican emigration to the U.S. has not improved the living conditions of families leaving the country.

The most recent estimate of the Gini coefficient in Puerto Rico (0.55) shows a higher figure than in the U.S., which is 0.48.⁵³ According to World Bank data, in 2016 South Africa was the country with the highest inequality, with 0.63. The 2016 Puerto Rico Human Development Report found that the country was third in the world with the highest economic inequality. Only South Africa and Zambia registered greater levels of inequality.⁵⁴

In summary, far from evidencing a decrease in poverty levels and inequality, recent reports reveal an increase in the proportion of Puerto Rico's population whose socioeconomic circumstances show the prevalence, and even growth, of these two conditions. Both, among a large portion of the country's resident families, and a substantial proportion of those who have emigrated, there is no evidence of overcoming low-income levels or material living conditions that exceed the official poverty line.

Indeed, Puerto Rico is a poor country in which, to a large extent, emigration rises as consequence of its colonial relationship with the U.S. The extreme dependence on the US economy and the impossibility of developing endogenous capacities prevent the foundations of self-sustained economic development from being created. This situation has been even undermining the very self-esteem of Puerto Ricans, producing a collective insolvency mentality much more harmful than the

material one: the powerlessness to overcome the socioeconomic scenario described in this paper, and the spiritual freedom to feel able to struggle for oneself benefit.⁵⁵

Impact of Hurricanes, Earthquakes, and The Covid-19 Pandemia

To what extent the impact of hurricanes of September 2017 have determined the most recent emigration flow? As already discussed, before the storms, there had been a long pattern of emigration. However, the socioeconomic circumstances fostered by the hurricanes provoked a massive outflow of people. Official figures are awesome. Puerto Rico's population shrank 4.3% in 2018, the largest decline in the island's modern history, attributed to the massive emigration reported that year, the highest since 2006. It was due to the devastating impact of Hurricane Maria, which caused around 3,000 deaths, and a severe economic crisis.⁵⁶

However, Professor José Caraballo-Cueto found that "...the analysis of data from the U.S. Census, from the departments of Transportation, Health and Labor, suggest that there was no such thing as a migration of Puerto Ricans to the U.S. in that period, but a situation of refugees abroad due to the direct consequences of the hurricane... what happened here was a refugee situation... the temporary relocation was made possible by the help of federal programs that paid for hotels and other subsidies."⁵⁷

Emigration as a direct consequence of the earthquakes of January 2020 was similar to that of September and November 2017, when thousands fled the catastrophe caused by Hurricane Maria⁵⁸. In January of this year, when earthquakes were shaking the southwest of Puerto Rico with intensity, 51,671 more people left the island than arrived, the highest figure for that month in recent years, according to data from the U.S. Bureau of Transportation Statistics (BTS)⁵⁹. Florida's Democratic congressional delegation called on the Trump administration to offer transitional and affordable housing to Puerto Ricans moving to that state after [the] earthquakes in Puerto Rico.⁶⁰

Closely related to the aftermath of natural disasters, the clearest sign of the level of dependence of Puerto Rico's economy on the U.S. is that, according to a recent analysis "the economy was in decline until more than \$100 billion of federal funds began to be disbursed between State and Local Coronavirus Fiscal Recovery Funds, under the American Rescue Plan Act (ARPA) and those granted for the Hurricane Maria disaster... since 2021, between the funds that were allocated from ARPA and the reconstruction funds from Maria is what has been driving the economy all this time."⁶¹ The same analysis affirms that "unfortunately,

at the moment, the only thing that can be said is that it is going to have an impact in the short term. When the funds run out, if they were not invested in a way that fosters long-term economic development, then the impact is going to be three to five years."⁶²

Although the economy has partially recovered since the dislocation produced by the coronavirus pandemic, real unemployment rate in Puerto Rico could soar around 40%, according to a report by the Fiscal Oversight Board in which it is also alleged that the economy continues to show no signs of long-term recovery⁶³. The same source states that "...it was anticipated that government revenues would collapse and that the economy, in real terms, could contract by up to 13%."⁶⁴

A brief comment on the Educational Background of Emigrants

Historically, emigrants from Puerto Rico to the U.S. had relatively low levels of education. However, the departure from the country of people with university education has increased over time.⁶⁵ By 2000, about 30.0 percent of college-educated Puerto Rico-born men live in the U.S. (2019 Census estimate). This scenario suggests a possible increase in the fiscal cost of emigration. The socioeconomic characteristics of these emigrants, including levels of human capital, suggest that it is very likely that if they had stayed in Puerto Rico many would have made a positive net tax contribution throughout their lives.⁶⁶

It is important to note that for some experts, including Professor Carlos Vargas-Silva⁶⁷, emigration of people with high levels of education has not been considered a negative social phenomenon for the country of origin. Indeed, "the Puerto Rican diaspora can be a source of local investment to create new export opportunities. This new era has... helped to highlight the clear interrelationship between migration and development, as well as the opportunities it presents for joint development, that is, the coordinated or concerted improvement of the economic and social conditions of the places of origin and destination, according to the UN (Excerpts from the prologue of: International Migration and Development)."⁶⁸

The *Migrant Profile 2018-19* reveals that not only a high number of health professionals and teachers left Puerto Rico, but also cleaning and maintenance, production and transportation employees.⁶⁹ "This is the portrait of the great Puerto Rican tragedy, which is not only about the so-called brains, but about the hands as well... in other words, much of the workforce no longer sees [the country] as a convenient alternative to get their hands on."⁷⁰

Data scientist Dr. Mario Marazzi states that "Puerto Rican migration has a particular appetite with that piece of the Puerto Rican population with better academic preparation."⁷¹ Marazzi adds that "this is consistent with the idea that people who have invested in their education and human capital are the most likely to seek employment opportunities that, in many cases, are only available outside of Puerto Rico."⁷²

Professor José Alameda points out that "from the economic perspective, it is human capital with specialized skills that will no longer be generating much economic activity on the island... the impact of this situation depends on what kind of workers are most often moving out of Puerto Rico, and the level of salary they are presumed to have on the island... these professions are usually among the highest purchasing power in the island."⁷³

A Basic Microeconomic Model for Explaining the Recent Emigration Pattern

In collaboration with Professor José Alameda, we propose the following basic microeconomic model for explaining the dynamics of Puerto Rican emigration to the U.S.⁷⁴

Let's say that:

Wpr = Salaries in Puerto Rico

PGpr = Availability of public goods in Puerto Rico (education, roads, electricity, potable water, communications, etc.)

Wus = Wages in the U.S.

PGus = Availability of public goods in the U.S. (education, roads, electricity, potable water, communications, etc.)

CLpr = Cost of Living in Puerto Rico

CLus = Cost of Living in the U.S.

The model suggests that there are no practical motivations to emigrate from Puerto Rico to the U.S. when:

$$[(Wpr + PGpr) > CLpr] > [(Wus + PGus) > CLus]$$

However, there are strong reasons for emigrating to the U.S. when:

$$[(Wpr + PGpr) > CLpr] < [(Wus + PGus) > CLus]$$

We can rearrange the above equations as follows:

$$[(Wpr + PGpr) - CLpr] > [(Wus + PGus) - CLus]$$

In a very simple example, Let's assume that, for Puerto Rico:

$W_{pr} = \$5.00$;

$PG_{pr} = \$2.00$;

$CL_{pr} = \$1.00$

Let's assume that, for the U.S.:

$W_{us} = \$10.00$;

$PG_{us} = \$4.00$;

$CL_{us} = \$20.00$

If we substitute the above values in the equation, then we have:

In the case of Puerto Rico: $[(\$5 + \$2) - \$1.00] = \6.00

In the case of the U.S.: $[(\$10 + \$4) - \$20] = (\$6.00)$

Therefore, even if salaries are higher in the U.S. economy, there are no strong motivations to emigrate, because the cost of living is substantially higher in the U.S. In other words, the salary to be earned (which doubles the salary level in Puerto Rico) is not enough to cover anyone's living expenses. (Here public goods are supplied at a higher cost and lower quality in Puerto Rico and, thus, the value assigned in the U.S. duplicates the value assigned in P.R.)

Now let's suppose that the relevant figures are as follows:

For Puerto Rico:

$W_{pr} = \$5.00$;

$PG_{pr} = \$2.00$;

$CL_{pr} = \$1.00$

For the U.S.:

$W_{us} = \$10.00$;

$PG_{us} = \$4.00$;

$CL_{us} = \$5.00$

Then, in the case of Puerto Rico: $(\$5+\$2) - \$1.00 = \6.00

In the case of the United States: $(\$10+\$4) - \$5.00 = \9.00

Now the situation is different. With high quality of services and a salary level that doubles Puerto Rico's salary level, even if the cost of living is five times higher in the U.S., there is a reasonable gap that will probably motivate people to emigrate. I suggest a more comprehensive microeconomic model that

would take into consideration the factors analysed in studies focused on the Puerto Rican emigration to the U.S. The model should include the following variables:

- Criminality in the Puerto Rican neighborhood where the person resides.
- Criminality in the proposed community in the U.S.
- Residence of most family members is in Puerto Rico
- Residence of most family members is in the U.S.
- Amount of government transfers received by residents of Puerto Rico as a proportion of total family income.
- Amount of government transfers to be received as residents of one the U.S. states as a proportion of total family income.
- Overall quality of life in Puerto Rico
- Overall quality of life in the proposed community in the U.S.
- Natural disasters occurrence in Puerto Rico
- Probability of natural disasters occurrence in the proposed community in the U.S.
- Social and political stability in Puerto Rico
- Social and political stability in the proposed community in the U.S.

The government of Puerto Rico has enumerated quite similar factors that either encourage emigration to the U.S. or demotivate it.⁷⁵ A comprehensive statistical analysis, including a regression model (which is beyond the scope of this paper) should include most of the previous variables, as well as those suggested by the quoted report.

Concluding Remarks

In this paper I have presented empirical evidence on various socioeconomic factors that have been fundamental in the analysis of Puerto Rican emigration to the United States over the past three decades. Because of the political relationship of Puerto Rico with its metropolis, the research approach employed

has taken into consideration the features, as well as the restrictions, imposed by the colonial territory status of the country.

The demographic evolution of Puerto Rico reveals the consequences of public policies promoted by both, the U.S. government, and the colonial administrations, during the past one hundred and twenty-five years. Birth control and promotion of emigration have resulted in a population profile similar to that of a developed economy, in spite of the fact that Puerto Rico is an upper-middle income nation with nearly half of its people living below the poverty line. Since the mid twentieth century, net emigration has generated an irreversible trend that, from the beginning of the present century, has registered a subsequent reduction of total inhabitants. Today, almost two thirds of people from a Puerto Rican origin live in continental U.S.

Almost twenty years ago, economist Julio César Pol concluded that "As experience has shown, in the face of adverse economic conditions, Puerto Ricans chose to relocate. The expected reduction... of the industrial system, high unemployment, the decline in the quality of life, the stagnation of wages, among others, impose a significant weight, supporting those who leave, and discouraging those who come. So, it is expected that the new cycle of emigration will be much more intense than the past, perhaps this time nuanced by young people with a high concentration of human capital."⁷⁶ Indeed, the reduction of Puerto Rico's total population took place, just as anticipated by Pol.

As demographer Raúl Figueroa has put it: "...we continue with the same factors that has pushed people out of Puerto Rico. As long as young people lack decent employment opportunities... we will continue to see negative migration figures every year. We cannot wait another ten years to make the decisions that ensure a better quality of life for all Puerto Ricans, especially those of us who want to stay on the island."⁷⁷

To conclude with an optimistic view proposed by demographer, Professor Judith Rodríguez-Figueroa: "If we all row in [the correct] direction, there is no doubt that we will reverse emigration, which is, from a demographic perspective, our immediate lifeline for a vigorous Puerto Rico eager to put its house in order. Not to do so is to continue with what we have been doing so far... and the process of depopulation will continue its course."⁷⁸

Notes:

1. See Carmelo Rosario Natal, *Exodo puertorriqueño: las emigraciones al Caribe y a Hawai: 1900-1915*, San Juan, 1983. Manuel Maldonado-Denis, *The Emigration Dialectic: Puerto Rico and the USA*, International Publishers, New York, 1980. Luis Nieves-Falcón, *El emigrante puertorriqueño*, Ed. Edil, San Juan, 1975. José L. Vázquez-Calzada, *La población de Puerto Rico y su trayectoria histórica*. Stanley L. Friedlander, *Labor Migration and Economic Growth: A Case Study of Puerto Rico*. The MIT Press, Cambridge, Mass, 1965. Jorge Duany, *La población y la migración en Puerto Rico de cara al siglo XXI*, in *El futuro económico de Puerto Rico*, Francisco E. Martínez (ed), Editorial de la Universidad de Puerto Rico, Río Piedras, 1999, pp. 219-254. Also from Duany see: *The Puerto Rican Nation on the Move: Identities on the Island and in the United States*. The University of North Carolina Press, Chapel Hill, 2002, and *Blurred Borders: Transnational Migration between the Hispanic Caribbean and the United States*. The University of North Carolina Press, Chapel Hill, 2011. José I. Alameda-Lozada and Wilfredo Ruiz-Oliveras, *La fuga de capital humano en la economía de Puerto Rico: reto para la década actual*, Unidad de Investigaciones Económicas, Departamento de Economía, RUM, UPR, Mayagüez, 1983. Guy T. Ashton, *Migration and Puerto Rican Support System*, Review Interamericana, Vol. XII, No. 2, pp. 228-242. Centro de Estudios Puertorriqueños (CENEP), History Task Force, *Labor Migration under Capitalism: The Puerto Rican Experience*, in *Monthly Review*, New York, 1979. Joseph Fitzpatrick, *Puerto Rican Americans: The Meaning of Migration to the Mainland*, Prentice Hall, New Jersey, 1971. Edwin Meléndez, *Los que se van, los que regresan: Puerto Rican Migration To and From the United States, 1982-1988*, Centro de Estudios Puertorriqueños, City University of New York, Working Paper series #1, New York, 1993. Also from Meléndez: *Puerto Rican migration and occupational selectivity, 1982-1988*, in <https://pubmed.ncbi.nlm.nih.gov/12287278/>. Mary Powers and John J. Macisco, Jr., *Labor Force Characteristics and Migration Experience of Puerto Ricans, Part 1: Puerto Ricans in New York City, 1970*, Social Science Research Center, UPR, Río Piedras, 1981. Francisco Rivera-Batiz, *Is There a Brain Drain of Puerto Ricans to the United States?* *Puerto Rico Business-Review*, June-July 1987, Vol. 12, pp. 6-7. Carlos Santiago, *The Migratory Impact of Minimum Wage Legislation: Puerto Rico, 1970-1987*, *International Migration Review*, 1993, Vol. 27, pp. 772-795. Michael González-Cruz, *Militant Puerto Ricans: Migrants, Armed Struggle & Political Prisoners*. Editorial Trastalleres, San Juan, 2020. Carmen Haydée Rivera and Jorge Duany, ed. *Cuba and Puerto Rico: Transdisciplinary Approaches to History, Literature, and Culture*, Edited by, University of Florida Press, Gainesville, 2023. Ismael García-Colón, *Colonial Migrants at the Heart of Empire: Puerto Rican Workers on U.S. Farms, 2020*. University of California Press, <https://doi.org/10.2307/j.ctww1d5qx>. Julio César Pol, *Determinantes económicos de la migración entre Puerto Rico y Estados Unidos*, Unidad de Investigaciones Económicas, Departamento de Economía, Universidad de Puerto Rico, 2004, in <https://economia.uprrp.edu/ensayo%20119.pdf>.
2. The Jones Act of 1917 imposed the U.S. citizenship to all residents of Puerto Rico.
3. However, Professor Edwin Meléndez, in *Los que se van...* op. cit, has presented empirical evidence that suggests that a high proportion of those emigrants had a low education level, a similar feature of the mid twentieth century emigration wave.
4. Under the direction of Professor Julio César Hernández, and with the collaboration of various scholars, statisticians, economists, anthropologists, and demographers, in 2014 the Puerto Rico Planning Board published a comprehensive study focused on the country's migration facts and recent history. See <https://jp.pr.gov/wp-content/uploads/2021/12/2014.03-Resumen-Economico-Mar-2014-Suplemento-Especial-Migracion.pdf>.
5. For a detailed discussion of the political status issue of Puerto Rico, see Professor Carlos Ivan Gorrín-Peralta *The Law of the Territories of the United States in Puerto Rico, the Oldest Colony in the World*, *Interamerican Law Review*, Spring 2023.
6. Puerto Rico Community Survey 2015, U. S. Census Bureau, [https://usa.ipums.org/usa/voliii/itemsPRCS\(2015\).shtml](https://usa.ipums.org/usa/voliii/itemsPRCS(2015).shtml).
7. See a detailed discussion in Maldonado-Denis, *En las entrañas...* op. cit.
8. Jorge Duany, *La nación en la diáspora: las múltiples repercusiones de la emigración puertorriqueña a Estados Unidos*. *Revista de Ciencias Sociales*, UPR, Vol. 17, 2007, p. 120. <https://revistas.upr.edu/index.php/rcs/article/view/7447>.
9. *Ibid*, p. 121.
10. Official demographic data obtained from the United States Census Bureau and from <https://jp.pr.gov/wp-content/uploads/2021/09/Informe-Economico-al-Gobernador-2020-816.21.pdf>. pp. 81-116. Another data sets were obtained from <https://jp.pr.gov/wp-content/uploads/2021/09/Plan-de-Reto-Demografico.pdf>.
11. Starting in the 1930s, but at an increasing pace during the three subsequent decades, the United States government, with the collaboration of the government of Puerto Rico, put in practice a programme of mass sterilization of the female population of Puerto Rico, as well as the introduction, at an experimental level, of the contraceptive pill. The obvious result of both "initiatives" was a drastic reduction in the number of births and, consequently, a substantial drop in fertility rates. See Maldonado-Dennis, *The Emigration Dialectic*, op. cit., p. 52.
12. As of 1 April, 2020, the United States Census of Population and Housing estimated Puerto Rico's total population at 3,285,874 inhabitants. Based upon that figure, subsequent official projections have estimated that the country's population arrived at 3,281,538 people as of 1 July 2020, and at 3,263,584, as of 1 July, 2021. See details in <https://jp.pr.gov/wp-content/uploads/2021/12/Estimado-de-poblacion-de-PR-a-julio-de-2021.pdf>. However, a recent report concluded that the Census overestimated Puerto Rico's total population as of 1 April, 2020, in about 174,000 people. Thus, the adjusted figure is 3,111,874, and, therefore, the figures for 1 July, 2020 and 1 July, 2021, are also overestimated. See a complete explanation in <https://www.census.gov/newsroom/press-releases/2022/2020-post-enumeration-survey-results-puerto-rico/2020-post-enumeration-survey-results-puerto-rico-spanish.html>.
13. The latest publication is Puerto Rico Community Survey, December 2019. Population Estimates, Federal Census Bureau. Refer to https://www2.census.gov/programs-surveys/acs/tech_docs/accuracy/PRCS_Accuracy_of_Data_2019.pdf.
14. *Ibid*.
15. *Ibid*.
16. *Ibid*.
17. See Puerto Rican Emigration and the Perceived Brain Drain: Evidence from the American Community Survey, by Kurt Birson and Edwin Meléndez, published in <https://jp.pr.gov/wp-content/uploads/2021/12/2014.03-Resumen-Economico-Mar-2014-Suplemento-Especial-Migracion.pdf>.
18. Puerto Rico Community Survey, December 2019, op cit.
19. *¿A dónde emigraron los boricuas en el 2019?*, by Ricardo Cortés-Chico, www.endi.com, 13 June 2021.
20. *Ibid*.
21. *Ibid*. See a related discussion in Álvarez, L., *A Great Migration From Puerto Rico Is Set to Transform Orlando*. *The New York Times*, November 17, 2017 (<https://www.nytimes.com/2017/11/17/us/puerto-ricansorlando.html>).
22. Spanish term usually used for referring to people born in "Borinquen", the previous name of Puerto Rico.
23. See a detailed analysis in José J. Villamil, *El modelo puertorriqueño: los límites del crecimiento dependiente*, *Revista Interamericana de Planificación*, Vol. X, No.

- 39, 1976, pp. 64-86. See also Francisco A. Catalá-Oliveras, *La economía de Puerto Rico, 1898-1998*, Unidad de Investigaciones Económicas, Ensayos y Monografías, No. 93, UPR, Río Piedras, 1998.
24. See the PhD thesis of the author, *Wealth Distribution in the Puerto Rican Model of Development*. Institute of Development Studies, Sussex University, Brighton, UK, 1989.
 25. See discussion in *Economía de Puerto Rico*, Edwin Irizarry Mora, McGraw Hill, Mexico, 2011, pp. 121-127.
 26. PROMESA is the acronym for Puerto Rico Oversight, Management, and Economic Stability Act, in force since 30 June 2016. Refer to Public Law No. 114-187, 114th Congress of the U.S., 2015-2016. The law created the Financial Oversight Management Board, which consists of seven members appointed by the President of the U.S. and one ex officio member designated by the Governor of Puerto Rico.
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