Building a Strategic Trade and Industrial Policy for Puerto Rico in the Context of Colonial Exclusion and Lack of a Development Strategy

by
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Given Puerto Rico's colonial exclusion from Latin American and Caribbean regionalism and its ruling parties' disregard for stimulating an industrial base of small and medium-sized local enterprises rather than U.S. multinational corporations, Puerto Rico needs to construct new pathways to inclusive socioeconomic development. One approach is articulating strategic and industrial policies to stimulate these enterprises from below by promoting value chains focused on exports or export potential. A proposed systematization draws on the experience gained in a project carried out under an agreement between the University of Puerto Rico and Puerto Rico's Trade and Export Company to generate strategic export plans and map value chains for small and medium-sized enterprises.

Dada la exclusión colonial de Puerto Rico del regionalismo latinoamericano y caribeño y el desprecio de sus partidos gobernantes por estimular una base industrial de pequeñas y medianas empresas locales en lugar de corporaciones multinacionales estadounidenses, Puerto Rico necesita construir nuevas vías hacia el desarrollo socioeconómico inclusivo. Un enfoque es articular políticas estratégicas e industriales para estimular a estas empresas desde abajo mediante la promoción de cadenas de valor centradas en las exportaciones o el potencial de exportación. La sistematización propuesta se basa en la experiencia adquirida en un proyecto llevado a cabo en virtud de un acuerdo entre la Universidad de Puerto Rico y la Compañía de Comercio y Exportación de Puerto Rico para generar planes estratégicos de exportación y mapear cadenas de valor para pequeñas y medianas empresas.

Keywords: *Strategic trade policy, Mapping value chains, Small and medium-sized enterprises, Puerto Rico, export plans*

Facing the internal and international crisis with an outdated development model and constrained by lack of sovereignty in regional trade agreement negotiations, Puerto Rico needs to construct new pathways to inclusive socioeconomic development. At present, and for at least the next seven to ten years, Puerto Rico has been placed under the control of a federal board that is overseeing the country until its fiscal crisis is stabilized. In June 2016, Congress enacted legislation

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responding to an ongoing economic crisis in Puerto Rico. The Puerto Rico Oversight, Management, and Economic Stability Act (PROMESA, P.L. 114-187) established a process for restructuring the island government's public debt and a federal oversight board, formally known as the Financial Oversight and Management Board for Puerto Rico (FOB hereafter), with "broad powers of budgetary and financial control" (Austin, 2016: 9) over the island.

PROMESA and the FOB highlight the demise of the colonial development model. Puerto Rico is threatened by vulture-fund interests that are pressuring the board and the government into repaying them first even at the cost of triggering and worsening a humanitarian crisis on the island. Consensus in the United States and on the island is that Puerto Rico lacks a development strategy and that without one stabilization is infeasible. Our research is an attempt to contribute to the building of alternatives within the complex economic and political situation the island faces today.

This research has three underlying propositions. The first is that as a U.S. colony Puerto Rico has the potential for growth through increasing trade with the United States and with some of the countries with which the United States has trade agreements in the region (e.g., the Central American Free Trade Agreement–Dominican Republic [CAFTA-DR] [Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, the Dominican Republic], the North American Free Trade Agreement [NAFTA, now the USMCA] [Canada and Mexico], and bilateral agreements [Colombia, Panama, Peru, and Chile]). The country's alarming unemployment rate (12 percent in October 2016), the negative growth rates (–2 percent to –3 percent) of the real gross national product (GNP) and the projected potential contraction of real GNP of −16 percent in 2018 and 1.2 percent in 2019 make growth strategies necessary. The second proposition is that export growth must be linked to employment generation and to business growth patterns that benefit small and medium-sized enterprises and not just larger firms. The third is that education should be the axis of development proposals—in particular, that the University of Puerto Rico, the island's top public academic institution, should play an important role given that its academic excellence and Puerto Rico's tertiary education levels are what still distinguish the island from other countries in the region. The challenge is to develop an analytical method capable of promoting value chains focused on the exports or export potential of small and medium-sized enterprises and formulating commercial, industrial, and strategic policies for these enterprises to stimulate inclusive socioeconomic development.

The objective of this article is to suggest how strategic trade and industrial policies can be articulated from below given Puerto Rico's colonial exclusion from Latin American and Caribbean regionalism and its ruling parties' disregard for articulating these policies by stimulating an industrial base dependent on small and medium-sized local enterprises rather than U.S. multinational corporations. It summarizes a method developed to address this knowledge gap and systematize its replication that draws on the experience gained in a two-year project carried out under an agreement, signed in 2015, between the University of Puerto Rico and Puerto Rico's Trade and Export Company to generate strategic export plans and map value chains for small and medium-sized enterprises. With Donald J. Trump's victory, the task at hand became even more urgent. His policy moves against NAFTA and potentially CAFTA-DR may alter the context for developing strategic export plans. Even if they do, however, Puerto Rico may still be able to carry out strategic trade with the United States as long as it is not excluded from Trump's "Only America First" discourse. The politicians in Puerto Rico, including its pro-statehood governor Ricardo Rosselló, ousted by the popular protests of Summer 2019 and forced to resign, had argued that that discourse also meant "Puerto Rico First." Puerto Rico might be in for an unprecedented and unpredictable response from the U.S. president, ranging from excluding Puerto Rico from duty-free trade to withholding aid after Hurricane Maria hit in 2017 and a magnitude 6.4 earthquake shook the island on January 7, 2020.

In any case, the research presented here will contribute to developing what Puerto Rico lacks: a strategic trade and industrial policy. It focuses on exports because Puerto Rico has not developed an understanding of regionalism that might inform policy makers and enterprises on how to build alternatives, With the severe contraction experienced by the economy, exports stimulate backward linkages and production and service networks, and are a way to generate growth locally while networking with other economies that are faring better at present.

LITERATURE REVIEW

Our research is located in the theoretical framework of strategic regionalism and value chains that attempt to articulate connections between chains and companies through data mining. It also incorporates findings from the strategic trade and industrial policy literature linked to global-value-chain analyses, enterprises, and regionalism as applied to Puerto Rico. It focuses on two interrelated problems: the lack of global-value-chain analyses based on trade databases and the lack of strategic export plans for small and medium-sized enterprises in the context of analyses of regional trade. The absence of an integrated database impairs the formulation of the strategic trade policy analyses advocated since Elhanan Helpman and Paul Krugman's (1985) seminal work laid the foundations for new trade theory—the idea that, once the firm and imperfect competition were introduced into the international trade model, the pattern of trade became unpredictable (Mikic, 1998: 174). The argument was that in an unpredictable context it was strategic trade and industrial policies tied to the targeting of firms and the advantages created by path-dependence that explained the success of particular industries in particular regions (Aponte-García, 2014: 24) and the potential of industrial policies.

After the post-2007 international crisis, strategic trade and policy analysis received new attention from the U.S. government. The Office of the U.S. Trade Representative's (2013) 2013–2016 strategic plan had as one of its goals the development of a strategic and transparent trade policy. The plan was to double U.S. exports by 2015, thus supporting millions of additional American jobs (Office of the U.S. Trade Representative, 2011: 2). Puerto Rico was not mentioned once.

Methodologically, the works of Sturgeon and Gereffi (2009), Sturgeon and Memedovic (2010), Durán Lima (2013), Miroudot and De Backer (2013), and Aponte-García (2011; 2014; 2016) are important for our conceptualization of international trade data linked to concepts of regional-chain statistics using existing databases, among them the United Nations Commodity Trade Database (known as UN Comtrade), and for establishing links between value chains and the internationalization of Puerto Rican small and medium-sized enterprises (Orengo-Serra, 2015; Orengo-Serra and Theng, 2015) or applying strategic management concepts to these enterprises (Wheelen and Hunger, 2012). Other questions are, according to Durán Lima (2013: 19), understanding the dynamics of these enterprises' role in international and intraregional trade, establishing the factors that determine their internationalization, identifying the problems these face in approaching the international market, and identifying the elements for the formulation of public policies that favor them and their contribution to inclusive socioeconomic development. Exports contribute to expanding production locally. In the future, these analyses can be further developed to identify how exports are connected to the promotion of backward linkages that will further stimulate local production. Recent academic work on the Puerto Rican economy (Collins, Bosworth, and Soto-Class, 2006; Dietz, 2003) and government-commissioned reports (GAO, 2013; Krueger, Teja, and Wolfe, 2015; Piva-Martínez, 2005) commonly overlook the relation between these concerns and the colonial relationship between the United States and Puerto Rico.

COLONIAL EXCLUSION AND THE LACK OF A DEVELOPMENT STRATEGY

Puerto Rico's economic industrial model in the 1950s was Operation Bootstrap or "industrialization by invitation." Partly inspired by Arthur Lewis's theory of economic development with unlimited supplies of labor (for which he won the Nobel Prize in 1979), it invited U.S. investment (on the rationale of capital scarcity), produced for export (because of a small local market), and fostered employment in labor-intensive industries (because of high unemployment rates). As it was applied in Puerto Rico (although this was not implied by Lewis's theory), it neglected agriculture and promoted migration to the United States, both linked to unemployment. To this day the government has never approached the design of a long-term industrial development strategy. The transition to capital- and knowledge-intensive industrialization in the late 1960s also failed to change its direction. The model focused on the petrochemical industry during the 1970s and on the pharmaceutical and chemical industries during the 1980s and 1990s. In the following decades, as the welfare state in the United States gained strength, Puerto Rican economic policy aimed to increase the federal transfer payments and grants that were crucial for alleviating poverty and inequality. The development of industrial policies was encapsulated in a colonial circuit of dependence on foreign capital inputs from the United States and tax incentives from the colony. U.S. corporations made billions of dollars, and Puerto Rico served as one of the United States' most profitable markets.

In general, U.S. corporations were attracted to the island by a macroeconomic across-the-board industrial policy approach that offered more than just marginal improvement in retained profits by reducing the opportunity cost of capital and providing low-wage labor. The island's government exempted qualifying U.S. firms from local taxes and fees, offered a package of subsidies for rent and labor training, provided infrastructure to house operations, and granted generous utilities subsidies linked to public enterprises in water and electricity. Policies that simply stimulate all types of a particular activity (foreign investment, exports, import substitution) or sectors (pharmaceuticals, electronics) are likely to be ineffective, however. The focus should be on stimulating production and service networks, clusters, and value chains promoting backward and forward linkages. Learning and innovation, coordination, and investment in infrastructure and public goods throughout the economy are crucial (Lawrence and Lara, 2006: 509).

Foreign direct investment has had little effect on technology transfer and knowledge in Puerto Rico. Known in the 1990s as the pharmaceutical capital of the world, in the past 30 years it has seen the creation of only one local pharmaceutical company, MOVA. Moreover, this firm manufactured only generic goods after the patents had expired and was recently sold to a U.S. transnational corporation. The increase in the loss of patent protection at the end of the 1990s and the divestment of pharmaceutical manufacturing subsidiaries from 1998 to 2008 are partially responsible for the vulnerability of the industry. As a consequence of an economic development model and industrial policy based on attracting leading multinational firms (Orengo-Serra, 2012), it was unable to develop innovations responding to the new diseases of the twenty-first century and thus remain globally competitive (Baquero and Longobardi, 2014). The limited backward and forward linkages with local industry and business that the pharmaceutical industry encouraged only helped establish small and medium-sized local manufacturing and services enterprises that became suppliers of multinational subsidiaries operating in Puerto Rico. Although their impact was significant (Orengo-Serra, 2007), technology transfer was not.

Segarra, Rodríguez, and Goyechea (2014: 174–175) conclude that the participation of Puerto Rico in the duty-free market with the United States did not promote the internationalization or export growth of Puerto Rican companies. According to some recent studies, only 8 percent of the companies in Puerto Rico claim that 25 percent of their customers are from foreign markets (GEM, 2016). Although the United States remains the country's most important trading partner, this trade focuses on chemicals and is largely intracompany transactions or trade among foreign manufacturing companies. No locally owned large industrial base has been targeted or developed. Colonial administrators were biased toward granting industrial and trade opportunities to U.S. multinational corporations. Small and medium-sized enterprises seem to have struggled in this context, some of them clustered around dominant U.S. firms or part of their supply chains. Incentives and initiatives for fostering locally owned small and medium-sized enterprises have been fragmented and inconsistent with firms' needs because the government has not positioned locally owned small and medium-sized enterprises as significant leaders of industrial and commercial development policy (De Hoyos-Ruperto et al., 2012). This has turned into a significant problem as multinational corporations leave the country: there is no industrial base that can absorb the workforce. An industrial ecosystem could have flourished if Puerto Rico had implemented an industrial policy requiring technology transfer and capacity enhancement.

The scant literature on entrepreneurship and small and medium-sized enterprises in Puerto Rico agrees that government policies, institutional arrangements (Aponte-García, 2006; Davis and Rivera-Batiz, 2006; De Hoyos-Ruperto et al., 2012), and lack of networks (entrepreneurs themselves appear not to exploit the opportunity to develop them) are the main reasons for low entrepreneurial activity in Puerto Rico (De Hoyos-Ruperto et al., 2012). The colonial legacy of fostering multinational corporations generated an employee rather than an entrepreneurial mindset. The Global Entrepreneurship Monitor, which provides longitudinal data on the entrepreneurial environment in 78 countries including Puerto Rico, shows that the ratio of entrepreneurial activity in the island is low (ranked 58 of 60). The reasons given for business failures are bureaucracy (32.4 percent) and low profitability (25 percent).

Regulatory policies have recently been introduced to favor exports produced by locally owned small and medium-sized enterprises. The Export Services Act (No. 20, 2012) offers a 4 percent corporate tax rate for Puerto Rican businesses providing services for export, 100 percent tax-exempt dividends from earnings and profits derived from the export services income of eligible businesses, a 60 percent exemption from municipal taxes, and a 20-year guarantee of these rates. Law 173 of 2014, encouraging native creative industry, of the PRTEC also represents a boost to small and medium-sized enterprises, offering monetary incentives (US$10,000) for creativity, skill. and talent. Design, arts, media, and creative services such as architecture and education may benefit from this law. In addition, Law 120-2014 offers tax and wage incentives for the generation and retention of jobs in small and medium-sized enterprises.

Notwithstanding these initiatives, policies generally failed to take into account long-term development and strengthening of the local small and medium-sized enterprise platform. Traditional industrial and business policy was based on business loans, infrastructure, and operational small grants for new and established firms. It was not integrated with the other commercial and fiscal policies of institutions and was challenged every four years in response to electoral cycle results. Supervision and follow-up for good policy management remained on hold. This is important today because, with the deepening crisis, people are calling for concrete alternatives and feasible economic development models. We believe that focusing on regionalism, enterprises, and trade and industrial policies within a colonial context can contribute important options for socioeconomic development.

Until the 1990s, four important traits distinguished Puerto Rico as a U.S. colony in the Caribbean and Latin American region: (1) duty-free trade with the United States; (2) subjugation to the Jones Act requirement restricting maritime trade to U.S.-flag vessels (the cabotage laws);[1] (3) Section 936 of the Internal Revenue Code, which until 2006 allowed U.S. corporations to repatriate profits without paying taxes in the United States; and (4) tertiary education rates and public university rankings among the highest in the region.

The apparent economic development of Puerto Rico based on exclusive free-trade and tax incentives policy encouraged by the United States changed dramatically after 2000, when Puerto Rico's preferred terms of trade were extended to other Latin American and Caribbean countries. The open regionalist schemes based on the attraction of foreign investment, capital flight, production for export, and low-wage employment that would characterize U.S. policies in the region under the neoliberalism of the 1990s (Aponte-García, 2014: Chap. 2) mirrored the Puerto Rican model (Pantojas-García, 1985). Open regionalism or outward-oriented integration was expected to increase foreign investment, income, exports, employment, and wages, but it was based on export-led industrialization with few linkages with the domestic economy. The fact that the multinational corporations established in the island could repatriate their profits free enabled an increase in imports instead of boosting exports. Among the problem areas of this model were capital flight, negative trade balances, migration, debt, and issues of employment and unequal income distribution (Aponte-García, 2014: 52).

Alternative schemes identified as new strategic or posthegemonic regionalism grew significantly in the post-2000 period. The new regionalism included the Bolivarian Alliance for the Peoples of Our America–People's Trade Treaty,[2] the Union of South American Nations,[3] the Community of Latin American and Caribbean States,[4] and a series of sectorial/industrial agreements such as Petrocaribe,[5] the energy integration agreement promoted by Venezuela in which 18 Caribbean countries participated. These alternative schemes marked a departure from U.S.-controlled agreements, but only sovereign countries were able to join. They promoted food, energy, and financial sovereignty, played a pivotal role in presenting a united front in favor of Cuba's inclusion in regional organizations until then controlled by the United States, and provided diplomatic mediation in cases of coup attempts or processes in Honduras, Paraguay, Ecuador, Bolivia, and elsewhere.

A dual panorama emerged in the region after 2000: alternative schemes that sought autonomy from the United States and open regionalist schemes like the Pacific Alliance, in which Mexico, Colombia, Chile, and Peru sought proximity with the United States and inclusion in the Trans-Pacific Alliance. When Trump withdrew the United States from the latter and threatened to renegotiate NAFTA, Pacific Alliance members faced a difficult scenario. It now seems that the alternative path (toward free-trade agreements with the United States) holds greater potential. This leaves colonial Puerto Rico in a complex situation, neither adapted to the changing scenario of open regionalism nor integrated into alternative schemes and, even worse, still attached to its economic development model. As other countries gained what had distinguished Puerto Rico earlier on, duty-free trade with the United States, the island lost an important competitive advantage while continuing to be constrained by the cabotage laws. Section 936 of the Internal Revenue Code was repealed in 1996 with a 10-year phase-out. Tertiary education remained important but was not viewed as the focus of a new development strategy.

If NAFTA, CAFTA-DR, and the Pacific Alliance are restructured, Puerto Rico will have to adapt to the bilateral trade agreements that remain in force or are established after NAFTA and CAFTA-DR renegotiations with Canada and the Dominican Republic, respectively. Bilateral agreements between the United

States and other Latin American countries, particularly Panama and Colombia, may also prove important. The island must then strengthen bilateral trade with the United States as long as it continues to be a plausible alternative not targeted by Trump. Much will also depend on the emergent agenda to alter the political status of the island. When the new pro-statehood government on the island held a plebiscite in 2017 (with a large abstention rate by Puerto Rican standards [only 23 percent of registered voters cast ballots]), the statehood option "won", and a drive for a statehood agenda was understood as likely to alleviate the problems that Puerto Rico confronts. This alternative seems implausible, since the United States will probably reject a bankrupt colony.

The Jones Act and the cabotage laws further complicate the picture. These laws impose onerous costs that affect Puerto Rico's competitive position and increase the prices of goods. Estimates of the cost to the country of the cabotage laws (e.g., Alameda-Lozada and Valentín-Mari, 2012; GAO, 2013; Herrero, Serrano, and Valentín-Mari, 2003; and Pesquera, 1965) were several hundred million dollars in 2018 (Grabow, 2019: 2). In 1995 the Legislative Assembly requested an exemption from the cabotage laws. The elimination of or a moratorium on these laws has often been proposed, since it would encourage local businesses to internationalize and export their products by lowering marketing and transportation costs.

The phase-out of Section 936 generated a contraction of Puerto Rico's economy after 2006 as many multinational corporations divested, producing unemployment and migration (with over 300,000 persons migrating to the United States after 2009).

The University of Puerto Rico, with its 11 campuses, should play a pivotal role in generating alternative development models. According to Scimago's Institutions Ranking for 2019 it ranks no. 16 in Latin America and no. 579 of 3,471 institutions internationally. Its Río Piedras campus is classified as a high-level doctoral research university (a designation granted to only 335 universities in the United States) by the Carnegie Foundation for the Advancement of Teaching. Moreover, 87 percent of programs subject to accreditation are recognized by international agencies, with all units accredited by the Middle States Commission on Higher Education. Around 70 percent of its faculty members hold terminal degrees in their fields. Finally, its Faculty of Business Administration is accredited by the Association to Advance Collegiate Schools of Business, which grants accreditation to only 5 percent of schools worldwide, and is the first public institution in Latin America and the Caribbean to achieve this.

THE POLITICAL ECONOMY OF MANAGING THE COLONY

Explaining why Puerto Rico has not adapted is beyond the objectives of this paper, but a few comments are in order to locate our discussion in a historical context. The core of the industrial development strategy strengthened a traditional colonial system of dependency. The main political parties have focused on short-term initiatives to guarantee their control beyond the traditional four-year election cycle, and this pattern has placed their commitment to the development of the country in question. Their focus has turned to controlling federal transfer payments and the increasing budget obtained through public debt.

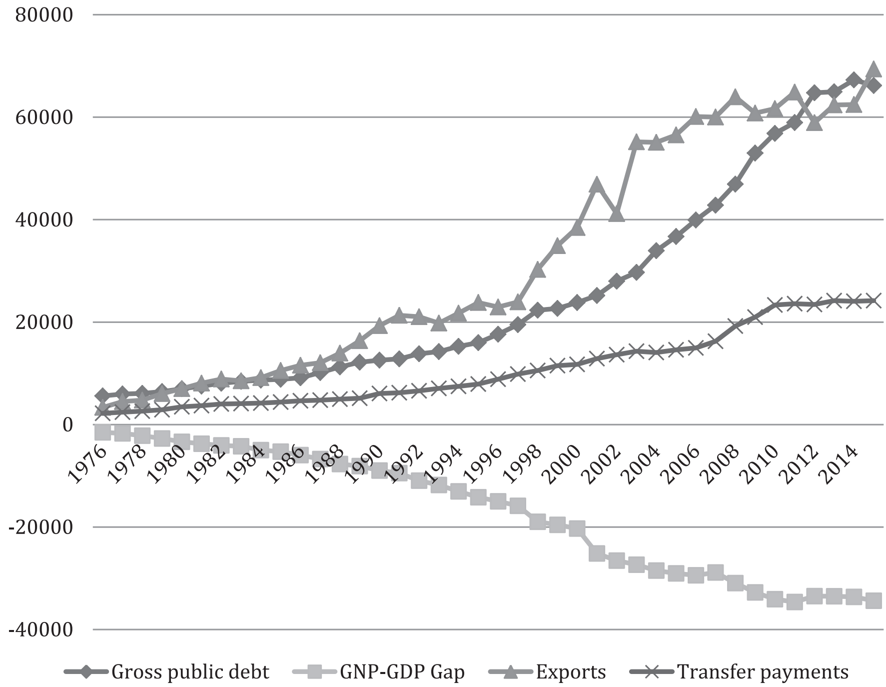

Figure 1. Selected economic indicators of Puerto Rico's development model (in millions of current dollars), 1976–2014 (data from Puerto Rico Planning Board available at http://www.gdb-pur.com/economy/statistical-appendix.html).

Some of the contradictions of this model are apparent in Figure 1. Multinational corporations' exports (concentrated in chemicals and pharmaceuticals) increased dramatically, accelerating after Section 936 was repealed in 1996 and continuing to grow until the end of the phase-out in 2006. After 2008, exports leveled off, and there was a decline in 2011. Gross public debt escalated particularly after 1996 as the political parties in power issued debt to keep a contracting economy "functioning." Investment income, recording both capital flight linked to the increase in multinational corporations' exports and profits and to interest paid on debt, also increased but at a slower rate. Transfer payments from the federal government accruing to the central, state, and municipal governments, as well as to individuals, continued to increase but not enough to offset the crisis. Most transfer payments to the central government went to subsidize public utilities during the 2006–2015 period.

The difference between the gross national product and the gross domestic product in Figure 1 is an estimate of the profits, interest, and dividends of nonresidents (foreign corporations and creditors) that leave Puerto Rico (see Dietz, 1986: 257). From this indicator it is apparent that a significant proportion of the production and income created in the island has been appropriated by foreign investors rather than being available for consumption or local investment (Aponte-García, 2014: 58). Gross public debt surged while Puerto Rico's economy contracted and its bonds' classification hit bottom, preventing the government from issuing debt to continue funneling money into an otherwise nonfunctioning economic development model. Because the country is a colony, however, it was not allowed to declare bankruptcy.

Puerto Rico's economic development model generated poverty, inequality, migration, and unemployment. By 2014, 45 percent of the population and 56 percent of children lived below the poverty level (*Puerto Rico Report*, 2015). In 2013 Puerto Rico exhibited the second-highest Gini coefficient, .547 (after the District of Columbia) and the lowest median household income, US$19,630 (followed by Mississippi's US$37,479) in the United States (Noss, 2014). Three hundred thousand jobs were lost between 2006 and 2015, fueling migration to the United States. At the same time, Puerto Rico's tertiary education rate (34.2) was among the highest in the Caribbean, together with that of Cuba (24.7), Barbados (31.2), and Trinidad and Tobago (23.7) (see Aponte, 2008: 495), and some of its universities ranked among the highest in the region.

Three major events made matters worse. First, the March 20, 2015, decision of the Supreme Court of Puerto Rico in *Pueblo v. Sánchez Valle* (2015 TSPR25 [2015]) established that a person convicted of a crime at the federal level could not be subjected to another trial at the state level, as this would constitute double jeopardy. When the case was appealed to the U.S. Supreme Court in 2016, it was determined that Puerto Rico did not constitute a "sovereign" for double-jeopardy purposes (*Harvard Law Review*, 2016), and this highlighted what some politicians had never acknowledged: that Puerto Rico was a colony of the United States. Second, the July 6, 2015, decision of the First Circuit Court of Appeals in Boston in *Puerto Rico v. Franklin California Tax-Free Trust* (805 F.3d 322 [1st circuit] [2015]) determined that under Chapter 9 of the Federal Bankruptcy Act Puerto Rico did not qualify as a state and therefore the Creole Bankruptcy Law was preempted by federal law. Third, the government-commissioned Krueger Report (Krueger, Teja, and Wolfe, 2015) proposed to address the fiscal crisis by imposing austerity measures similar to those implemented by the International Monetary Fund (where Krueger once worked): increasing income taxes, eliminating the Christmas bonus, and reducing the minimum wage below the federal minimum. It also supported exempting Puerto Rico from the cabotage laws. That same day, the governor issued Executive Order 22 creating the Working Group for Fiscal and Economic Recovery of Puerto Rico, whose report (Rivera Vargas, 2015), presented on September 9, 2015, reflected many of the recommendations of the Krueger Report.

PROMESA, signed by President Obama into law on June 30, 2016, was strongly criticized for proposing what was clearly an act of colonialism—the creation of an oversight board with powers over the legislature and the governor. Established in May 2016, the FOB included members with strong ties to the Partido Nuevo Progresista (New Progressive Party[endash]PNP) and to banks that should be held responsible for their issuance of debt. It rejected the fiscal plan of former governor Alejandro García-Padilla and called for a replacement of it by January 2017. Governor Rosselló's fiscal plan was approved on March 13, 2017.

In his first weeks as governor, Rosselló signed into law some controversial reforms that seemed aligned with the FOB's objectives. Among these were a labor reform (approved by the pro-statehood PNP–controlled legislature) that reduced labor benefits to workers and introduced significant changes in severance pay, flexible scheduling, employee retention, and vacation days. Combined with this was the Personnel Management Transformation Act, which proposed to convert the government into a single employer.

As the crisis deepened, Rosselló's government realized that the debt could not be repaid as he had promised and filed for bankruptcy relief in federal court on May 3, 2017. At the time, Puerto Rico owed more than US$72 billion to island and U.S.-based creditors (Farrant, 2017). This marked the first time in history that a U.S. state or territory had filed for bankruptcy, and there was no precedent for PROMESA (Walsh, 2017). On April 26, 2017, President Trump tweeted that there should be no "bailout" for Puerto Rico.

While vulture funds and other local creditors prepared for and engaged in legal battles, the government handed the FOB a budget project for fiscal year 2017–2018 as required by PROMESA. Continued resistance by Rosselló to making this budget public led the Partido Popular Democrático (Popular Democratic Party[endash]PPD) to sue.

The following description *(New York Times*, May 3, 2017) captures the complexity of the situation:

> The coming court proceedings will not be formally called a bankruptcy, since Puerto Rico remains legally barred from using Chapter 9, the bankruptcy route normally taken by insolvent local governments. Instead, Mr. Rosselló petitioned for relief under Title III of the PROMESA law, which contains certain Chapter 9 bankruptcy provisions but also recognizes that, unlike the cities and counties that use Chapter 9, Puerto Rico is not part of any state and must in some ways be treated as sovereign. Bankruptcy lawyers and public finance experts are watching Puerto Rico's case closely, to see if it shows a path that financially distressed states like Illinois might also one day take. States, like United States territories, currently cannot declare bankruptcy.

The first case under PROMESA was opened May 17, 2017, in the U.S. District Court under Judge Laura Taylor Swain. It was expected to last several years and to surpass Detroit's US$20 billion default. In 2015 a commission to audit the debt was created through legislation, since it was believed that at least half of the US$72 billion debt might be illegal and/or unconstitutional. The Constitution of Puerto Rico (1) prohibits the government from borrowing to cover budget deficits, and it is estimated that as much as US$30 billion fall into this category; (2) prohibits debt service from exceeding 15 percent of the average income of preceding years, a limit that has been exceeded; and (3) prohibits issuance of debt for periods over 30 years, and this has been the practice when refinancing debt. Rosselló removed commission members, and they sued in response. A citizens' commission was launched to proceed with the endeavor. Although Judge Swain issued an order requiring Puerto Rico to file a list of all its creditors by August 30, 2017, and there was a call for her to order a full audit of the debt as part of this process, it was not clear to what extent the culprits would be prosecuted. In fact, the FOB announced that it would subcontract a firm to audit the debt, and there was concern that this was partly to protect the banks and politicians from their responsibilities.

Discussion of budget cuts equivalent to almost 50 percent of the University of Puerto Rico's budget over a five-year period triggered a 70-day strike in March 2017. On July 27, 2017, initial cuts of US$163 million were announced for fiscal year 2017–2018, representing a 20 percent reduction of its budget (*El Nuevo Día*, July 26, 2017). Some organizations and political leaders argued that the university was an essential service under Section 201, Title III, of PROMESA, and that the approved budget should be amended to ensure the continuity of educational services.

METHOD: THE EXPO PARTNERS PROJECT

The 2015–2017 UPR-PRTEC agreement established a collaborative project involving the two of us, participants in Puerto Rico Trade and Export's Expo-Partners Program, small and medium-sized enterprises, and graduate students in the university's business school.[6] Expo Partners, coordinated by María Matías-Navedo, is an export assistance program that helps Puerto Rican companies enter or expand their presence in the international marketplace through the preparation and implementation of export plans. Under the UPR-PRTEC agreement, M.B.A. students worked for a semester as paid interns for participating firms, professors served as their mentors and met with them weekly in a formal course in which they were enrolled at the university, and the PRTEC coordinated the program and, along with other institutions, also served as a mentor. The students delivered strategic export plans for small and medium-sized enterprises, the firms implemented the plans, and professors created and analyzed the database generated to systematize the experience of the firms and generate theory. Strategic export plans were developed through a method including the mapping of regional value chains (Aponte-Garcia, 2016) and the Strategic Factor Analysis Summary matrix developed by Wheelen and Hunger (2012). Value-chain mapping uses descriptive quantitative methods and, through a methodology developed by Maribel Aponte-García (2011; 2014; 2016), links the level of analysis of international trade (USA Trade Online, UN Commodity Trade, and PRTEC's database, among others) with that of potential regional production chains (data from the U.S. Census Bureau on business patterns and the newly integrated database).

The strategic management component employed Wheelen and Hunger's (2012) approach to generate strategic situational analyses for participating firms. Export strategies were generated on the basis of mapping of Heinz Weihrich's Threats, Opportunities, Weaknesses, and Strengths (TOWS) matrix and the export plan components provided by the professors, companies, and interns (company profile, marketing aspects, competition and competitiveness analysis, market selection of countries, country profile, financing plan, strategies, and action plan). Case studies based on participating firms were developed for each enterprise.[7] The employment of these tools along with market intelligence and financial forecasting "pinpoints strategies that are feasible to achieve, and highlights the critical importance of expert perceptions in addressing strategic issues as well as highlighting more immediate concerns" (Chang and Wu, 2010).

Any firm established in Puerto Rico could participate in the program provided that it had been in operation for at least a year and submitted formal documentation to PRTEC. The program was supported by a federal grant to PRTEC from the U.S. Economic Development Administration. Grant money was allocated to participating firms to defray 60 percent of the costs of the interns' work. Interns were paid US$1,100 a month for five months, and thus the firms paid only US$400 a month. Both professors worked ad honorem for PRTEC. On January 24, 2017, President Trump announced the elimination of the Economic Development Administration (among 17 agencies targeted for cutbacks), and this was bound to affect the program. To date, most of the firms for which strategic export plans have been developed have focused their strategies on a member country of CAFTA-DR, NAFTA, or one of the bilateral trade agreements and on strategic competitiveness characteristics identified through the program (Table 1).

The UPR-PRTEC program was original in the following ways: (1) it delivered practice generated knowledge; (2) it combined the mapping of regional value chains with strategic factor analysis; (3) it produced a "living document" that forecasted and prioritized the company's development in the short, medium, and long term and outlined a plan for each phase, allowing implementation of preliminary recommendations throughout the semester; and (4) it allowed the government to explore more accurate policies because of the integration of mentors' expertise and students' creativity and specialized education.

Firms were motivated to participate in the program by a number of drivers. It provided them with a strategic export plan designed by experts in the field using an innovative methodology that helped determine in which countries, sectors, and value chains they could be successful. They benefited from technical mentoring from academics and the government during the development of the plan. Their investment was low and significantly below market value. The program allowed firms to establish the recommended networks to foster their development through foreign trade missions and trade shows and provided them with other business development tools (e.g., financial plans). In 2015 and 2016, 15 firms participated in the initiative, including 7 that enrolled during the August–December 2016 semester. Most firms had been operating for more than 10 years. All of them reported at least one of the following results: increase in sales, production levels, or job creation; new export markets, customers, and business contacts; regional and global awareness; and the establishment of a branch or representative office in a foreign country. For instance, Acesco Caribe and Gascó Industrial reported increases in export sales of US$204,000 and US$74,000 respectively.

Puerto Rico's economic crisis pushes firms to seek new markets. The government and the private sector alone cannot articulate a long-term trade and industrial policy that guarantees the strengthening of companies and training for international expansion, since they do not have all the tools necessary for firms to be successful. The UPR-PRTEC alliance and the UPR–Expo Partners Project helped develop a way of promoting value chains focused on small and medium-sized enterprises' export potential and formulating commercial, industrial, and strategic policies for these enterprises to stimulate inclusive socioeconomic development.

CONCLUDING REMARKS

Puerto Rico, being a colony, cannot negotiate regional trade agreements. The government of the island has not developed strategic trade and industrial

TABLE 1
Strategic Export Plans Developed under the UPR-PRTEC Agreement, Selection

Firm and Year of Establishment	*Author of Plan*	*Sector*	*Number of Employees*	*Potential Foreign Markets*	*Competitiveness*
Quality Consulting Group, LLC, 2002	Melanie Figueroa-Benítez	Quality control and validation consulting	5	Costa Rica	Efficiency in delivering high-quality services to firms regulated by the U.S. Food and Drug Administration
AZ Engineering, 2000	Robert A. Fernández-López	Electrical engineering consulting services and design of photovoltaic energy systems	11	Dominican Republic and Panama	International certifications and awards, previous experience
Claro Lencería, 2000	Darwin Morales	Manufacturing and retailing high-end home decor products	8	Canada	Highly differentiated products for luxury decor niche market
Enco Paints, 1983	Melanie D. Medina	Paints, sealers, and cement products	140	Canada, Chile, and Panama	Innovativeness and high-tech products for construction industry
Acesco Caribe, 1996	Karina Jiménez-Bayrón	Manufacturing and marketing of structural galvanized steel	55	U.S. West Coast	Part of a solid Latin American business group managing and controlling the entire supply chain; market knowledge due to years of experience
Hacienda Gosén, 2006	Jacqueline Alvarado-Inglés	Semiprocessed produce	20	Caribbean and Latino markets in the U.S. state of Florida	Production and processing of 100 percent natural exotic vegetables and fruits for specialty food market
Unlimited Diesel Supply Corporation, 2012	Jessica Carrasco-Martell	Remanufactured diesel pumps, injectors, and turbo chargers	8	Dominican Republic, Bahamas, Jamaica	Updated technology, flexible and just-in-time manufacturing; expertise in diesel engines and equipment; after-sales customer service.

(continued)

TABLE 1. (CONTINUED)

Firm and Year of Establishment	*Author of Plan*	*Sector*	*Number of Employees*	*Potential Foreign Markets*	*Competitiveness*
Integrated Environmental, Management, and Engineering Services, 2015	Auri Rodríguez	Engineering services focused on technical consulting and project management geared toward compliance with current environmental, health, and safety laws and regulations	4	North Carolina, Dominican Republic, and Canada	EPA lead-safe certification and PREQB-accredited asbestos training, updated technology and highly customized services, key organizational partners
Granja Avícola Pujols Corporation, 2011	Noedith Cruz-Rodríguez	Eco-friendly production of eggs in shell and organic fertilizer based on hen excrement	5	Antigua and Barbuda, British and U.S. Virgin Islands	Fully sustainable eco-friendly production, competitive production costs, technology, flexible and high-quality operational standards
Lalin's Inc., 1998	Valeria López-Rodríguez	Production of premium implements for equestrian sports (Paseo, Paso Fino, Western and Horse Riding).	14	Dominican Republic, U.S. states of Florida, South Carolina, and Texas	High-quality and customized products, technology, capacity for flexible production, experienced workforce
Infopáginas, Inc., 2009	Angely Medina-Velásquez	Strategic marketing solutions and affordable digital tools for small and medium-sized enterprises	86	Panama, Costa Rica, and Dominican Republic	Partnership with Google, free personalized consulting and marketing services, experience working with small and medium-sized enterprises, affordable prices, financial health.

policies. Building alternatives from below can contribute to the formulation of initiatives that lead to this kind of policy, fostering understanding of the dynamics of the inclusion of small and medium-sized enterprises in international and intraregional trade, establishing the factors in the internationalization of these enterprises, identifying the problems they face in approaching the international market, and identifying the elements for the formulation of public policies that favor them and their contribution to inclusive socioeconomic development. In the absence of government policies, the University of Puerto Rico can help construct strategic industrial and trade policies that contribute to inclusive development without being subjected every four years to partisan political interests.

The appropriation of an industrial development policy from below, articulated by the academy in conjunction with the private sector and government, allows for the creation of a network guiding an interconnected entrepreneurial ecosystem. The lack of entrepreneurial activity in Puerto Rico is due partly to the absence of such an ecosystem. Our method enables firms to undertake a robust strategy of internationalization delineated in a well-designed strategic export plan. Anticipating the hard years that lie ahead, we hope that this paper will contribute to the promotion of alternative pathways for our beloved island.

NOTES

1. The Jones Act, Section 27, provides "that no merchandise shall be transported by water, or by land and water, on penalty of forfeiture of the merchandise . . . , between points in the United States including Districts, territories, and possessions thereof embraced within the coastwise laws, either directly or via a foreign port, or for any part of the transportation, in any other vessel than a vessel built in and documented under the laws of the United States, and owned by persons who are citizens of the United States."

2. Venezuela, Cuba, Bolivia, Ecuador, Nicaragua, Antigua and Barbuda, Dominica, Saint Vincent and the Grenadines, Saint Lucia, Grenada, and Saint Christopher and Nevis. Ecuador was withdrawn from ALBA-TCP in 2018 and Bolivia in 2019.

3. Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Suriname, Uruguay, and Venezuela.

4. All Latin American and Caribbean countries except colonies and territories.

5. Venezuela, Antigua and Barbuda, Bahamas, Belize, Cuba, Dominica, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Nicaragua, Dominican Republic, Saint Christopher and Nevis, Saint Vincent and the Grenadines, Saint Lucia, Suriname.

6. The Trade and Export Company, in partnership with the International Association of Students in Economic and Commercial Sciences, Puerto Rico, established Expo Partners in June 2008 as a pilot project. The service is offered by these entities and the Puerto Rico Manufacturing Extension, Inc., the U.S. Commercial Service, and Puerto Rico Department of State. On March 2009, the project was declared the best entrepreneurship project in business in Latin America at the 2009 Latin American Conference of Leadership Development held in Guatemala City, Guatemala. The pilot project concluded successfully in August 2009, and in May 2010 Expo Partners became a formal component of PRTEC.

7. Students first identified the firm in terms of the codes of the international Harmonized System or the North American Industry Classification System. They proceeded to map and, applying components of Aponte-García's method, analyze the firm's potential in regional markets. Having established this profile, they performed a detailed analysis of the firm's products at the international level in order to choose a target country and market. This analysis was then combined with the results of the Strategic Factor Analysis Summary Matrix, which included the

highest-weighted internal and external factors influencing firms' performance (Wheelen and Hunger, 2012). The SFAS matrix allows researchers to develop a SWOT (Strengths, Weaknesses, Opportunities, Threats) or TOWS (Threats, Opportunities, Weaknesses, Strengths) matrix identifying variables that enable a firm to perform well. The TOWS matrix generates four possible strategic alternatives: SO (using strengths to take advantage of opportunities), WO (taking advantage of opportunities by overcoming weaknesses), ST (using strengths to avoid threats), and WT (minimizing weaknesses to avoid threats).

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