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The Missing Agrarian Middle Class

Puerto Rican Development in Comparative Perspective

ABSTRACT During the middle decades of the twentieth century, Puerto Rico embarked on one of the most rapid processes of industrialization and economic development the world had ever seen. Yet the industrial economy that this process produced had two fundamental flaws: it featured little by way of local capital formation in the manufacturing sector, and it was incapable of producing sufficient employment for the island's labor force. What explains these flaws? This article seeks to answer this question by drawing on the rich literature on development in East Asia. I engage with four theories that explain successful East Asian development on the basis, respectively, of unique insertion into the international political economy, robust industrial policies, economic nationalism, and agrarian reform processes that preceded industrialization. While Puerto Rico benefited from all of these factors—which may explain the relative success of development on the island—they differed qualitatively from the East Asian cases, with the possible exception of international political economy. I suggest that these differences might in turn be explained by substantial differences in pre-existing agrarian class structure. The absence of a significant stratum of smallholding agricultural producers in Puerto Rico distinguished the island from East Asian societies. It also helps explain the lack of local capital formation and employment generation built into the Puerto Rican development model, as well as the shape of industrial policy and agrarian reform and the ultimate weakness of nationalist impulses. KEYWORDS Puerto Rico, development, unemployment, local capital formation, agrarian class structure

During the middle decades of the twentieth century, Puerto Rico embarked on one of the most rapid processes of industrialization and economic development the world had ever seen. Yet the industrial economy that this process of development produced had two fundamental flaws. First, it featured little by way of local capital formation in the manufacturing sector, and was instead almost completely reliant on U.S. multinational capital. Second, it was incapable of producing sufficient employment for the island's labor force, reproducing the pattern of massive, chronic unemployment that had also characterized the preceding agrarian plantation economy.

What explains these fundamental flaws in Puerto Rico's development model? This article seeks to begin an answer to this question by drawing on the rich literature that has emerged in the last several decades to explain the remarkable processes of economic development in East Asia: those of the so-called East Asian Tigers or "developmental states," which were more or less contemporaneous with development in Puerto Rico. Since, unlike Puerto Rico, these cases were characterized by robust local capital formation

Sociology of Development, pps. 1–24, electronic ISSN: 2374-538X DOI: https://doi.org/10.1525/sod.2023.0038

and did not suffer long-term unemployment, theories developed to explain their "success" can be generatively applied to the Puerto Rican case to determine the extent to which they explain these two specific dimensions of development. In particular, I engage with four theories that explain successful East Asian development on the basis, respectively, of unique insertion into the international political economy, robust industrial policies, anticolonial movements and strong economic nationalism, and agrarian reform processes that preceded industrialization.

While Puerto Rico benefited from all of these factors—which may explain the relative *success* of development on the island—they differed qualitatively from the East Asian cases. In Puerto Rico, industrial policy explicitly favored outside over local capital; the surge in nationalism that preceded the industrialization process quickly petered out; and agrarian reform nationalized sugar plantations rather than redistributing land to reinforce smallholder agriculture. I suggest that these differences might in turn be explained by substantial differences in pre-existing agrarian class structure. The absence of a significant stratum of smallholding agricultural producers in Puerto Rico—whether tenant farmers or proprietors—distinguished the island from East Asian societies. This difference helps explain the lack of local capital formation and employment generation built into the Puerto Rican development model, as well as the shape of industrial policy and agrarian reform and the ultimate weakness of nationalist impulses.

PUERTO RICO AS "NEGATIVE CASE": THE UNIQUE FLAWS OF A DEVELOPMENT MODEL

Beginning in the 1940s, Puerto Rico embarked on a process of industrialization and economic development, lasting roughly three decades, the likes of which the world had rarely before seen. At the risk of irritating the reader with a barrage of numbers, I will cite a few statistics. Puerto Rico's GDP per capita increased from barely 15% of the U.S. figure in 1947 to around 40% by 1970—during a period in which the U.S. economy was itself growing at its fastest pace ever (Baumol and Wolff 1996:870). Development was rooted in industrialization: between 1950 and 1970, manufacturing increased its share of GNP from 16% to 25%, and its share of employment from 9% to 19% (Dietz 1986:256, 258). And using indicators of social rather than economic development, the Puerto Rican "miracle" looks even more impressive. Between 1940 and 1960 alone, life expectancy in Puerto Rico increased from 46 to 69 years (Vázquez Calzada 1984:178). According to the World Bank (2023), as of 2021 the island's life expectancy was four years longer than the U.S. average—80 compared to 76.

Yet today, in wake of a long recession, massive migration to the mainland US, a debt crisis, and a devastating hurricane, Puerto Rico is more often viewed as a basket case than as a showcase (Maldonado 2021:3–11). At the heart of this shift are two fundamental flaws that set Puerto Rico's development trajectory squarely apart from those of the East Asian Tigers. The first is the utter incapacity of industrialization to create sufficient employment. Between 1950 and 1990, a period which covers most of the industrialization process, the unemployment rate never dropped below 10% and usually hovered closer to 15% (Baumol and Wolff 1996:880).

Second, the Puerto Rican industrialization process was utterly dependent on outside, and particularly U.S., multinational capital. It saw disappointingly little by way of local capital formation in the manufacturing sectors that led the economic "miracle." Thus, around 2005, while Puerto Rico's exports per capita were higher than those of South Korea or Taiwan, none of the 25 largest locally owned firms in Puerto Rico was a manufacturing firm, and of the 100 largest local firms, manufacturing enterprises accounted for barely 3% of total revenues. Instead, the largest local firms were overwhelmingly in the banking, insurance, real estate, and retail sectors, while the local manufacturing firms that did exist, at least the larger ones, were food processing firms producing mostly for the local market. Multinational enterprises dominated the island's higher-value-added sectors like pharmaceuticals (Ayala 2008:107–11).

The flaws in Puerto Rico's development model make it unusual among those societies that experienced rapid industrialization in the second half of the twentieth century. Very few of them have suffered from *both* chronically high unemployment *and* low levels of domestic industrial capital formation. This is illustrated in Table 1, which lists, of the 20 countries that experienced the largest growth in real GDP per capita between 1950 and 2000 (according to data from the Maddison Project—see Bolt and van Zanden 2020), the 13 whose growth was not primarily a product of natural resource extraction and did not occur within the framework of a command economy.[1] This selection is based on an intent to situate Puerto Rico among comparable cases: societies that experienced rapid development in the second half of the twentieth century on the basis of capitalist industrialization. In addition to the average unemployment rate between 1991 and 2022 (the dates for which standardized data are available from the World Bank), Table 1 also provides the average ratio of GNP (gross national product) to GDP. This ratio roughly measures the share of the economic output of a territory that is retained by its residents, and thus the strength of local capital formation.[2]

Of the resulting list of 13 societies, all but Puerto Rico and Ireland are in either East/Southeast Asia or Southern Europe. Puerto Rico clearly stands out in this list: it not only had a double-digit average unemployment rate between 1991 and 2022 (along with Spain and Greece) but also had an abnormally low GNP/GDP ratio (68%), with Ireland a distant second (83%). No other society that otherwise experienced rapid economic development in the second half of the twentieth century displays this combination of chronic unemployment *and* low levels of local capital formation.

What explains Puerto Rico's uniqueness? And what might it say about economic development in general? Puerto Rico's flawed development model, particularly with respect to local capital formation, has been a topic of inquiry for scholars of the island for quite some time. Weisskoff (1985:120) argues that a shift in the 1940s toward an industrialization model almost completely dependent on outside capital represented a return, led by local leaders, "to the familiar colonial plantation model of the nineteenth and early twentieth centuries, in which the foreigner owns and operates the factory while the local elite oversees the workers and overlooks the foreigner." Pantojas-García

TABLE 1. The Unique Flaws of Puerto Rican Industrialization

	Real growth in GDP per capita, 1950–2000 (%)	Average unemployment, 1991–2022 (%)	Average GNP/GDP ratio, 1960–2022 (%)
South Korea	2,215	3.4	100
Taiwan	1,735	3.6	102
Malta	1,199	5.9	96
Japan	985	3.7	102
Singapore	957	4.0	93
Hong Kong	706	4.1	103
Puerto Rico	702	12.4	68
Spain	679	16.9	99
Cyprus	674	6.5	99
Thailand	639	1.3	96
Ireland	605	8.9	83
Portugal	603	7.8	98
Greece	587	14.0	131

Sources: Bolt and van Zanden (2020) for column 1; World Bank (2024a, 2024b, 2024c) for columns 2 and 3. Taiwan figures for columns 2 and 3 are from Taiwan Directorate-General of Budget (2024) and Taiwan Statistical Bureau (2024), and, in the case of column 3, cover only the years 1991–2022.

(1989:523) sees the economic dependence built into Puerto Rican industrialization as rooted in the ascent to power, in response to the economic crisis of the 1930s, of a "fraction of the colonial power bloc" linking Puerto Rican technocrats to the federal state and U.S. capital. Ayala and Bernabe (2007:189) argue that the tracks of dependent industrialization were laid in the mid-1940s, when Luis Muñoz Marín, leader of the newly hegemonic Popular Democratic Party (PPD), concluded that full political independence for the island was not feasible and access to the U.S. market was crucial for development.

Catalá Oliveras (2013:8) attributes the same phenomenon to the turn away from the "institutionalist" development outlook of governor Rexford Tugwell, who had emphasized planning and state enterprise during his tenure (1941–1946). Rodríguez (2002:157) views the origins of this institutionalist period in the 1930s more dubiously, as "a carefully crafted project of development that embodied a technology of domination over the colonial subjects." Dietz (2003:29–47) links Puerto Rico's uniquely dependent development to its sequence of industrialization, comparing it with those that prevailed in Latin America and East Asia. While in the latter regions industrialization began with import substitution in a protected market, which enabled the development of an incipient domestic industrial bourgeoisie, no such phase ever occurred in Puerto Rico, which dove into export-oriented industrialization without a pre-existing domestic industrial structure on which to rely. Bolívar Fresneda (2008:142–44) links the weak development of a local class of manufacturers to the policies of Puerto Rico's Development Bank, established in 1942, which ultimately privileged U.S. enterprises and infrastructure projects over investment in local manufacturing. Padín (2003:290–93) suggests that this odd development banking framework was linked to the strength and growth of a local banking sector in Puerto Rico that viewed the Development Bank as a potential source of competition.

While interpretations vary, they all converge in one respect: an emphasis on the decade of the 1940s as a key conjuncture of change in which Puerto Rico's development model, which produced the fundamental flaws of underemployment and dependence, took shape. My analysis follows in their footsteps in focusing on the events of the 1940s. However, it adds to this literature by situating Puerto Rico more squarely in comparative scholarship on economic development and industrialization in the twentieth century, particularly in East Asia. This literature helps shed light on the Puerto Rican case, while the study of economic development in general could benefit from closer scrutiny of Puerto Rico, given the uniqueness of its development model.

More specifically, this article seeks to frame Puerto Rico as a "negative case": one in which outcomes predicted by existing theories *did not* occur (Emigh 1997, 2008:15–27). If we see Puerto Rico's development trajectory in the areas of local capital formation and employment generation as "failures" or shortcomings in an otherwise very "successful" process of economic growth and rising living standards, it then presents a paradox whose resolution could help clarify the particular implications of existing development theories. As Emigh (1997:650) puts it with specific reference to theories of development, the literature's focus on explaining "successful" cases "makes it difficult to separate out events, processes, structures, and patterns that are present, but irrelevant, from those that are crucial to processes of economic change." The Puerto Rican case is useful in helping to articulate precisely which "events, processes, structures, and patterns" are relevant for explaining the two *particular aspects* of economic development that are local capital formation and employment generation.

The literature on "successful" development in East Asia (Japan, South Korea, and Taiwan) in the second half of the twentieth century provides useful theoretical lessons for the Puerto Rican case. Most importantly, development in East Asia did not suffer from either of Puerto Rico's flaws, as illustrated in Table 1. To give some comparative context, in Taiwan, an East Asian Tiger which, like Puerto Rico, had been a colonial sugar exporter in the first half of the twentieth century (Ka 1995), the unemployment rate was just 6.3% in 1961, according to government statistics, and a similar proportion of the employed population was considered underemployed (Lu 1968:561, 558). In the 1970s, non-local firms accounted for only 20 to 25% of Taiwan's manufactured exports—a figure that was even lower in South Korea—and only 13% of the industrial workforce (Wade 1990:149, 151n34).

The East Asian "developmental state" literature highlights four "events, processes, structures and patterns" as crucial explanatory factors of rapid development: favorable international political economy conditions, industrial policy, nationalism, and agrarian reform. If we take these as binary variables—that is, characterized only by their presence or absence—then they would seem to fail to explain the flaws in Puerto Rico's development. Puerto Rico benefited from favorable insertion into the global political economy during its industrialization process; its leaders executed a consolidated set of industrial policies; and industrialization was preceded by both a rise of nationalism and the execution of an agrarian reform. The island would thus seem a "negative case," insofar as theories constructed to explain successful development in East Asia would not predict these flaws.

Analyzing these factors qualitatively, however, points to a sharper explanation: their mere presence may very well explain the *success* of Puerto Rican development, while their qualitative differences from the East Asian cases might explain its flaws. Thus, in what follows, I begin by analyzing Puerto Rican development along these four dimensions, to formulate generative questions that might bring us closer to an understanding of the flaws of Puerto Rican development. I then incorporate a somewhat less studied factor in the literature on late development, agrarian class structure, and suggest that it might help explain Puerto Rican industrialization's lack of local capital formation and employment generation, not only directly but also *indirectly*, by answering the questions generated earlier in the analysis. More specifically, I draw from scholarship on other cases to suggest that deeper-seated patterns of Puerto Rican class structure might help explain the shape of industrial policy, agrarian reform, and the ultimate weakness of nationalism, which, in turn, contributed to the overall flaws of the industrialization process.

EXPLAINING THE FLAWS: PUERTO RICO IN EAST ASIAN PERSPECTIVE

The literature on development in East Asia points to four important factors in explaining successful industrialization: international political economy and "product cycles"; robust industrial policy; nationalist ideology; and agrarian reform. The following sections examine each of these factors with reference to the Puerto Rican case, with an eye toward gauging the extent to which they can help us understand the origins of the island's flawed development model.

International Political Economy: Geopolitics and "Product Cycles"

One factor highlighted in explanations of East Asian development is international political economy. Various scholars have suggested that East Asian development in the second half of the twentieth century was only possible because that region was very uniquely inserted into the global economy, in part because of the geopolitics of the Cold War. In particular, it is argued that foreign capital made itself available to East Asian countries in ways that were especially amenable to local capital formation. This argument has two main parts.

First, because of their geostrategic importance in the Cold War—as neighbors of communist China, North Korea, and the Soviet Union—South Korea and Taiwan received large infusions of U.S. aid on generous terms that helped fuel local capital formation. In other words, U.S. capital arrived in these countries under exceptional circumstances, since its typical form in most developing countries was foreign direct investment that was not very helpful to local capital. Thus, for example, between 1946 and 1978 South Korea received $6 billion in U.S. economic grants and loans, while the entire African continent received $6.89 billion (Cumings 1984:24). Between 1961 and 1965, 78% of the long-term net foreign capital Taiwan received was in the form of bilateral government loans, mostly from the United States, while only 13% came in the form of foreign direct investment; in South Korea, the figures were 84% and 2%, but in Mexico they were 7% and 42%, and in Brazil 57% and 38% (Stallings 1990:62). While foreign capital in East Asia came in the form of generous government aid, in Latin America it came in the form of foreign direct investment that drowned out local capital rather than strengthening it.

Second, unlike most developing countries, South Korea and Taiwan were able to access foreign technology transfers that fueled local capital formation. This was because of their unique position in an East Asian "product cycle" led by Japan, also dubbed the "flying geese" formation. As labor costs increased in Japan, itself an exporter of manufactured products to the United States, Japanese firms became interested in moving lower-valued-added manufacturing processes overseas. Because of geographical proximity and historical colonial ties, South Korea and Taiwan were attractive candidates for such offshoring. In turn, Japan's distinctive industrial structure, which relied on complex subcontracting networks that divided up the value-added chain among numerous firms, made this offshoring particularly amenable to the transfer of technologies to local firms in Taiwan and South Korea (Arrighi, Ikeda, and Irwan 1993:51–56, 60–64; Chibber 1999:329–36; Cumings 1984:2–3; Lie 1998:58–61).

Was the failure of Puerto Rican industrialization to bring local capital formation in its wake—and even its failure to generate sufficient employment—a product of a lack of the propitious conditions enjoyed by South Korea and Taiwan? In fact, evidence suggests that of all other places in the world, Puerto Rico came closest to replicating these conditions in the middle decades of the twentieth century. Puerto Rico, and the Caribbean more generally, assumed acute geopolitical importance during two crucial periods. The first was the early years of the Second World War, when, unbeknownst to many, the region was a strategic field of battle. In 1942, 95% of the oil consumed by the Eastern Seaboard of the United States was supplied via the Caribbean from northern South America. As a result, German U-boats systematically targeted shipping in Caribbean waters, sinking nearly 400 commercial ships and oil tankers between January 1942 and July 1943, totaling two million tons and accounting for one in five Allied ships sunk during the period (Bolívar Fresneda 2021:1, 7, 233n1).

In part because of this geostrategic importance, the U.S. injected a massive amount of funds into Puerto Rico. Between 1938 and 1946 alone, the federal government spent nearly $688 million on various forms of development aid for the island (Perloff 1950:391–92).[3] Given the island's population of about two million at the time, these expenditures would yield per capita, per-year figures significantly higher than those of

South Korea and Taiwan in the postwar era, or Western Europe during the Marshall Plan.[4] This massive injection of funds did play some role in stimulating local capital formation. Puerto Rican cement production, for example, more than quintupled between 1940 and 1950, and was dominated by two firms, one state-owned (Puerto Rico Cement[5]) and the other a local private firm (Ponce Cement, which bought the former when it was privatized); the two firms competed for federal government contracts (Bolívar Fresneda 2011:33, 35, 39). Evidently, however, massive federal expenditures, which continued into the postwar years, did not result in the emergence of a development strategy anchored in local capital.

Puerto Rico became of acute geopolitical importance again 20 years later, following the Cuban Revolution. Although Castro's Cuba may not have been as powerful as Mao's China, it is worth remembering that it did harbor nuclear missiles 90 miles off the coast of Florida in the early 1960s. This lent the Caribbean, and Puerto Rico in particular, a geostrategic importance more critical than the rest of Latin America in U.S. eyes. A major coup and civil conflict in the Dominican Republic in 1965 raised U.S. fears of another communist state in the Caribbean. As sociologist Andrew Schrank (2003:420–21) has shown, these fears led not only to U.S. military intervention and aid to the Dominican Republic under the dictatorship of Joaquín Balaguer (more in per capita terms in the late 1960s and early 1970s than aid to South Korea), but also to a U.S.-led effort to establish in the Caribbean a version of the "product cycle" that seemed to be working well in East Asia. This arrangement would have presumably involved roles for both Dominican and Puerto Rican industrialists at different levels of the product cycle.

According to Schrank (2003:423–27), the Dominican state itself prevented the emergence of the proposed "flying geese" scheme, eschewing export-oriented industrialization to continue with a policy of import substitution. Nevertheless, Schrank's counterfactual raises a number of generative questions. Did Puerto Rico also have something to do with the failure of the product-cycle scheme? Who were the Puerto Rican industrialists referred to in conversations over establishing the scheme, if Puerto Rico had such a dearth of local capital formation in manufacturing? Was there an impulse toward local capital formation in the early-to-mid-1960s that was undone? What would the implications have been if the scheme had succeeded?

In any case, the Dominican counterfactual suggests that Cold War geopolitics and international political economy alone cannot explain the failures of Puerto Rican industrialization *vis-à-vis* the East Asian cases, because geopolitics did provide an opportunity to reproduce East Asian conditions in the Caribbean—an opportunity which was evidently not taken. The same can be said of U.S. government aid: Puerto Rican industrialization did not fail in the areas of employment generation and local capital formation because of a lack of U.S. aid that could be channeled to local enterprise. The island received large amounts of aid, but it evidently did not have the same effects as in South Korea or Taiwan. Why they did not is a question that demands an answer, and to search for one we must zoom in from the broad arena of international political economy and geopolitics to the more local level.

Industrial Policy

One "local-level" factor we can draw from the literature on East Asia is industrial policy. The literature on East Asian development not only emphasizes unique international factors but also points out that governments in Japan, South Korea, and Taiwan protected their infant industries behind tariff barriers and offered them subsidized credit, fiscal incentives, and privileged access to foreign exchange, among other benefits. They also established state-owned enterprises (SOEs) in strategic sectors, restricted international capital flows, established multiple exchange rates, and enforced local content requirements (Amsden 2001:125–60; Chang 2002:46–51; Johnson 1982:29; Wade 1990:77–82, 86–88). Thus, an inverse argument might hold that the flaws in Puerto Rico's development were a product of a lack of industrial policy. An especially credible version of this argument would point out that Puerto Rico's local government lacked control over two of the most important dimensions of industrial policy: monetary policy, since the island was of course on the U.S. dollar; and tariff policy, since foreign trade was also subject to U.S. laws mandating free trade between Puerto Rico and its main export market and source of imports, the U.S. mainland.[6]

There are two problems with attributing the flaws of Puerto Rican development to a lack of industrial policy. First, as development economist Ha-Joon Chang (2002:65) notes, tariff protection was "by no means the only, or even necessarily the most important" industrial policy used by today's developed countries in their processes of industrialization. Instead, "there were many other tools, such as export subsidies, tariff rebates on inputs used for exports, conferring of monopoly rights, cartel arrangements, directed credits, investment planning, manpower planning, R&D supports and the promotion of institutions that allow public-private cooperation."

In fact, monetary and tariff policy are arguably the most "blunt," and therefore most dubious, types of industrial policy. This is particularly true for the kind of industrialization embarked on by *both* Puerto Rico and the East Asian cases, export-led industrialization. In Europe during the decades of postwar growth, for example, discretionary monetary policy was associated with industrialization oriented toward the domestic market in the countries of southern Europe, and fixed exchange rate systems with the export-oriented economies of northern Europe, a difference which led monetary integration to seriously destabilize the former economies (Johnston and Regan 2014:1–4). In contrast, Singapore began its own economic miracle in the 1960s without a central bank, relying on a "currency board" system inherited from the British colonial period which made it "difficult for the Government to finance large-deficit operations" but also ensured that there would be "no problem of a foreign-exchange shortage, an overvalued exchange rate, a severe inflation, or a loss of currency," much like in a state without monetary sovereignty (Emery 1970:537). Neither the northern European nor the Singaporean economies lacked industrial policies, however; quite to the contrary, they widely employed more targeted policies.

This brings us to the second problem with attributing Puerto Rico's development flaws to a lack of industrial policy: the Puerto Rican state also employed a range of targeted industrial policies, but the *ways it used* them were ultimately not compatible with extensive local capital formation or sufficient employment generation. Let us consider three of the most important of these industrial policies: the use of SOEs, discretionary allocation of credit by the state through a development bank, and fiscal incentives.

In the 1940s, Puerto Rico's local legislature, under the island's last non-Puerto Rican and second-to-last non-elected governor, Rexford Tugwell, established an SOE, the Puerto Rico Industrial Development Company, also known as Fomento after its Spanish name, to promote industrialization. Fomento acted in various capacities; the first was as the holding company for several state enterprises created in the 1940s to stimulate industrial development. These firms engaged in the production of cement, glass, shoes, and paper and clay products. Yet the Puerto Rican government quickly privatized these enterprises by the end of the 1940s (Bel 2011; Dietz 1986:190–94).

After the various SOEs were privatized, Fomento's economic development strategy shifted toward a consolidated program of fiscal and other incentives to attract capital to Puerto Rico to set up manufacturing concerns. In addition to tax breaks, Fomento provided market research, subsidized land and factory buildings, worker training programs, and other incentives to attract manufacturing capital (Maldonado 1997:81–102). Yet its benefits were oriented overwhelmingly toward U.S. multinational capital. As of 1958, Fomento and its umbrella agency, the Economic Development Administration, provided various forms of assistance to 518 U.S. firms employing roughly 35,000 Puerto Rican workers, but only 68 local firms totaling 3,200 workers (Puerto Rico Economic Development Administration 1960:23).[7]

In addition to Fomento, the Tugwell–PPD government created an industrial development bank to encourage industrialization. Yet in its first iteration, between 1944 and 1948, this bank behaved very little like a proper development bank. It lent \$5 million to other government agencies, \$10 million to construction firms, and only \$4 million to manufacturing projects, of which 34% went to non-local U.S. firms. The value of the bank's loans in this period as a share of its assets was lower than the corresponding figures for the three largest local banks, and insofar as it did offer loans for productive investments, it required higher ratios of collateral to loan value for local manufacturing firms than it did for non-local U.S. firms: 238% versus 167% (Bolívar Fresneda 2011:193–94, 200–201, 70–71). The development bank, in other words, was not much different from a normal commercial bank.

The failed experiment with SOEs, the weakness of development banking, and the transition to a policy of "industrialization by invitation" all bring up the question of Puerto Rico's overall industrialization strategy. Chronic unemployment plagued the industrialization process. And it was not a new problem but had plagued the island's earlier agrarian economy as well. Thus, for example, surveys conducted by the island's Department of Labor between 1946 and 1948 consistently found that roughly a third of the labor force was either unemployed or underemployed. Barely half of the workers in the island's dominant sugar industry were employed for more than ten months of the year (Perloff 1950:146–47). On the eve of industrialization, Puerto Rico thus presented a classic case of an economy with what economist Arthur Lewis (1954:140–41, 171–72) called "unlimited supplies of labor," one that was ripe for labor-intensive industrialization.

Yet while there was some labor-intensive industrialization in the 1950s, this process was still dominated by U.S. multinational capital, even though the low capital requirements of such industries made them obvious entry candidates for local capitalists (Pantojas-García 1990:70–79).[8] Moreover, labor-intensive industrialization, coupled with a precipitous decline of the sugar industry that was encouraged by government policy, still reproduced high unemployment even when taking into account massive emigration to the mainland United States. Not only did agricultural employment decrease in the 1950s, but manufacturing employment—and, as a consequence, total employment—actually decreased as well, because of increases in labor productivity that destroyed the traditional home needlework industry (Ayala 1996:73–78). Finally, the period of labor-intensive industrialization was short, and was quickly followed in the 1960s by a turn toward capital-intensive industries such as petrochemicals—industries which were not nearly as employment-generating (Ayala and Bernabe 2007:192–93; Pantojas-García 1990:106–13). This is all the more puzzling given that in the 1930s policymakers later associated with the PPD government had seriously considered a plan (then called the Plan Chardón) to stimulate labor-intensive agriculture and manufacturing based on local capital and natural resources, with an eye for future development of manufactured exports (Dietz 1986:149–54). Yet the plan was ultimately nixed for the dependent program of industrialization we have been outlining so far.

In short, the question of government industrial policy, although explaining the flaws of Puerto Rican industrialization at a surface level, only raises further questions. Why did the government have such little faith in an industrialization process centered on local capital? Why did it do so little to help local capital formation in the manufacturing sector, when it evidently had the resources to do so? And why was the resulting industrialization process unable to generate sufficient employment to replace jobs lost in the agricultural sector and prevent chronic unemployment? Since industrial policy seems to be as much an outcome to be explained as a proper explanation of Puerto Rico's development model, in what follows I consider theories that might help account for the industrial policies described so far and, in turn, for the flawed industrialization process they helped produce.

Nationalism and Ideology

Why did Puerto Rican industrial policies ultimately favor multinational over local capital? One potential explanation is a lack of nationalism among the officials in charge of devising these policies. The strength of nationalism in post-independence Asian states has been invoked to explain their lesser reliance on foreign capital in industrialization compared to Latin American states. Some scholars have suggested that the legacy of recent anticolonial movements led to a "nationalist" pattern of industrialization in Asia, in contrast to a "dependent" path in Latin America, where independence was in a more distant past (Kohli 2009:403–4).

Yet Puerto Rico would not seem to fit well into this dichotomy between "nationalist" Asian countries and "dependent" Latin American ones. On the eve of Puerto Rican industrialization, decolonization was not in the distant past (as in the rest of Latin America) but in the yet-unrealized future. In fact, there were strong currents of economic nationalism, even among those politicians who later came to oversee the industrialization process.

The 1930s saw a surge in the Puerto Rican independence movement and a growth of the Nationalist Party, which came to represent workers in a massive general strike in 1934 (Taller de Formación Política 1982:9–15). The Nationalist Party's 1928 platform decried "the regime of exploitation to which the Puerto Rican nation is submitted by foreign interests . . . which have converted it into an immense factory and its inhabitants into miserable peons" (Asamblea General del Partido Nacionalista 1979:462). The Liberal Party, which was much more moderate than the Nationalists and was amply represented in the local legislature, declared in its 1932 platform that its purpose in government would be "to create Puerto Rico's economic independence, to decolonize and nationalize Puerto Rico's economy" (Barceló 1979:491). Luis Muñoz Marín, at the time a member of the Liberal Party, later a founder of the PPD, and Puerto Rico's elected governor from 1949 to 1965, wrote in 1925 of absentee capital in Puerto Rico that "profit has been known to surpass 100 per cent per annum, and a very large share of it leaves the island never to return. That is the secret glory of the colonialists. And even this ghastly spectacle of wealth drained from a starving population into the richest country on earth is sanctimoniously entitled in the official reports A Favorable Trade Balance" (Muñoz Marín 1925:381).

These political platforms would seem to suggest that in the period immediately preceding industrialization there was plenty of anticolonial nationalism in Puerto Rico, particularly when it came to the economy. Puerto Rico would seem much more like Asia than Latin America in this sense. The question of nationalism and ideology, again, raises key questions: the same politicians that railed against absentee capital and advocated the "nationalization" of the Puerto Rican economy in the 1920s and 1930s proceeded to oversee an industrialization process based on absentee capital in the 1950s and 1960s that, if anything, denationalized the economy. In 1937, more than half (54%) of Puerto Rican sugar output was ground in locally owned mills (Farr & Co. 1938:152–55), but local participation in the leading industries of the 1950s and 1960s, as we have seen, was much lower. Evidently, there was a marked *shift* in nationalist ideology that itself demands an explanation.

On the other hand, Puerto Rico was unlike Asian countries in one key respect: industrialization was *not* preceded by decolonization. Puerto Rico did gain the right in 1952 to establish its own constitution and elect its own governor, but it remained subject to the laws of a U.S. Congress in which it had no representation. A variation of the "nationalism" explanation, then, might attribute the flaws of Puerto Rican development to the failure of decolonization. However, such an argument would ignore the fact that de jure independence should not be confused with de facto decision-making autonomy in the process of economic development. In the latter dimension, Puerto Rican policymakers do not seem to have had much less autonomy than their East Asian Tiger counterparts, at least in the 1950s.

Taiwan, for example, was dependent on U.S. aid in the 1950s to an extent that severely constrained its independence. Consider the following description of economic decision-making in Taiwan in the 1950s, by sociologist Thomas Gold (1986:68–69): "The Chinese [i.e., KMT, or Taiwanese] government did not have final say over its economy, as the Americans, through AID, had de facto veto power through their control of the Nationalists' economic lifeline. Americans sat in on ESB [Economic Stabilization Board] meetings, and many Chinese government agencies had to hold their meetings in English for the benefit of American advisers." As Bruce Cumings (1990:466) notes, a similar dependence on the United States characterized South Korea in the early fifties. Even before the beginning of the Korean War, "Americans kept the government, the army, the economy, the railroads, the airports, the mines, and the factories operating; they supplied funds, electricity, expertise, and psychological succor. American gasoline fueled every motor vehicle in the country."

Yet in South Korea and Taiwan, a concerted effort to stimulate local capital formation served as a way to *decrease* the economic dependence on the United States which so constrained their autonomy. In Puerto Rico, as we have seen, this never occurred, even though Puerto Rican policymakers explicitly stated this very same goal. Why?

Agrarian Reform

A third "local level" explanation might blame the flaws of Puerto Rican industrialization on a lack of agrarian reform. The literature on East Asia emphasizes the seminal importance of agrarian reform programs in Japan, South Korea, and Taiwan after the Second World War in clearing the way for industrialization. Land reform eliminated rentier landlords as a political obstacle to industrialization and redirected landlord capital toward industrial investment. It fostered educational advancement in the countryside and promoted labor-intensive agriculture, giving peasants a more secure outlet for surplus labor and preventing the development of a large underemployed subproletariat on the scale of other parts of the developing world. When combined with robust state investment in agriculture, it also strengthened the domestic market for industry and increased food production, freeing up foreign exchange for use in the industrialization process (Ban, Moon, and Perkins 1982:23–24, 56, 106; Kay 2002:1076–85; Koo 1968:101–102, 120–21; Lie 1998:12–14, 20–22; Schrank 2023:118–23; Studwell 2013:3–10).

Some scholars argue that while agrarian reforms preceded industrialization in East Asia, in Latin America they tended either not to occur at all or happened after industrialization was well underway, denying countries this wide range of benefits (Kay 2002). Given this insight, one might be tempted to attribute the flaws of Puerto Rican industrialization at least partially to the absence of agrarian reform. The trouble with such a suggestion is that the island's government did conduct an agrarian reform, and a rather wide-ranging one at that, *before* industrialization began in earnest. Through the 1940s and into the 1950s, the Puerto Rican state nationalized about 70,000 acres of sugar plantation lands and two sugar mills to create government-run farms—these were not privatized like Fomento's industrial concerns—and distributed small plots of land of 0.25 to 3 acres, or *parcelas*, to tens of thousands of families of landless agricultural laborers (Ayala-McCormick 2021:397; Edel 1963:47). By 1964, over 50,000 such *parcelas* had been organized into communities, while another 22,000 were owned by families living outside such communities (U.S. Bureau of the Census 1967:321, A6).

It is important to emphasize, however, that Puerto Rico's agrarian reform did not create a class of family farmers. The Land Law that initiated the agrarian reform did envision a program of medium-sized family farms for commercial production, but few of such farms were ultimately created—only 437 as of 1951 (Koenig 1953:251).[9] Nevertheless, given the fertility of tropical soils, even small *parcelas* of an acre would normally be large enough, if worked intensively, to produce significant marketable surpluses. For example, in Taiwan in 1956, after agrarian reform, 57% of farms were smaller than 1 hectare (2.5 acres), while only 7% were larger than 3 hectares (7.4 acres) (Koo 1968:41). The *parcelas*, in other words, were not that much smaller than the much-lauded family farms of East Asia. And yet they do not seem to have performed an analogous economic role. Some *parcelas* did produce marketable surpluses; in the 1964 agricultural census, for example, 1,020 of the *parcelas* outside of organized communities reported sugarcane harvests; 3,390, coffee harvests; and 730, tobacco harvests (U.S. Bureau of the Census 1967:321). This still meant, however, that the majority did not report harvests, at least of Puerto Rico's three most important cash crops (other crops that might have been grown on *parcelas* were not reported by the census, which is itself revealing).

The question of agrarian reform in Puerto Rico thus brings up further questions. Why did it take the shape that it did, with minimal distribution of medium-sized family farms? And why didn't the smaller *parcelas* play a role analogous to the tiny farms of East Asia, as sites of labor-intensive agriculture that generated substantial marketable surpluses, absorbed rural labor, and fostered linkages with industry?

THE MISSING LINK: AGRARIAN CLASS STRUCTURE

To explain the flaws of Puerto Rican development—insufficient employment generation and dependence on non-local capital—I have so far searched for answers in the factors invoked in explanations of East Asian development, which did not share these flaws. However, insofar as we treat these factors as binary—that is, characterized simply by their presence or absence—they likely help explain the *success* of Puerto Rican development. Puerto Rico *did* benefit from a uniquely favorable insertion into the international political economy beginning in the 1940s; it *did* see a resurgence of nationalism in the 1930s, just before the beginning of industrialization; Puerto Rican government officials *did* employ a range of industrial policies; and they *did* conduct an agrarian reform. All of these factors likely help explain the fact that Puerto Rico *did* experience rapid industrialization, just like the East Asian cases.

Examining these factors in detail, however, reveals *qualitative* differences from the East Asian cases. Just as Puerto Rico differed from East Asia in the *type* of industrialization it experienced, it differed in the *type* of industrial policies and agrarian reform it pursued, as well as in the fact that nationalism ceased to be a driver of economic development policy after the 1940s. Our engagement with the various explanatory factors generated by the East Asian development literature has yielded several generative questions. Why did industrial policy so quickly eschew a role for SOEs, and why did its fiscal and credit dimensions not only fail to privilege local capital but actually favor *outside* capital? And why didn't agrarian reform reinforce a class of small farmers, as it did in East Asia? In what follows I consider a factor that not only might help explain the flaws of Puerto Rican development directly, but also might help explain them indirectly by addressing these questions: the lack of a large *pre-existing* class of small farmers.

Before moving to the issue of agrarian class structure, however, it is worth considering previous answers to these questions. As is likely evident from the foregoing analysis, the decade of the 1940s was a pivotal one in Puerto Rico, when Puerto Rican industrial policy and agrarian reform took their ultimate form and nationalism began to disappear from the political map. Scholars have seen in this decade a shift from nationalism to a governing "populism" combining redistribution, dependent development, repression of political radicalism, and the cultivation of a "soft" ideology valuing Puerto Rican cultural expression rather than explicit anticolonialism.[10]

Explanations of the turn to an industrial policy that fostered dependence on U.S. multinationals variously emphasize the importance of Puerto Rican and U.S. capitalists and political forces. Emilio Pantojas (1989:523, 1990:51), for example, suggests that the shift was a product of the alignment of the PPD's "state-based technobureaucracy made up of intellectuals, professions and technicians" with "the strategic interests of those groups within US capital and state that were linked to Puerto Rico." On the other hand, José Padín (2003:290–93) has explained the Development Bank's restrained credit policies as product of a compromise with a blooming *local* private banking sector, one whose growth in the years of industrialization was in stark contrast to the weakness of the local manufacturing sector. Similarly, various scholars have emphasized the opposition of local capitalists in accounting for the quick collapse of the experiment with SOEs (Ayala and Bernabe 2007:189; Dietz 1986:194).

In fact, there were both local and U.S. forces pushing for each of the two development directions, the one dependent on U.S. capital and the one centered on local capital formation (whether private or state-owned). As Francisco Catalá Oliveras (2013:8) notes, there were certainly external forces acting on PPD policymakers as they shifted to the dependent route: the context of the accelerating Cold War, for example, may have contributed to the move away from SOEs. However, Puerto Rico's last non-Puerto Rican appointed colonial governor, Tugwell, was *against* this policy shift (Tugwell 1958:63), so much so that Fomento's Puerto Rican director, Teodoro Moscoso, who was in favor of it, kept the changes under wraps during their initial development until the end of Tugwell's term, in late 1946 (Ross 1969:79–81). And while Puerto Rican finance capitalists may have preferred the Development Bank's timid credit policies, local manufacturers severely criticized them (Bolívar Fresneda 2011:187–96).

The ultimate shape taken by the agrarian reform, meanwhile, has usually been attributed to PPD policymakers "realizing" that a breakup of large sugarcane plantations would threaten agricultural productivity. Tugwell (1941:18) himself believed this, and therefore favored nationalization and the creation of large state farms rather than redistribution to small farmers. Scholars have mostly repeated Tugwell's belief that in the Puerto Rican case land redistribution and efficiency were at cross-purposes (Concepción de Gracia 1943:318–19, 326–28; Rosenn 1963:340; Nazario Velasco 2014:115)—though studies of the few family farms created by the agrarian reform found that they were actually quite efficient, productive, and profitable (Serra 1948:338–42). Nevertheless, it does seem that PPD politicians switched rather quickly in the 1940s from an agrarian reform program based on redistribution to one based on the formation of state-owned plantations, that Tugwell played an important role in this shift, and that policymakers were genuinely convinced of the incompatibility of redistribution and efficiency (Ayala-McCormick 2021).

These explanations no doubt go a long way in accounting for the pivotal industrial and agrarian policies that took form in the 1940s and shaped subsequent industrialization. Yet they miss a key point: in focusing on political and economic elites, they do not account for the fact that there was little resistance "from below" to such a quick change in policy. The rapidity with which overall development policy changed suggests a lack of coordinated, organized mass politics intervening in such policies. There was, at least by the 1940s, evidently no mass constituency pushing either for redistributive land reform or for a nationalist industrial policy centered on local capital formation. I would like to suggest that this absence has to do with a key aspect of Puerto Rican class structure that distinguished it from East Asian societies even before industrialization: the lack of a significant class of small family farmers.

Although not prominent in the development literature, this thesis has some precedent. Sociologist Diane Davis (2004:208–25) has put forth a convincing explanation of the patterns of divergent development in East Asia and Latin America that rests on the strength—or weakness—of agrarian middle classes. Davis suggests that in South Korea and Taiwan, agrarian middle classes provided the basis for both labor-intensive agriculture and labor-intensive industrialization. Especially in Taiwan, the agrarian middle class was the basis of a strong *industrial* middle class of small-scale manufacturers that were the backbone of labor-intensive, export-oriented industrialization. They were also the backbone, therefore, of local capital formation and urban employment generation. In contrast, in Latin America coalitions of strong agrarian oligarchies, urban middle classes, and industrialists produced industrial sectors that, while generating benefits for a privileged layer of urbanites, were capital-intensive and heavily reliant on foreign direct investment, failed to create internationally competitive local capitalists, and did not provide sufficient employment or material benefit for populations as a whole. The flaws of Latin American development, in other words, were a product not only of "urban bias" but also of a particular class dynamic.[11]

Agrarian class structure may help explain the flaws of Puerto Rican development both directly and indirectly, through their relationship with agrarian reform and nationalist industrial policy. First, regional comparisons of agrarian social structure *within* countries suggest that even without widespread agrarian reform and assuming a uniform set of industrial policies, areas with weaker agrarian middle classes of small family farmers have experienced industrialization processes that are more dependent on foreign capital and generate less employment. In Spain, for example, industrialization in the 1960s in northern regions traditionally dominated by small family farms, such as Valladolid, Zaragoza, and Navarre, was centered in the automotive and metalworking industries, which generated many jobs, as well as linkages to numerous small and medium-sized firms engaged in processing and input production. In contrast, in the southern province of Huelva, a region dominated by large agricultural estates worked by wage laborers suffering chronic under-employment, industrialization was concentrated in the petrochemical industry, which was highly capital-intensive but generated relatively few jobs (de la Torre and García-Zúñiga 2013:49–50).[12] Similarly, in the Dominican Republic, in the Cibao, historically a region of small farmers and local entrepreneurs producing and exporting cash crops (San Miguel 1995), contemporary export-processing zones have involved a strong role for local entre-preneurs. In contrast, in the southeast, a region historically dominated by foreign-owned sugar plantations, export-processing zones have been controlled by foreign capital, with little participation by local entrepreneurs (Schrank 2005:43, 2008:1382).

Second, agrarian class structure also helps explain qualitative differences in the nature of nationalism, industrial policy, and agrarian reform. In East Asia, both the nationalism that drove policies oriented toward domestic capital formation *and* the impulse toward agrarian reform were products of strong political movements rooted in smallholding peasantries. South Korean agrarian reform, for example, was a culmination of decades of struggles by small tenant farmers against rentier landlords that began under the Japanese colonial period (Shin 1998:1324–41). Class struggle by smallholding peasants from below, as well as the specter of communism emanating from the North and from China, were decisive in the implementation of an agrarian reform that eliminated the landlord class in South Korea and Taiwan (Doner, Ritchie, and Slater 2005:341–42). Importantly, these "external" communist threats were themselves products of successful peasant revolutions in China and North Korea.

This brings us to a key point about agrarian reform: the type of redistributive, land-to-the-tiller agrarian reform that took place in East Asia and whose effects have been so widely lauded *presupposed a pre-existing class of small farmers*. East Asian agrarian reform did not turn agricultural laborers into proprietors; it turned tenant farmers and share-croppers into proprietors. There was thus a profound transformation of property rela-tions, peasant welfare, and the utilization of agrarian surplus, but *not* a qualitative transformation of the *organization of production*. Transformation of a tenant farmer into a proprietor entailed relative continuity not only in production but also in the marketing and management processes; making a farmer class out of rural proletarians whose labor process, as well as the marketing of goods, had previously been organized by capital implied a much greater discontinuity.

This point is key, because Puerto Rican agrarian society on the eve of agrarian reform was dominated by plantations and landless wage laborers, not by tenant farmers or sharecroppers. Puerto Rico's census of 1930, for example, recorded 209,902 "farm laborers" but only 53,414 "farmers"—that is, operators of an agricultural enterprise of any size or tenure form (U.S. Bureau of the Census 1932:170). In Taiwan, by contrast, although on the eve of agrarian reform 36% of the agrarian labor force consisted of landless tenant farmers, only 5.4% were agrarian wage laborers (Ka 1995:103, 149). Similarly, in 1945, before agrarian reform, 49% of farm households in South Korea were landless tenants while less than 3% were farm laborers (Ban, Moon, and Perkins 1982:286).

East Asian peasants not only brought about agrarian reform; they also drove the nationalism that shaped industrial policy. Peasant struggles, for example, were instrumental in the formation of "people's committees" throughout South Korea immediately after liberation from Japan, and they are credited with having shaped a high level of national consciousness (Shin 1996:145–53). And peasant nationalism was a key factor in the Chinese Revolution that overthrew the Kuomintang in mainland China and exiled them to Taiwan (Johnson 1962); it would not be surprising if the KMT took this to heart when formulating later industrial policies in Taiwan.

The importance of the smallholding peasantry in driving radical anticolonial nationalist movements is also evident closer to Puerto Rican waters, in Latin America itself. Independent agricultural producers, to the extent that they existed in Latin America, have always been key forces behind both nationalist independence movements and radical or revolutionary impulses in general. In the nineteenth century, the revolutionary movement for Mexican independence that broke out in the *Grito de Dolores* had its origins among market-sensitive tenant farmers, or *rancheros*, in the heavily commercialized Bajío region (Tutino 2011:400–401). Similarly, the small-scale independent cattle herders of the Venezuelan and Colombian *llanos* were decisive in the success of Bolívar's independence armies (Lynch 1986:206–7, 214–15, 222–24, 271). In Cuba, the Ten Years' War for independence (1868–1878) broke out not in the bastion of slavery and sugar plantations in the west of the island but in the east, where subsistence peasant production was prevalent and the power of planters was weak (Ibarra 1967:35–37).

This pattern continued into the twentieth century. The radical strongholds of the Mexican Revolution of 1910 were the small-scale sugar-producing peasants of Morelos, led by Zapata, and the small-scale cattle herders (*charros*) and *rancheros* of Chihuahua, led by Villa. And when the revolution that created Latin America's only communist regime broke out in Cuba in the late 1950s, it gained traction—like a century before—not among the wage laborers of lowland sugar plantations but in the subsistence peasantry of the eastern highlands that had escaped proletarianization (Wolf 1969:26–36, 69–71).

We should note that although Puerto Rico lacked a significant class of agrarian smallholders, it did have a substantial urban middle class which was oriented toward employment in the state bureaucracy and the professions, and which dealt with a constant specter of downward mobility. Scholars have suggested that this stratum provided the social base for both the nationalist independence movement of the 1920s and 1930s

(Maldonado Denis 1976:802–3) and, subsequently, the PPD (Quintero Rivera 1993:122–31). Scholars have also suggested that similar social strata led processes of nationalist industrialization in various parts of the non-European world, from Japan during the Meiji Restoration (Beasley 2001:162–65; Cohen 2014:140–42; Smith 1988:136–39) to Turkey after the First World War (Keyder 1987), India after its independence (Tudor 2013:3–4, 45–47, 167–68), and even Peru in the 1970s (Trimberger 1978:152–54). Not all of these societies experienced economic development as *rapid* as Puerto Rico, but none of them experienced industrialization processes that were quite as dependent on outside capital. The importance of a smallholding peasantry as a political and economic *base* for nationalist industrialization might explain Puerto Rico's uniqueness in this respect.

In short, the *weakness* of any class of peasant smallholders in Puerto Rico—whether proprietors, tenants, or sharecroppers—helps account directly for the lack of local capital formation and employment generation that characterized the industrialization process. But it also helps explain the ultimate weakness of nationalism and consequently of nationalist impulses in industrial policy, as well as the shape of an agrarian reform quite distinct from the ones whose positive effects for development have been lauded in the East Asian cases. Thus, the relationship between agrarian class structure on one hand and nationalism and agrarian reform on the other might help account for the evident correlation between (1) stratified agrarian social structures characterized by large rural proletariats, weak agrarian middle classes, and large-scale chronic unemployment, and (2) industrialization processes characterized by weak local capital formation and insufficient employment generation.

The foregoing analysis, if not presenting an open-and-shut case, should help narrow down a future research agenda on the theoretical implications of Puerto Rican development in comparative perspective. Deeper historical patterns of agrarian class structure are still an underexamined explanatory factor in the literature on late development. What might be the causal mechanism behind the connection between highly stratified agrarian social structures and industrialization processes characterized by foreign dependence and insufficient employment generation? Conversely, to what extent can market-oriented, labor-intensive smallholding agriculture and strong agrarian middle classes be fostered by conscious policies or rapid social change, and to what extent are they products of *longue durée* historical processes that are difficult to reproduce? Answering these questions would further clarify the contributions of the Puerto Rican case to a wholistic, comparative understanding of economic development in the twentieth century. ■

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NOTES

1. The countries in the top 20 that are thus excluded are Oman, Botswana, Equatorial Guinea, Libya, Romania, and Saudi Arabia. Swaziland has also been excluded, since the vast majority of the population continues to be employed in agriculture today (thus, growth presumably implied a very low starting point and does not reflect substantial industrialization).

2. For examples of the use of GNP/GDP ratio to measure lack of local capital formation in Puerto Rico, see Ayala and Bernabe (2007:271); Dietz (1986:246); Pantojas-García (1990:120).

3. The $688 million figure includes education, agriculture, roads and highways, rivers and harbors, health, farm security and soil conservation, unemployment and work relief and civilian conservation, agricultural adjustment and commodity credit, expenditures of war agencies and the National Guard, food relief, war housing and public works, training of defense workers and nurses, and other miscellaneous expenditures. It excludes veterans' benefits and social security payments, which totaled $46.6 million over the same period.

4. For yearly U.S. foreign aid figures to Marshall Plan recipient countries between 1948 and 1951, see Berolzheimer (1953:117).

5. Puerto Rico Cement was originally established in 1938 by the Puerto Rico Reconstruction Administration, the main New Deal agency on the island, and was transferred to the local government shortly thereafter (Burrows 2014:117–19).

6. For a statement of this point, see Pantojas-García (1990:173).

7. This report noted one remarkable fact, however: "In spite of the concern in Puerto Rico that local businessmen are not undertaking a large enough part of the Island's total industrial expansion, it would appear that their share is probably larger than that of local businessmen in the [U.S.] South. In a study of new investment in manufacturing projects costing over $100,000, the Atlanta Federal Reserve Bank found that 90% of the total was made by firms having home offices and plants outside the states included in its District. In Puerto Rico 78% of the investment in Fomento plants has been made by firms or individuals having origins outside Puerto Rico, 12% by local businessmen, and 10% by the Commonwealth Government" (15–16).

8. As James Dietz (2003:53) points out, "it would have been in precisely these same consumer, nondurable industries that a concentrated effort to expand locally controlled ISI [import substitution industrialization] production could have been most successfully mounted.... Instead, U.S. firms began to produce in Puerto Rico for export to the U.S. market in precisely those industries that everywhere else have been the entry point for initiating ISI."

9. For comparison, by that same year 25,000 *parcelas* had already been distributed (Koenig 1953:251).

10. On the transition to a "cultural" nationalism cultivated by the PPD, see Rodríguez Castro (1993:100–105).

11. For a critical review of the concept of "urban bias" see Kay (2009:110–15). See also the classic work of Bates (1981).

12. On agrarian class structure and economic development in twentieth-century Spain, see Ayala (2024:29–33, 48–67, 128–42, 170–83, 210–16).

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