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MOVING FORWARD: RAILWAYS IN PUERTO RICO

by

GRICEL M. SURILLO LUNA

A dissertation submitted to the Graduate Faculty in History in partial fulfillment of the requirements for the degree of Doctor of Philosophy, City University of New York

2017

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This manuscript has been read and accepted for the
Graduate Faculty in History in satisfaction of the
dissertation requirement for the degree of Doctor of Philosophy

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ABSTRACT

Moving Forward: Railways in Puerto Rico

by

Gricel M. Surillo Luna

Advisor: Laird W. Bergad

In the second half of the nineteenth century the establishment of railways was essential for the progress and modernization of the Puerto Rican economy. Railroads were fundamental and slowly appeared along the coast reaching their highest level of development in the first decade of the twentieth century. After the First World War, however, the railroads faced economic challenges, and competition with trucks and automobiles became a serious matter. During the depression of the 1930s, the state started to show unwillingness to aid railroads. The exclusion of the railroads from the new industrial model developed during the 1940s when a new conception of progress and modernity transformed the railroads into an obsolete means of transportation.

This study is about the transformation of the railroads in the efforts to build a modern Puerto Rican economy. Railroads signified progress and modernity during the nineteenth century to become symbols of inefficiency and tradition tied to the sugar business in the mid-twentieth century. Automobiles, buses, and trucks became new symbols of modernity and progress for a country struggling to overcome economic backwardness.

ACKNOWLEDGMENTS

This dissertation was possible thanks to the support of various friends and colleagues. The cartography was a contribution of geographer Héctor Sánchez Graterole to whom I will always be grateful. I appreciate the suggestions of Professors Jalil Sued, José Molineli, and José Luis Pons. Another important support came from John Caro for proof reading the manuscript.

I received important support from the staff at the *Archivo General de Puerto Rico*, the *Colección Puertorriqueña* in the library of the Universidad de Puerto Rico, Río Piedras, and especially to Professor Josué Caamaño Dones for the digitalization of documents in the *Centro de Investigaciones Históricas* also in the *Universidad de Puerto Rico*, Río Piedras Campus. In New York I receive the help from the staff in the *Centro de Estudios Puertorriqueños* at Hunter College, the Graduate Center Library, and the New York Public Library.

Finally, I am eternally in debt to the all the support received from my family in all the process of fulfilling the doctoral degree. For them, all my love and gratitude.

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SELECTED LIST OF ACRONYMS

AAA	Agricultural Adjustment Administration
AID	Aid to Industrial Development
ARRC	American Railroad Company of Porto Rico
ATC	American Tobacco Company
BI	Bureau of Investigations
CCF	Compagnie des Chemins de Fer
CFC	Compañía Ferroviaria de Circunvalación
CFPR	Compañía de los Ferrocarriles de Puerto Rico
FDA	Food Distribution Administration
FLT	Federación Libre de Trabajadores
NWLB	National War Labor Board
ODT	Office of Defense Transportation
PRATCO	Porto Rican American Tobacco Company
PRTA	Puerto Rico Transportation Agency
PRRC	Porto Rico Railways and Power Company
PWA	Public Works Administration
UWR	Utilization of the Water Resources

INTRODUCTION: STATE OF THE RESEARCH

The study of the railroads in Latin America and the Caribbean has been used to address broader economic, social and political issues. In the 1970s most scholars adopted a structural perspective proposing that railroads were essential to export economies. Under this approach, an increase in exports did not translate into economic progress for Latin American nations. This was because cheap raw materials returned as expensive manufactured goods producing unbalanced trade, which perpetuated the economic backwardness of the region. In short, the development of railroads was interpreted as part of a new development in economic dependency. Winthrop R. Wright published a work about Argentina using this perspective.[1] This author argued that railroads in Argentina did not produce the same outcomes they had in Great Britain or the United States. Although Argentinean railroads shortened the distances between distant production areas like the case of Britain and the U.S., in Argentina the capital of investment came from abroad, and this was an essential difference. For Wright, Great Britain enjoyed the real gains of the railroads in Argentina:

> British-owned railways did not foster Argentine industrialization. Rather, the British-owned railroads opened up commercial opportunities to Britons far more valuable than the dividends they paid. Supplying coal, locomotives, rolling stocks, rails, and standard equipment for the daily operation of the lines meant steady

[1] Winthrop R. Wright, *British-owned railways in Argentina: their effect on the growth of economic nationalism, 1845-1948* (Texas: University of Texas Press, 1974.)

> employment for numerous British workers and profits for British firms. In turn, the working class of England consumed a relatively inexpensive diet that contained large quantities of Argentinean beef, lamb and cereals. In this situation Argentina could not develop a well-rounded national economy. Railways did not spawn large steel complexes, as they had in Britain and the United States. The majority of the industries that the railways helped to create concentrated upon processing raw materials for export and producing consumer goods and foodstuffs.[2]

Wright argues that in the twentieth century nationalism provided the basis to reject British interests in Argentina.

From a Marxist perspective, the railroads were an instrument of the dominant classes to maintain their economic privileges, and consolidate their political control through a discourse of modernization. Samuel Hurtado Salazar argued in his study of Venezuela that railroads held up the process of nation building.[3] Local entrepreneurs without sufficient capital for costly ventures such as the development of railroads relied on foreign investors to pay for rail lines to the ports and this promoted economic fragmentation. In words of Hurtado Salazar: "Desde la construcción de las vias férreas hasta las torres de los pozos petroleros, el proyecto social venezolano se fue desviando (desnacionalizando) hacia centros de decisiones gerenciales extranacionales."[4] Both scholars from

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[2] Wright, *British-owned railways in Argentina*, 82.
[3] Samuel Hurtado Salazar, *Ferrocarriles y proyecto nacional en Venezuela, 1870-1925* (Caracas, Venezuela: Universidad Central de Venezuela, Facultad de Ciencias Económicas y Sociales, 1990.)
[4] Translation: "From the construction of railways to the towers of oil wells, Venezuela's social project was diverting (denationalized) to extra-national managerial decisions."

the structural and Marxist perspectives focused on power dynamics between metropolitan centers and peripheries.

Another approach to the study of railroads moved the attention from the role in export economies to domestic markets. Richard Salvucci claimed that "the advent of the railroad in Latin America, once understood primarily as a means of facilitating the production of exportable goods, is now known to have had a powerful impact on the domestic market in some places, such as Argentina, and was less associated with international trade in others, such as Mexico, than commonly supposed."[5] Furthermore, historian Sandra Kuntz Ficker proposed to revisit the data on internal freight transportation during the Porfiriato in Mexico. Her findings clashed with the traditional perspective of the railroads as fundamental for integration into the world markets, and demonstrated the impact of the railroads in the strengthening of internal economic activities. Kuntz Ficker's methodology centered in the scrutiny of freight statistics from eleven railroads companies to measure long-term economic growth. Her conclusions debunked John H. Coatsworth earlier study of railroads in Mexico.[6] Coatsworth measured the "social savings" produced by railroads in Mexico following the example of Robert William Fogel's study for railroads in the United States.[7] Fogel defined social savings in railroads as the difference between the actual cost of shipping goods in a given year and the alternative cost of shipping exactly the same bundle of goods

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Hurtado Salazar, *Ferrocarriles y proyecto nacional en Venezuela*, 170.

[5] Richard Salvucci, "Export-Led Industrialization," in *The Long Twentieth Century*, edited by Victor Bulmer-Thomas, John H. Coatsworth, and Roberto Cortés Conde (Massachusets, USA: Cambridge University Press, 2006), 249.

[6] Sandra Kuntz Ficker "Economic Backwardness and Firm Strategy: An American Railroad Corporation in Nineteenth-Century Mexico," *Hispanic American Historical Review*, vol. 80, no. 2 (2000): 267-298.

[7] Robert William Fogel, "A Quantitative Approach to the Study of Railroads in American Economic Growth: A Report of Some Preliminary Findings," *The Journal of Economic History*, vol. 22, no. 2 (1962): 163-197.

between exactly the same points without the railroad.[8] Kuntz Ficker concluded for Mexico that freight transportation had a high "social savings," but paradoxically it "contributed little to the industrial growth of Mexico during the Porfirian era."[9]

Scholar A. Kim Clark moved away from the economic issues to focus on the political project of liberal politicians in Ecuador to unite Quito and Guayaquil in a project of national unification.[10] The country had two sectors committed to the establishment of railroads: the coastal agro-export elite wanted labor from highland regions, while landowners in the highland areas of the country wanted coastal markets for their food products. Clark argues that conservative highland elites made a truce with liberal coastal elites because they had confidence in the economic benefits of the railroad although their political perspectives in other aspects such as secularization or labor policies were in conflict. Clark also discusses the experiences of the common people who benefited, or were excluded, from railroad operations. Railroads would ease the movement of goods and laborers but also indigenous leaders would journey to town centers to submit complains and denounce abuses of landowners. Clark's study looked at the culture of dominant social groups and their discourse from an anthropological perspective in dialogue with alternate views from subordinate groups.

The New Economic History offered another view of the railroads by incorporating

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[8] Robert William Fogel. "Notes on the Social Saving Controversy," *The Journal of Economic History*, vol. 39, no. 1 (1979): 2-3.
[9] John H. Coatsworth, *Growth Against Development: The Economic Impact of Railroads in Profirian Mexico* (Illinois, USA: Nothern Illinois University Press, 1981), 180.
[10] A. Kim Clark, *The redemptive work: railway and nation in Ecuador, 1895-1930* (Wilmington, Del.: Scholarly Resources Books, 1998.)

quantitative techniques and economic theory to historical analysis. William Summerhill conducted a study to calculate the economic impact of the railroads in Brazil. He formulated a new set of questions reconsidering the traditional view that railroads promoted a dependency on foreign capital and export markets.[11] Summerhill did for Brazil what John H. Coatsworth had done for Mexico twenty years before. He concluded that railroads strengthened the internal economy of the country by providing cheaper transportation. Summerhill analyzed the finances of railroad companies and the impact of governmental regulation policies.[12] He relied on econometrics to attest to the inaccuracies found in previous historic narratives. Summerhill avoided cultural questions or political struggles, to focus on the economic outcomes of the railroads.

The most recent paradigm to approach the history of railroads is the New Cultural History. Michael Matthews studied the "cultural dimensions" of the railroads in Mexico during the *porfiriato*.[13] Matthews' study shared some of the questions raised previously by A. Kim Clark's study of Ecuador. Both shared an interest in the discourses about railroads and modernity. Matthews proposed a detailed scrutiny of the symbolic representations of the railroads for a better understanding of the *porfirian* regime. He moved away from the economic questions about the role of railroad in the advancement of the national economy to questions about power and how it was maintained and challenged.

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[11] John Coatsworth, Alan Taylor, eds. *Latin America and the World Economy since 1800* (Massachusets, USA: Harvard University Press, 1999.)
[12] William Summerhill, *Order Against Progress: Government, Foreign Investment, and Railroads in Brazil, 1854-1913* (California, USA: Stanford University Press, 2003.)
[13] Michael Matthews, *The civilizing machine: A cultural history of Mexican railroads, 1786-1910* (Nebraska, USA: University of Nebraska Press, 2013), 5.

This concise historiographical review showed different approaches to the topic of railroads in Latin America. I recognize the value of the traditional perspective as the foundation for subsequent nuanced narratives. In my study, I discuss the groundwork for railroads in Puerto Rico, and also address cultural and ideological issues. The following section offers a review of studies about railroads in the Spanish Caribbean to narrow the focus to the region under study.

Railroads in the Caribbean

There are few studies about railroads in the Caribbean. The best is that of Oscar Zanetti Lecuona and Alejandro García titled *Sugar and Railroads*. In this book the authors provide an economic history of the development of the railroads in Cuba from their inception as a Spanish colony to the Cuban Revolution of 1959.[14] As the title suggests, railroads in Cuba were directly tied to sugar production; if sugar production increased then freight income also increased and the railroad business prospered. The entrance of U.S. capital sugar monopolies in the first decades of the twentieth century generated a problem for the railroad companies because the internal railroad system of these factories transported raw cane to the mills but also transported refined sugar to the ports to be exported, marginalizing the railroad companies for public service. In the 1920s the crisis in the sugar industry affected the railroad industry and competition during the Gerardo Machado regime (1924-1933) was stimulated thanks to an aggressive plan of highway construction. In the 1940s the principal railroad companies were in serious fiscal problems but the state assumed an active role to prevent their closure and acquire two of the companies.

[14] Oscar Zanetti Lecuona and Alejandro García Álvarez, *Sugar and railroads: a Cuban history, 1837-1959* (North Carolina, USA: University of North Carolina Press 1998.)

Railroad workers unionized and were leaders of the Cuban labor movement which in the 1950s opposed the dictatorship of Fulgencio Batista. Zanetti and García concluded that the railroad economic downfall was part of the Cuban neocolonial political system crisis.

For the Dominican Republic, the Michiel Baud' study provides a social perspective of the impact of the railroads in the Cibao region. Baud stresses the role of local elites in the promotion of the new infrastructure, and recounts the people's reaction to the project of economic modernization. Railroads were important for the transportation of tobacco and cacao, not only sugar, as was the case in Cuba. The construction of the railroad Samaná-Santiago was a challenge because the population in the area was scarce. The company relied in migrant workers from British and Danish islands (known as *cocolos*), but a resentment in the local population pushed the company to hire more local workers. Ten years later the Ferrocarril Central hired local workers because the area had a much more dense population, however these workers had the inconvenience of being seasonal. At this moment (1891) the Cibao region entered in the sugar business and the population mostly worked in the cane harvest, after that, during the idle or dead season these laborers worked in the railroad construction. Peasant laborers from vicinity lands were also problematic because during the dry season they worked in their subsistence plots, but for the railroad company this was the best moment to build the tracks. The beginning of the railroad service also provided a source of income to peasants living near the railroad route by working in the maintenance of the area. Although the construction of railroads confronted multiple problems and delays, it was important in the development of capitalist relations in the region. Baud also discusses the role of foreign investment in the country. He concluded that investors from Europe

limited their interests to business, but investors from the United States also influenced political decisions in the Dominican Republic for their economic benefit. The author considered that U.S. investments in railroads produced the first signs of loss of sovereignty of the Dominican Republic.[15]

Puerto Rico had only a handful of studies about railroads, but none of which could compare with those about Cuba and the Dominican Republic. Jesús Martín Ramos in his published doctoral dissertation, *Las comunicaciones en la isla de Puerto Rico, 1850-1898*,[16] identified 1850 as the beginning of serious efforts to establish railroads. Martín Ramos discussed every private initiative to establish railways, even unsuccessful ones, and mentioned the debates related with the line gauge. The Spanish government imposed in Puerto Rico one-meter line gauge for all railroads offering public service but the promoters of railroads on the island opposed the decision. Narrow gauge railroads were less expensive to construct than wider gauge railroads but the government preferred a uniform wider-gauge for the transportation of heavier loads and for an easier transfer of wagons between railroad companies. Martín Ramos argued that private initiatives did not pursue a rational scheme because investors only proposed coastal short lines until the engineers from the Bureau of Public Works outlined a national plan for a railroad system. The proposal was simply a coastal trajectory to expedite the transportation of goods to the ports. Martín Ramos concluded by describing the effort of private companies to connect branch lines from sugar mills to the coastal

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[15] Michiel Baud, *Historia de un sueño: los ferrocarriles públicos en la República Dominicana, 1880-1930* (Santo Domingo, DR: Fundación Cultural Dominicana, 1993.)
[16] Jesús Martín Ramos, *Las comunicaciones en la isla de Puerto Rico: 1850-1898* (San Juan, PR: Academia Puertorriqueña de la Historia, 2005.)

railroad. *Las comunicaciones en la isla de Puerto Rico* is based on Spanish manuscripts which provided a clear and detailed description of the emergence of railroad companies during the last decades of Spanish control in Puerto Rico. However, the focus of the book was not the railroads as they were part of a communication infrastructure comprised by roads, maritime trade, telegraphs and ports.

In a study about maritime trade, Emma A. Dávila Cox discussed how the railroads established in the nineteenth century were a failure in the economic advancement of the island.[17] Dávila Cox argued:

> El ferrocarril de Puerto Rico fue un verdadero fracaso. No se ajustó al patrón de "embudo" que suele caracterizar a las economías de exportación de manera que fluyan los productos desde el interior hasta los puertos. Ni mucho menos llegó a parecerse al patrón de "estrella" que caracteriza a las naciones desarrolladas de Europa, en el cual todas las líneas del interior desembocan en la capital, verdadero epicentro económico del país. La línea de ferrocarriles de Puerto Rico terminó siendo un anillo partido en cuatro pedazos. La falta de sentido económico en su construcción no es sino un reflejo de la poca falta que en realidad hacía, y al igual que el estado de abandono en las carreteras, era reflejo del poco interés que tenían los puertorriqueños en las comunicaciones intermunicipales. Da haberse intentado la más difícil tarea de comunicar los centros cafetaleros de la montaña por

[17] Emma A. Dávila Cox, *Este inmenso comercio; las relaciones mercantiles entre Puerto Rico y Gran Bretaña, 1844-1898* (San Juan, PR: Editorial de la Universidad de Puerto Rico, 1996).

> ferrocarril con la costa, siguiendo el convencional patrón de "embudo", la empresa sin duda habría resultado mucho más exitosa. Pero, como apuntaba Churchward, el ferrocarril sólo recorría la costa, y por lo tanto no podía competir con el servicio más eficiente y barato que ofrecía la navegación costera.[18]

Dávila concluded that railroads were not really necessarily at this moment, and that Puerto Ricans were not distressed with the limited internal communications due to the fact that goods moved efficiently via the sea. From my perspective, the people in Puerto Rico did have an interest in the development of railroads but lack of capital limited their development. Even with this limitation, there were multiple attempts to develop rail lines, which evidenced the need to modernize internal communications. The actions of the investors were pragmatic, if it was cheaper to develop narrow gauge railroads on flat soil then those were the railroads they would establish. Dávila Cox recognized the necessity of connecting coffee plantations of the interior with the ports on the coast, but Spain eluded any serious commitment to invest in the development of infrastructure. Finally, Dávila Cox also argued that railroads could not compete with the "cheap and efficient" service of maritime shipping. But, it was the other way around: I claim, maritime

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[18] Translation: "The railroad in Puerto Rico was a real failure. It did not follow the "funnel" pattern that often characterizes the export economies so products could flow from the interior to the ports. Much less did resemble the "Star" pattern that characterizes developed nations of Europe, in which all rail lines of the interior lead into the capital, the real economic epicenter of the country. The railroad in Puerto Rico ended up being a ring torn apart into four pieces. Lack of economic sense in its construction only reflected how needless they were, just like the state of abandonment on roads was a reflection of the lack of interest the Puerto Ricans had on internal communications. If the company had attempted to communicate the highland coffee centers and the coast by rail following the conventional "funnel" pattern certainly would have been much more successful. But, as Churchward pointed out, the railroad only toured the coast, therefore could not compete with the more efficient and cheap service offered by coastal navigation."
Dávila Cox, *Este inmenso comercio*, 292.

shipping could not compete with the cheap, efficient and rapid transportation of the railroads. Here the key element is *time*. Railroads could decrease time in the transportation of goods and consequently decrease costs and prices. In the nineteenth century, Puerto Rico had an efficient maritime service, but the island needed railroads for expeditious shipping of goods, and Dávila Cox avoided the discussion of this key element.

There are two unpublished theses on the railroads during the Spanish era. The first thesis focuses on the study of the beltway railroad. Edwin Borrero González claimed in his study *El ferrocarril de circunvalación: Estudio de una subcultura puertorriqueña y la tecnología auxiliar* that from 1888 to 1898 Spain promoted the most important infrastructure development in four centuries of colonial occupation.[19] He claimed that the beltway railroad unified the country by connecting coastal towns. Even those living in the mountains participated in this process of national unification, which made the colony more valuable to Spain. From my perspective Borrero González overstated the preeminence of the beltway railroad in the island because in the last decade of the nineteenth-century the economy relied mainly in the exports of coffee and the railroads provided service mainly to sugar mills.

The second work was Leandro Fanjul González's thesis titled *Don Pablo Ubarri y Puerto Rico.*[20] Fanjul González's dissertation is a biography of a Spanish merchant, Don Pablo Ubarri, Conde de Santurce, who first introduced the steam locomotive in 1880. The *Tranvía de Ubarri*

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[19] Edwin Borrero González, *El ferrocarril de circunvalación : Estudio de una subcultura puertorriqueña y la tecnologia axiliar* (Master's thesis. Río Piedras: Universidad de Puerto Rico, 1978), 227-228.
[20] Leandro Fanjul González, *Don Pablo Ubarri y Puerto Rico* (Master's thesis. Río Piedras, PR: Universidad de Puerto Rico, 1980.)

was the first steam tramway in the urban area of San Juan, Santurce, and Río Piedras. The tramway increased the reputation of Ubarri to the point that the name "Santurce" was adopted in honor of Ubarri's birthplace in Spain.[21] The discussion of Ubarri's trolley was not extensive, but it was descriptive; and offered important information on one significant developer of urban tramways.

Juan R. González Mendoza and Héctor E. Sánchez Sánchez also wrote an article about the *Tranvía de Ubarri*.[22] The authors offered the most insightful research questions of all the secondary literature under review; however, the article did not address all the issues presented by them. González Mendoza and Sánchez Sánchez analyzed the origins of the tramway and identified accidents as one of the principal problems confronted by the company.

Antonio Santamaría García, in the article "Los ferrocarriles de servicio público de Puerto Rico (1870-1990)," followed the development of the railroads and their eventual collapse.[23] Santamaría García's main contribution was the comparative analysis he made by contrasting the case of Puerto Rico with other railway systems in Latin America. Finally, historian Aurelio Tió in "Breve historia de los ferrocarriles de Puerto Rico" provided an overview of the emergence and downfall of the railroads in Puerto Rico.[24] Tió began his essay with a descriptive narrative but concludes with an assessment of the reasons behind the collapse of the railroad system. He

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[21] Ibid., 412-13.
[22] Juan R. Gonzalez Mendoza, and Hector E. Sánchez Sánchez, "Los orígenes del tranvía de San Juan a Rio Piedras, 1878-1885," *Anales de Investigación Histórica*, vol. 1, no. 2 (1974): 2-33.
[23] Antonio Santamaría García, "Los ferrocarriles de servicio público de Puerto Rico (1870-1990)," *Revista Complutense de Historia de América*, no. 20 (1994): 207-228.
[24] Aurelio Tió, "Breve historia de los ferrocarriles de Puerto Rico," *Boletín de la Academia Puertorriqueña de la Historia*, vol. 3, no. 10 (June 1973): 105-116.

claims that policy makers considered railroads an anachronism, and for this reason denied subsidies to maintain operations.

There are other short studies in newspapers, popular magazines, and publications about the sugar economy, in which aspects of the railroads are discussed, but none of them provides a significant analysis of the socioeconomic impact of the railroads.[25] The works about the railroads in Puerto Rico include articles, a chapter in two books, two master's theses, but no comprehensive study has been forthcoming. In this dissertation, I depart from those descriptive works already developed by other authors, and produce an analysis (from the mid-nineteenth century to the first half of the twentieth) of the origin, development and collapse of the railroads in relation to the transformation of the Puerto Rican economy.

This study

The objective of this study is to trace the evolution of railways in Puerto Rico through the experience of establishing, operating, and then dismantling them. There were multiple successful as well as unsuccessful attempts to establish tramways and railroads. The franchises under operation were numerous and I am seeking to understand how those companies contributed to the insular economy. My focus is the study of "public interest railroads." In Puerto Rico the state did not own railroads and all of them were private corporations. However, the government considered some railroads to be beneficial for the country as a whole. Those railroads were

[25] Articles in journals include Helen V. Toocker "The good old railroad" published in San Juan Review, and Jaime Bague "Los ferrocarriles de vía estrecha en Puerto Rico, Siglo XIX" published in *Boricua*. Books about sugar plantations, which make references to the railroads are Andrés Ramos Mattei, *La sociedad del azúcar en Puerto Rico*, and Angel L. Vázquez Medina, *La Hacienda Monserrate de Manatí : 131 años de historia del azúcar en la region norte central de Puerto Rico.*

subject to governmental regulations and provided transportation for passengers and/or freight. Among these companies, this work closely examines the largest providers of railroad transportation, which I consider to be soul of the industry. My ideal reader will look for the story of a Caribbean country struggling to improve its economic reality. The introduction of European technologies in the nineteenth-century to Puerto Rico offers an opportunity to examine the ideas of an era and the transformations that occur in the ongoing efforts to reach the level of economic development of Europe.

I am telling the story of the Puerto Rican effort to modernize the transportation infrastructure. Like other scholars have done for several Latin American and Caribbean countries I point out the challenges faced by the island to compete in the international markets with an inadequate infrastructure. My contribution to the historiography will be the analysis of the economic need for railroads and their contribution to the economic development and modernization of the island through analysis of text from politicians, policy makers, entrepreneurs, unionized workers, legal documents, and the press.

Finally, this work argues that railroads' role in the economy was transformed from being a necessity to promote prosperity in the last quarter of the nineteenth century to being a transportation system that was no appropriate for the industrial development strategy adopted by the insular and colonial elite in the 1940s.

This dissertation is based on archival material from Puerto Rico, Spain, and the United States. I primarily rely on official documents such as reports of railroad companies, reports of the insular governors, legislative hearings, official memos, court cases, and the census. Other sources

include commercial newspapers and magazines.

Structure

The six chapters of this thesis should be read as a continuous long essay with a chronological linkage. As a starting point, I analyze the debates of the economic situation in Puerto Rico during the second half of the nineteenth century and the different proposals for the development of railroads. These debates were insular, but with ideas common to Latin America and Europe. Through this analysis, I trace the evolution of the proposals to bring railroads to the island. This chapter ends with the establishment and outcomes of the first tramways on the island.

In the second chapter, I focus on the governmental project for a beltway railroad to cover the entire coastline of the island. The narrative includes the building process of the railroad, and the interests of the sugar mills to link their own internal railroads to the beltway railroad.

The third chapter deals with the euphoria for railroad construction after the occupation of the island by the United States. This section also introduces the challenges the railroads faced during World War I. I give special attention to the emergence of workers unions and the beginning of the competition between railroads and trucks for the control of the distribution of goods.

Chapter four provides an account of the railroads during the interwar period. This section includes the discussion of the New Deal program in Puerto Rico, which provided economic relief in rural areas, but gave no assistance to sugar mills or railroad companies.

Chapter five is about the role of the railroads in national defense during World War II.

Workers gained prominence in that decade and became central in this section as well as in the last chapter. Another aspect I will analyze is the attitude of policy makers in relation to the railroads.

In the final chapter, the discussion revolves around three main issues: labor demands, competition with trucks and automobiles, and the development of a post-war economic plan of industrialization. In the conclusion, I revisit the trajectory of the railroad industry and offer the final considerations regarding the changing role of the railroads in the Puerto Rican economy.

CHAPTER I. ON THE ROAD TO PROGRESS

> *"In a short time he had increased the production of ice to such a degree that it was too much for the local market and Aureliano Triste had to think about the possibility of expanding the business to other towns in the swamp. It was then that he thought of the decisive step, not only for the modernization of his business but to link the town with the rest of the world.*
> *-"We have to bring in the railroad," he said.*
>
> Gabriel García Márquez
> «One Hundred Years of Solitude»

Eugenio María de Hostos was one of the most prominent thinkers of the nineteenth century in Puerto Rico. He is well known for his ideas against colonialism and as a promoter of education, but not necessarily recognized for his ideas about the role of railroads and their impact on the progress of nations. Adriana Arpini found that Hostos was a strong supporter of the trans-Andean railroad, which connected Chile and Argentina through the Andean mountains. Arpini argued that Hostos did not conceive the railroad as a mere bridge between two nations but that it ment Latin-American unity as well as a step towards civilization. In Arpini's words:

> Desde la perspectiva hostosiana –forjada a partir de los principios humanistas del krausianismo y orientada por ideales civilizatorios-, el ferrocarril es no solo un elemento de unión entre los pueblos, sino también un medio de paz; ya que es un mediador de intereses económicos complementarios de la producción, del consumo, de la circulación de las riquezas, de la organización del trabajo, de la

locomoción y del desarrollo de culturas embrionarias.[26]

Hostos was an exceptional figure, and his opinions with respect to the railroads and their impact in achieving civilization and modernity were shared by many within the Puerto Rican elite. The idea of establishing "*caminos de hierro*" (iron roads) to move freight and passengers came from abroad as a potential solution to the transportation difficulties that many planters and merchants confronted through the nineteenth-century. Railroads could unite the island and its interior and with the rest of the world.

The nineteenth-century was a time of change. The island of Puerto Rico finally emerged from decades of economic isolation. The Spanish monopoly trading system came to an end after more than two hundred years, and a new chapter of slow economic liberalization improved the possibilities for economic growth. Sugar plantations on the coast and coffee farms of the interior became sources of incredible wealth. Agricultural production opened the door for economic expansion after years of limited commerce, and an unrestrained informal economy.

Sugar exports underwent a phase of expansion in the early nineteenth-century. Sydney Mintz claimed that "from 1815 until 1876 a full-scale plantation system operated in Puerto Rico."[27] It was in 1815 that the King of Spain, Ferdinand VII, decreed the *Real Cédula de Gracias* to

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[26] "From Hostos' perspective – shape from Krausian humanist principles and guided by civilizatorian ideals – the railroads were an element of cohesion and peace for the nations, because fuctioned as mediator between economic interests of producers, the consumption, the circulation of wealth, the organization of labor, of locomotion, and the development of embrionary cultures."
Adriana Arpini, *Eugenio María de Hostos y su época: Categorías sociales y fundamentación filosófica* (Río Piedras, PR: La editorial de la Universidad de Puerto Rico, 2007), 96-97.

[27] Sidney W. Mintz, "The Culture History of a Puerto Rican Sugar Cane Plantation: 1876-1949," *Hispanic American Historical Review,* vol. 33, no. 2 (1953): 226.

promote the island as an ideal place to settle and invest. The *Cédula de Gracias* allowed free commerce with "friendly nations" and privileged the immigration of white planters with capital and slaves.[28] The decree granted free land for Catholic migrants, their relatives, and slaves; it also granted tax exemptions for 15 years, and naturalization after five years of residency. The Spanish Crown allowed the entrance of slaves and agricultural equipment duty free pursuing the transition fom subsistence agriculture and cattle ranching to embrace the plantation system. Article 32 in the *Cédula de Gracias* explicitly welcomed the establishment of sugar mills by locals and foreigners to produce sugar.

Sugar was a product in high demand with an attractive value in the international markets. However, Puerto Rico was a late comer to the sugar business and competed against well established producers like Cuba. Colonel George D. Flinter, an Irishmen serving in the Spanish army, wrote in 1830: "We cannot expect, of course, to find in Puerto Rico the immense commercial and agricultural riches which mark Cuba and Jamaica as the richest of the West Indian islands."[29] Nonetheless, Colonel Flinter believed the island was moving towards improving its economic situation, among other things, through investments in roads and bridges. In his analysis, Puerto Rico was gifted with abundant water resources. However, in the rainy season torrents of water flowed from the mountains to the coast with incredible force, making it impossible for horse or mule-driven carts to cross the rivers. This situation required the construction of bridges to halt

[28] Immigrants from african descent would also benefit from free land but they received three acres of land while white immigrants received six acres. Article 10 in the *Real Cédula de Gracias*, 10 August 1815.
[29] George D. Flinter, *An Account of the Present State of the Island of Puerto Rico* (London, UK: Longman, 1834), 12-13.

economic losses and to prevent the loss of human lives. Colonel Flinter continued to write on how Spain had ignored Puerto Rico's needs during the Latin American wars for independence. The situation changed: "Since the year 1824, the opening and consolidating of roads, and constructing of bridges, has occupied the attention of government, as the only means of awaking the dormant spirit of industry."[30] Colonel Flinter praised the quality of the roads and the number of bridges also captured his interest: "One hundred and thirty wooden bridges, over rivers and brooks, have been constructed within the last six years, some of which would be an ornament even in Europe."[31] This commendation of the government's commitment to the enhancement of the infrastructure was sealed with this conclusion:

> On the whole it may be asserted that the roads of Puerto Rico are generally good, and some of them excellent. The inhabitants of every part of the island begin to feel the beneficial effects arising from them, without the expense pressing hard on any part of the community…In the course of three or four years, I am persuaded that one will be able to travel round the island, and through the interior of it, in a carriage, with the greatest facility; for the inhabitants, convinced that their prosperity in a great measure depends on good roads, zealously second the wise views of Government.[32]

Flinter's prediction, however, was far from accurate. The progress in infrastructure took

[30] Ibid, 29.
[31] Ibid. 32.
[32] Ibid, 33.

more time than he had estimated. Probably, Flinter's calculations responded to Governor Miguel de la Torre's initiatives for the construction of new roads. Governor De la Torre visited every town on the island and directed the construction and repair of roads and bridges on the coast and on the highlands. In 1827, Pedro Tomás de Córdoba, Secretary of State under Governor De la Torre, reported the construction and improvement of roads in 26 towns funded with private capital and public funds.[33] However, the efforts to provide a modern infrastructure were insufficient due to limited capital and human resources.[34]

Labor scarcity was a serious concern in Puerto Rico; in 1834 the island had an estimated population of 358,836 inhabitants, and only 41,818 were slaves. The details of the slave trade to Puerto Rico are vague due to the lack of official records, in all probability because after the Anglo-Spanish treaty of 1820 the introduction of slaves from Africa was illegal.[35] Government officials like De la Torre did not enforce its prohibition, and illegal slave traffic continued supplying slaves to sugar planters which relied mainly on slave labor. Planters also hired peasants to complement slave labor. Oral arrangements between planters and peasants based on the exchange of land and labor were common. These peasants known as *agregados* (squatters) lived on a plot ceded to them by the planter with the authorization to cultivate their own food and tend animals. In exchange for the land, the *agregado* peasants worked on the plantation and could

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[33] Pedro Tomás de Córdoba, *Relación circunstanciada de todas las obras públicas emprendidas en la isla de Puerto Rico en el año de 1827* (Puerto Rico: Imprenta del gobierno, 1828), in "Folletos sobre obras públicas, censo y aumento de productos," Portal de Archivos Españoles (PARES), Archivo Histórico Nacional (AHN), Ministerio de Ultramar, Unidad 2015, Expediente 4.
[34] Guillermo A. Baralt, *Una de cal y otra de arena: Panorama histórico de la construcción en Puerto Rico 1493-2004* (San Juan, PR: Asociación de constructores generales de América, Capítulo de Puerto Rico, 2008), 65-67.
[35] Francisco A. Scarano, *Sugar and Slavery in Puerto Rico: The plantation economy of Ponce, 1800-1850* (Wisconsin, USA: The University of Wisconsin Press, 1984), 121.

receive payments in tokens to redeem at the planter's store. The *agregado* also had the alternative to acquire goods in the store on credit to be paid off with labor. These arrangements would benefit peasants and planters alike, because peasants had access to goods and the planters maintained the peasants working on the plantation until the debt was cancelled.[36] However, planters commonly complained that peasants had no working discipline, irregularly appeared to work, and rejected tough tasks. Most sugar planters claimed that undisciplined peasants made the sugar industry unsustainable without slaves.

The 1840s were tough times for sugar planters with "stagnating production, unusually low prices and profits, increasing costs because of diminishing returns and expenditures on irrigation."[37] Labor shortages became more acute when diplomatic pressure from Britain dramatically affected the entrance of slaves to the island. Jorge Chinea claimed that "The third Anglo-Spanish treaty banning slave shipments to the Hispanic Caribbean (1845), the establishment of a British consulate and Spain's adoption of stringent measures against *negreros* proved disastrous for the undercapitalized Puerto Rican sugar estates, many of which could not afford the inflated prices of fresh bonded labor. In response, colonial officials tried desperately to use anti-vagrancy regulations to mobilize peasants and urban workers."[38] Most of these peasants subsisted with their own crops and worked on the plantations when they had specific needs to defray. As a

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[36] James L. Dietz, *Economic history of Puerto Rico: institutional change and capitalist development* (New Jersey, USA: Princeton University Press, 1986), 31-36.
[37] Scarano, *Sugar and Slavery in Puerto Rico*, 60.
[38] Jorge L. Chinea, "Confronting the Crisis of the Slave-Based Plantation System in Puerto Rico: Bureaucratic Proposals for Agricultural Modernisation, Diversification and Free Labour, c. 1846–1852," *Journal of Latin American Studies*, no. 42 (2010): 122.

result, the texts of the time commonly cast peasants with a negative imagery of laziness and indolence. The government's strategy was to alter the "nature" of the natives by imposing a strict work ethic.

In 1849 Governor Juan de la Pezuela responded to planters' demands for laborers with the *Bando de Policía y Buen Gobierno,* which was a legal code to control the behavior of the population which did not own land or exercise a profession. [39] The code mandated the people to register and provide all personal data including their occupation. The intent of code was an attempt to force the population to work as wage earners instead of living a life of subsistence. [40] The law exempted land owners, but slaves and landless peasants were closely monitored by local authorities to avoid "immoral" activities typical of "lazy" people. Interesting enough the spaces of surveillance were dirt roads and streets. Transgressors could be punished with fines, prison, or community service, such as working in the "composición de los caminos vecinales."[41] A good example of this was article 178, which penalized any person making public disorder or dressing inappropriately because of drunkenness with jail and fifteen days working on road improvements. The code provided a mechanism to stop undesirable behavior, and was also a retribution to society through work for the public benefit. In a study of discipline and punishment in France the experience was similar: "thieves who also obstruct the free circulation of goods could be put to

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[39] Gervasio L. García, "Economía y trabajo en el Puerto Rico del siglo XIX," *Historia Mexicana*, vol. 38, no. 4 (1989): 858.

[40] Pezuela's code was not the first to be imposed in the island. Field Marshal Miguel López de Baños established a code with similar goals in 1838.

[41] Translation: "maintenance of local roads."
Juan de la Pezuela, *Bando de Policía y Buen Gobierno de la Isla de Puerto-Rico* (Puerto Rico: Imprenta del gobierno, 1849), 27.

rebuild the highways."[42] The reason: "Public works meant two things: the collective interest in the punishment of the condemned man and the visible, verifiable character of the punishment. Thus the convict pays twice; by the labor he provides and by the signs that he produces."[43] The *Bando de Policía y Buen Gobierno* represented the streets as vulnerable spaces. No loitering was allowed on the street, they were only for transit. Streets had to be in good shape, not necessarily for the convenience of the peasants, the *jornaleros* (wage earners) or the slaves, but because goods had to be moved to the markets or ports. Land owners and merchants were the social groups who had the economic interests of a better infrastructure for the island, and Governor Juan de la Pezuela wanted to improve the economy by transforming an indolent population (from his perspective) into wage workers.

Governor Pezuela enacted another code, also approved in 1849, establishing procedures for the development and maintenance of roads. The code mandated the creation of town boards to study, develop, and maintain roads for the public benefit. To finance these projects the town boards collected excise taxes for rum and cattle meat, and property taxes (two *pesos* per *caballería*) every quarter.[44] An engineer, architect, or surveyor would be on charge of the road design. Roads would have a width of 12 *varas* (measure equivalent to 3 foot per one *vara*) including 2 *varas* for each sidewalk. On steep slopes the width could come down to 8 *varas* and the road would form a spiral to reduce the angle to a ratio of 1:18. After 20 or 25 *varas* the road would be leveled in a plateau to ease the turn of carriages in a spacious bend. The gutters had to have an inclination of 45 degrees.

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[42] Michel Foucault, *Discipline and Punish: The Birth of the Prison* (New York, USA: Vintage Books, 1995), 109.
[43] Ibid.
[44] *Caballería* was a unit of land area. In Puerto Rico equaled 78.58 hectares.

The material used in roads was limestone. Large rocks would be at the base and small rocks (with the dimensions of a chicken egg) in the surface until it reached a thickness of 10 to 12 inches. A manual roller was necessary to compact the limestone. In the absence of limestone an alternative was cobblestone, although it required a layer of clay on the road surface to seal it.

For maintenance of the roads the town boards would hire road peons (*peones camineros*). Each peon had to supervise one *legua* (equivalent to 4 kilometers) to fill potholes with stones and solid ground, clean ditches, and oversee the transit of people, horses or carriages on the road. A peon had the right to a small house near the road assigned to him and tools to perform maintenance work.[45] These workers had to wear an identification bronze shield on the chest with the letters "P.C.", had to be able to read and write in order to submit weekly reports to the town board, and would earn a monthly salary of 15 *pesos*.[46] Pezuela's code provided the structure for the enhancement of the island infrastructure in a moment of new economic challenges.

Economic changes

The decline in revenues from sugar exports continued to the mid-ninetenth century. Sugar planters and merchants on the island called for reforms to improve the economy. When the acquisition of slaves became more difficult and therefore more costly planters relied on peasants and slaves born in Puerto Rico. Capital formerly used for the purchase of slaves would be invested in the acquisition of more land to increase production, but the problem of labor continued. Advanced technology was one strategy to confront the labor problem. In this case the substitution

[45] The name of these dwellings was *Casillas de camineros*. In the *casillas* lived the peon with his family.
[46] *Reglamento para las juntas subalternas en la isla de Puerto-Rico* (Puerto Rico: Imprenta de Gimbernat, 1849).

of the traditional oxen-powered mill by the modern and more efficient steam powered mill was necessary to improve production. However, technological innovation was expensive. Historian Pedro San Miguel studied sugar production in Vega Baja and found that investment in modern technology was not a possibility for small planters with limited capital. For instance, a mill (*trapiche*) powered by animals in Vega Baja could have a value of 500 *pesos* (as was the case in *Hacienda Rosario*), but a steam mill had a value of 8,000 to 10,000 *pesos*. A hydraulic mill was less expensive than a steam mill but it required a source of water with a strong current to move the water wheels, and that possibility was not real for many planters.[47] Another option was the acquisition of a "Jamaica train" (series of large kettels) for the boiling house where the cane juice was heated to produce brown sugar (*moscabado*). This technology did not improve the quality of the product but it heated the kettles with the bagasse of the cane, thus cutting down fuel costs.[48] These technological improvements impacted the phase of sugar manufacturing, but once the sugar was produced another issue arose: the transportation of the sugar to the ports.

By the mid-nineteenth century Puerto Rico continued with a rudimentary road infrastructure. Planters could have abundant land, workers, and machinery, but if they could not transport sugar to the markets their businesses would collapse. The sugar profits depended on the success in exporting the product, not from local consumption. Local planters competed against other countries to sell their sugar without any privilege, such as protective tariffs, because the United States was the main consumer of the Puerto Rican sugar. Historian Francisco A. Scarano

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[47] Pedro San Miguél, *El mundo que creó el azúcar: Las haciendas en Vega Baja, 1800-1873* (San Juan, PR: Ediciones Huracán, Inc., 1989), 172-184.
[48] Scarano, *Sugar and Slavery in Puerto Rico*, 107.

indicated that Puerto Rico was an atypical case in the Caribbean because "the expansion of the sugar industry depended on interaction with a foreign nation –the United States– and not with its metropolis, Spain."[49] Sugar produced in Spain had primacy over sugar produced overseas, forcing sugar planters in Puerto Rico to look for other markets. The key was to produce cheap sugar of good quality to win over the competitors, however the island only produced *moscabado* variety of sugar of low quality and the cost of transportation was high. Planters did not have the capital to access the technology to produce refined sugar in the mid-ninetenth century, but actively pursued state support for the development of new infrastructure to access the export outlets from their estates. Cheaper and fast transportation could increase profits and competitiveness. Historian Guillermo Baralt indicated that landowners and merchants donated money, equipment, and slaves to support government projects to enhance the condition of the infrastructure, and the towns (*ayuntamientos*) approved laws to force peasants to work on these projects.[50] The improvement of infrastructure was slow, although it was easier to solve than labor shortages. The country needed more capital for investment in infrastructure and a stronger commitment from the state.

The first rail initiatives

In reaction to the slow construction of roads by the state a potential solution would be private transportation over rails. Puerto Ricans could emulate foreign railroad initiatives. The official newspaper, *La Gaceta del Gobierno de Puerto-Rico*, sporadically published articles about the establishment of railroads in countries like Britain, United States, Cuba, and France. Although,

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[49] Scarano, *Sugar and Slavery in Puerto Rico*, 9.
[50] Baralt, *Una de cal y otra de arena*, 66-67.

a small percentage of the population could read the gazette, the literate few had the opportunity to learn about the first railway initiatives.[51]

On August 8, 1837 the newspaper examined monetary difficulties in the United States, and mentioned the futile use of public funds in the development of 200 miles of railroads in New York. In a territory with a small population like New York it had been a mistake to build another 340 miles railroad with laborers that could have been used in more necessary projects. The article stated that it was a disadvantage for commerce and industry to develop railroads in territories with limited wealth and human resources.[52] This assessment was applicable to Puerto Rico, a poor country with a limited labor supply, but the gazette did not make this analogy. Another article published at the end of the month celebrated the opening of a steam railroad from Manchester to Liverpool, two important industrial centers in Britain. Although the British success was an example to other countries, the gazette explained, the economic benefits of railroads would not be enjoyed in Spain because the mountainous topography of the country impeded its development.[53] This limitation also applied to Puerto Rico because the interior of the island was mountainous, but once again the gazette did not make the analogy. Two months later, the gazette published an article about the origin of "iron roads" in Britain. Furrows in roads made by the wheels of carriages had

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[51] In a report about a calligraphy assessment for elementary level students (5 to 12 years old) in 1845 the General Governor lieutenant Rafael de Aristegui y Vélez informed the existence of 64 public schools with 3,185 male students and 17 private schools with 691 male students for a total of 81 schools with 3,876 male students. For female students there were 7 public schools with 260 students and 26 private schools with 910 students for a total of 33 schools with 1,170 female students. The estimated population for the Island in 1846 was 447,914 inhabitants, which suggest a student population of 1 percent. "Resultado de los exámenes generales de enseñanza primaria," PARES/AHN, Ministerio de Ultramar, Unidad 301, Expediente 3, 25 April 1847.
[52] "Noticias Extrangeras. Estados-Unidos de América," *Gaceta del Gobierno de Puerto-Rico*, 8 August 1837, 2-3.
[53] "Railway o Caminos de Hierro de Manchester a Liverpool," *Gaceta del Gobierno de Puerto-Rico*, 31 August 1837, 3-4.

been the reason to use stones in roads since ancient times. In the seventeenth-century the British substituted the stones with wood and later the wood was plated with iron to extend its use, and that was the origin of the "iron roads." Initially the British used cast iron until the nineteenth-century when wrought iron became the norm because it was stronger. Iron lines on the road evolved to iron rails place over the roads to avoid obstacles such as mud or stones. Iron rails required the use of specially designed convex iron wheels to run aligned on the rails. Elevations, depressions, and curves were more dangerous in rails than in common roads and had to be avoided. Indeed, the leveling of the terrain was the most expensive aspect of railroad building. The article provided an estimated one million to 1.5 million *reales* for the cost of developing two rails in one *legua de posta* (equivalent to 4 kilometers) and 300,000 *reales* for the cost of the iron for the rails in one *legua de posta*.[54]

In December of 1837 the gazette announced the construction of a railroad from Havana to Güines in Cuba. The government of Cuba had problems maintaining its roadways in optimal conditions and considered the construction of railroads following the example set by England. This initiative began the process of railroad development in Cuba. As usual, the gazette avoided making any association between the Cuban experience and the situation in Puerto Rico.

Some months later, in August 1838, the gazette revealed the investment of 157 million Francs for the construction of four railroads lines in France. This article showed a trend towards the establishment of railroads in multiple countries with state support. However, Spain was reticent.

In August 1842 the gazette reported that a terrible railroad accident had occurred on the

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[54] "Variedades: Los caminos de hierro," *Gaceta del Gobierno de Puerto-Rico*, 21 October 1837, 3.

5:30 p.m. train from Versailles to Paris. The French calamity was not common the gazette clarified, and should not be lessen the incredible benefits of the railroads. The gazette included a list of nine railroad lines that were to be constructed in France by private companies with 4,400 *reales* of state funding. In a decade France had built 3,600 kilometers of railroads in an effort to recover its past glory as a modern country, which had been surpassed by the United Kingdom, Belgium, and Germany. The article questioned the viability of developing railroads in areas without sufficient economic activity to make them profitable. The French government had to consider two factors: if the railroad would shorten travel time for passengers and if the railroad would decrease shipping costs for merchandise. The article concluded that only four railroad lines were viable due to the commercial development in the area, but the other five rail lines only viewed it as an imprudent and fashionable impulse of promoting prosperity.[55] This closing commentary demonstrated the cautious outlook adopted by Spain in relation to the railroads. Spain did not adopt a public policy for railways until the approval of a Royal Decree on December 31, 1844, which established the procedure to acquire the permits for the construction and operation of railroads by private corporations. The corporations had to submit maps with the route of the railroad, and a report comprising a justification for the project based on the public benefit of developing the railroad, a detailed description of the rail alignment including aspects, such as the slopes and curves, a budget for the phase of construction and operation, and a list of construction materials. Previous to this Royal Decree some railroad projects were submitted by private

[55] "España. Madrid 19 de Mayo. Correspondencia Estranjera. Paris 14 de Mayo," *Gaceta del Gobierno de Puerto-Rico*, 27 August 1842, 2-3.

corporations and approved by the government, but none of them attracted enough investors. This decree provided a standard procedure to stimulate private capital to invest in modern railway infrastructure.[56]

The first railroad established in Spain was the Barcelona-Mataró railroad. The gazette in Puerto Rico announced the project in July 1844 but it was in 1847 when the newspaper celebrated the opening of the railroad line in Catalonia.[57] The entrepreneurs behind the project were Miquel Biada Bunyol who had lived for years in Cuba and knew first hand the benefits of the Havana-Güines railroad, and Josep María Roca Cabanes who lived in London and had witnessed the first rail initiatives in Britain. Roca Cabanes answered Biada Bunyol's call to establish a railroad from Barcelona to Mataró, Biada Bunyol's hometown. After the royal approval of the feasibility studies, the Catalonian entrepreneurs created the railroad corporation and hired British engineer John Lock for the technical aspects of the project. The inauguration was on October 28, 1848. The *Gaceta del Gobierno de Puerto-Rico* did not review the event, but the gazzete was an official paper to publish local pronouncements and metropolitan decrees, legislative decisions, and international news filtered by the authorities. It was in 1850 when the Barcelona-Mataró railroad reappeared in the pages of the gazette. The gazette published a fragment of the debate in the Spanish Parliament for the approval of a railroad law. The Minister of Public Works in Spain, Mr. Seijas Lozano claimed that Spain demonstrated its commitment with the development of railroads as demonstrate the

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[56] Rafael Alcaide González, "El ferrocarril en España (1829-1844): las primeras concesiones, el marco legal y la presencia de la geografía en las Memorias de los anteproyectos de construcción de las líneas férreas," *Revista Bibliográfica de Geografía y Ciencias Sociales*, no. 190 (1999) in http://www.ub.edu/geocrit/b3w-190.htm
[57] "Barcelona 29 de Abril," *Gaceta del Gobierno de Puerto-Rico*, 11 July 1844, 3; and "Barcelona 28 de Agosto," *Gaceta del Gobierno de Puerto-Rico*, 19 October 1847, 2.

opening of the Barcelona-Mataró railroad and the development of new rail lines in Aranjuez and Langreo-Gijon. A controversy arose in relation to the path to be followed: the French model of public funding or the British model of private initiative. For Minister Seijas Lozano the solution was a Spanish model, not French nor British, of private railroads in public lands with state amortization of 6 percent per capital invested in the construction of railroads. In other words, Spanish railways would be private, economically encouraged by a state amortization and public land use permits, but would be regulated by a railroad law. The impact of this notes published by the gazette about the process of railroad expansion is unmeasurable, however the awareness that railroads could improve the infrastructure in Puerto Rico is palpable through the railroad proposals received by the insular government since the 1850.

The first initiatives to build railroads in Puerto Rico came from local entrepreneurs. In 1850 the government received a proposal to develop a railroad between the northern towns of Arecibo and Cataño, close to the port of San Juan. The official newspaper, *La Gaceta Oficial de Puerto-Rico*, published a short article relating the creation of a corporation for the development of a railroad with the support of the government.[58] The Intendant of Puerto Rico, Don Miguel López de Acevedo, approved a tax exemption on materials imported to be used in the construction of this railroad. The Intendant expressed the commitment of the Governor General in the amelioration and development of agriculture and commerce on the island. Among other things, the Intendant was committed himself to provide a labor force from those men that had been sentenced to public

[58] "Intendencia del Ejército. Superintendencia Jeneral Delegada de Hacienda de Puerto-Rico," *Gaceta del Gobierno de Puerto-Rico*, 15 June 1850, 2.

works. However, Pezuela's government was not committed to concede land or directly invest in railroads. The Intendant found that it was plausible to subsidize the project through a 6 percent tax break, as approved in Spain. However, the Council of Ministers for Overseas Territories interpreted the Spanish law differently. They rejected any tax breaks, because the law of February 20, 1850 did not apply to Puerto Rico or any overseas territories.[59]

Neither Governor General Pezuela nor the Council of Ministers for Overseas territories supported the initiative of the Intendant. The Council rejected the project with the excuse that it was lacking information. In essence, the government wanted answers: Did the company submit plans for the route? Did the company submit a financial program with an estimate of the costs? Was there any auction proposed for contracts related to railroad construction?

The rail line from Arecibo to Cataño started as an idea. If the idea had supporters, then the corporation could become a reality, and the government could promote the agricultural and industrial sectors. Months after Don José Joaquín Solís requested the franchise, the intendant organized a meeting in his home to create a board composed of a president, vice-president, secretary and five vocals. The Intendant's petition was submitted in June, four months after assuming office on the island, demonstrating his active role in promoting alternatives to improving the economy, although he could not persuade the Council of Ministers about the maturity of the project. The Council even suggested consulting an engineer from the United States or England.[60]

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[59] "Solicitud de información sobre construcción de ferrocarril," PARES/AHN, Ministerio de Ultramar, Unidad 1134, Expediente 1, Img. 10, 31 July 1851.
[60] "Sobre formación de Soc. para construir un ferrocarril," PARES/AHN, Ministerio de Ultramar, Unidad 304, Expediente 6, Img. 157.

This short phrase is important, because the ministers recognized the vanguard position of these countries in the development of railroads. England and the United States were models to follow, since both countries enjoyed healthy economies, and were furthermore civilized and progressive countries. It was reasonable to believe that their formula for success had to be replicated in Puerto Rico. The island needed railroads to become a more progressive and civilized countries:

> Si la utilidad de las vías ferradas es reconocida y notoria en todos los países, en ninguno como en la isla de Puerto Rico, donde los frutos no tienen salida y el comercio y la industria languidecen por la falta casi absoluta de caminos. El establecimiento de los ferrocarriles allá, será un gran paso en la senda de la prosperidad y de la civilización, presentando además garantías para las eventualidades del porvenir[61]

The project to develop a railroad between Arecibo and Cataño collapsed. The attention given to the lack of communications changed with the arrival of the new military governor in 1852, Don Fernando de Norzagaray y Escudero. Governor Norzagaray recognized the economic problem of an island without a basic infrastructure for the transportation of goods. He classified the roads in two types: general roads under the responsibility of the insular government and vicinity roads

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[61] "If in every country it is notorious and recognized the usefulness of iron roads, then in Puerto Rico like in no other place, where agricultural products had no way out and commerce and industry languish by almost absolut lack of roads. The establishment of railroads would be a great step in the path of prosperity and civilization alike, presenting also guaratees for the eventualities of the future."
Ibid., Img. 24.

(*caminos vecinales*) under the responsibility of the towns (*ayuntamientos*).[62] General roads connected the departments, first-class vicinity roads connected towns with the capital of its department or with the general road that connected with the capital of its department, and second-class vicinity roads that connected two towns.[63] Governor Norzagaray wanted the participation of people from the entire island to elucidate the best places to establish low cost roads to promote the economy. As an incentive, the *Junta Superior Directiva* (Guiding Superior Board) chaired by Norzagaray opened a competition among the departments with a price of 25,000 *pesos* for the development of new roads. The departments must submit a list of road projects with its benefits for the island as a whole not for the sole benefit of the locals. On November 2, 1852 the board met and declared the department of Ponce the winner of the price and surprisingly the department of Bayamón received another 25,000 *pesos* after a unanimous vote of the board. The reason was the construction of a general-road from the Capital to the port of Ponce via Bayamón. The *Junta Superior Directiva* had two engineers hired to trace a route in a level terrain avoiding the construction of bridges to maintain low costs, a genuine defy in a country with abundant rivers and a dense mountain range.[64]

In February 1853 a regulation for the construction of local roads included the third-class vicinity roads defined as local roads or particular roads. These roads connected towns or

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[62] "Parte Oficial: Gobierno y Capitanía Jeneral de la Isla de Puerto-Rico-Circular núm. 4," *Gaceta del Gobierno de Puerto-Rico*, 3 July 1852, 1.
[63] The island had seven *departamentos* (districts) and the name of the *departmento* indicate the town serving as capital or administrative center: Capital (San Juan), Bayamón, Arecibo, Aguadilla, Mayagüez, Ponce, Guayama, Humacao.
[64] "Parte Oficial. Gobierno y Capitania Jeneral de la Isla de Puerto-Rico," *Gaceta del Gobierno de Puerto-Rico*, 9 November 1852, 1.

plantations with the municipality or a road in connection with the municipality. The towns had to finance the construction and maintenance of first-class vicinity roads, municipalities and residents that used second-class vicinity roads had to finance the construction and maintenance, and the third-class vicinity roads were under the sole responsibility of the residents that benefited from the road.[65] Governor Norzagaray "attempted to systematize the old system of corvées, by which residents were obliged to contribute, with money, tools, draft animals, or their personal labor, to the construction and repair of roads."[66]

The road program of Governor Norzagaray was more coherent than previous governmental initiatives, as historian Fernando Picó claimed: "the system of communications devised during Norzagaray's governorship would provide the insular administration with a vision of all the roads needed on the island for marketing and provisioning."[67]

A new effort to bring railroads occurred in 1857 for the town of Ponce under the guidance of Don Juan Lacot, Don Juan Prat, and Don Guillermo G. Oppenheimer. These men represented a group of south coastal planters and merchants eager to create a corporation for the development of a railroad connecting Ponce and Santa Isabel of Coamo. They went to the Commander Colonel of the region requesting a permit for the creation of a corporation to establish the rail line. If the project was successful they planned to extend further to the east arriving in Guayama, and add a

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[65] "Reglamento: Para la construcción, conservación y mejora de los caminos vecinales, que se cita en la circular anterior," *Gaceta del Gobierno de Puerto-Rico*, 3 March 1853, 1-2.
[66] Fernando Picó, *History of Puerto Rico: A Panorama of its People* (New Jersey, USA: Markus Wiener Publishers, 2014), 180.
[67] Ibid.

branch line from Juana Diaz.[68] The *Empresa del Ferrrocarril de Cotoner* received a permit to conduct studies, and provide the government with the blueprints, fares, and other requisites with a deadline of six months. Shareholders made a commitment to deposit 10 percent of the projected cost in a commercial house, and decided to reject state subventions. *Empresa Cotoner* had 18 months to complete the railroad from the date the government approved the project. The projected cost of the construction was 220,000 *pesos*. The capital came from the sales of 2,200 shares of 100 *pesos* each. The call for shareholders not only emphasized the economic possibilities of investment, it also stressed the pioneering character of the establishment of the first Puerto Rican railroad: "Las locomotoras de las llanuras de PONCE serán seguramente las precursoras de otras que humearán dentro de pocos años en diferentes puntos de esta favorecida comarca; pues la esperiencia (sic) de todas las Naciones nos demuestra que en esta senda el primer paso es difícil."[69]

These 4½ *leguas* (25 kilometers) of railroad was the beginning of a new era. In the pamphlet published to attract shareholders the city of Ponce followed suit the path pioneered by London and Manchester, and Brussels and Anvers. In these cities the success of the railroads surpassed all projections. Passengers became an important source of income, and these countries had much better roads than Puerto Rico. As with the experience in Europe, the railroad from Ponce to Santa Isabel of Coamo had to be a success because the costs of freight transportation could drop;

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[68] Supra, "Sobre formación de Soc. para construir un ferrocarril," Img. 177.

[69] Translation: "Locomotives in the plains of Ponce surely would be the precursors of others that would be steaming in diverse places of this fortunate region in years to come; because the initial step is the most difficult of the journey as demonstrated the experience in every Nation."
Juan Lacot, Juan Prat, and Guillermo G. Oppenheimer, *Sociedad anónima del ferrocarril Cotoner* (Ponce, PR: 1857), 1.

and, the people could move safely in a timely manner. The *Empresa del Ferrrocarril de Cotoner* (probably named after Governor General Lieutenant Fernando Cotoner), did not accomplish its goals. The railroad never materialized.

Another study for a railroad in Ponce was submitted on May 30, 1864 by the British engineer Edward Brainerd Webb and Gustavo Sichel. Webb and Sichel received the approval of the Governor General to generate a feasibility study for a steam railroad between Ponce and Arroyo in nine months. Jaime Bolland in representation of Webb and Sichel requested an extension to conclude the study. Although the extension was granted the study was never concluded and the project did not prospered.[70] This was the second set back for Edward Brainerd Webb because he submitted a previous project for a feasibility study in June 1863. In that occasion Webb associated with two British partners, Richard Revett and Henry Augustus Cowper, for the construction of a steam railroad from San Juan to Arecibo with a branchline to Río Piedras. The government approved the study to be concluded in eighteen months but the final report was not submitted.[71]

In April of 1864 Don Felix Vidal D'Ors, a French engineer, submitted a proposal for the study of a tramway connecting the town of Ponce with its port. A tramway differs from a railroad in the space it covers. Tramways provided services in urban areas in a single town, and the railroads interconnected multiple towns. Tramways were easier to construct than railroads and the

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[70] "Permiso estudio de ferrocarril desde Ponce a Arroyo," PARES/AHN, Ministerio de Ultramar, Unidad 312, Expediente 5.
[71] "Parte Oficial: Gobierno Capitanía General de la Isla de Puerto-Rico. Dirección de Obras Públicas," *Gaceta del Gobierno de Puerto-Rico*, 11 June 1863, 1.

Captain and Governor General granted a permit for eight months.[72] Time passed and D'Ors failed to implement his idea of a railroad for Ponce. In 1871 a new study for a tramway in Ponce received the government's approval. Don Miguel Lloreda had eight months to complete the study for a horse-drawn tramway running near the road.[73] Lloreda suffered the same fate as D'Ors when his dreams of progress arrived at the same dead end.

On January 19, 1862 Carlos Raldiris, a merchant from Mayagüez, requested a permit to make a feasibility study for a railroad departing from Mayagüez to the south with arrivals in San German and Cabo Rojo. The government granted six months to prepare the study but in June 14, 1862 the governor revoked the permit in absence of the final report or a petition for time extension.[74]

This small sample of local efforts to establish rail-based transportation suggests the active role of the wealthy sector on the island at making economic improvements. However, twenty years of unsuccessful private attempts to develop iron roads tell us something more. Private initiative alone was not enough. The government would have to assume an active role for the advancement of the railroads. The government would have to launch a plan for a national network of roads and railroads to promote the economic progress of the country. Without planning, domestic elite groups would make little progress.

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[72] Jefatura de Obras Públicas, "Expediente sobre estudios de un ferrocarril entre Ponce y su Playa, 1864-1865," AGPR, Fondo Obras Públicas, Subfondo Ferrocarriles y Tranvías, Serie Expedientes y proyectos de construcción de tranvías, Caja 54, Legajo 98, Expediente 33.
[73] Jefatura de Obras Públicas, "Estudios de un ferrocarril de sangre entre la población y el Puerto _ Ponce, 1871," AGPR, Fondo Obras Públicas, Sub Fondo Ferrocarriles y Tranvías, Serie Expedientes y proyectos de construcción de tranvías, Caja 54, Legajo 98, Expediente 34.
[74] "Se pide autorización para un estudio proyecto de ferrocarril," PARES/AHN, Ministerio de Ultramar, Unidad 309, Expediente 22.

On January 21, 1868 Queen Elizabeth II of Spain decreed a general road plan for Puerto Rico. The plan reformulated the hierarchy of the road system in four levels: (1) first class roads, (2) second class roads, (3) vicinity paths, and (4) particular paths. [75] First and second class roads were proposed by the Overseas Minister to the Board of Roads, Channels, and Ports in the metropolis. The General Road Plan included five first class roads and four second class roads:

First-class roads:

No. 1- From San Juan to Ponce by way of Caguas and Coamo.

No. 2- From Cataño to Mayagüez by way of Arecibo and Aguadilla.

No. 3- From Mayagüez to Ponce.

No. 4- From road no. 1 to the port in Arroyo by way of Guayama.

No. 5- From Cáguas to the port of Naguabo by way of Humacao.

Second-class roads:

No. 6- From Arecibo to Guayanilla by way of Utuado and Peñuelas.

No. 7- From Río Piedras to Fajardo.

No. 8- From Lares to Aguadilla.

No. 9- A junction in Guaynabo for roads No. 1 and No. 2.

The construction of the first-class roads had priority over second-class roads. The decree mandated the design of a plan for local or vicinity paths originated in the towns and structured by the Bureau of Public Works. On June 9, 1869 the Oversees Minister approved the plan for the

[75] "Inspección General de Obras Públicas de la Isla de Puerto-Rico," *Gaceta del Gobierno de Puerto-Rico*, 18 February 1868, 3-4.

creation of 40 vicinity paths.[76] Particular paths needed the approval of the Bureau of Public Works and must indicate the public benefit of it. The length of the roads or paths vary in a case by case basis, but the width for roads was 7 meters, vicinity and particular paths for carriages was 6 meters, and 3 meters for horse paths.

In 1869 the island did not have any railroad after few unsuccessful efforts but at least the government had approved a new comprehensible plan for the development of roads. Though, the execution of the road plan would be determined by the funding assigned for public works. The general budget for fiscal year 1869-1870 allocated 2,000 *escudos* for road repairs and maintenance, which represented 21 percent of the budget assigned for development projects (*Fomento*), and allocated 200 *escudos* for surveys from an extraordinary fund.[77] For the fiscal year 1871-1872 the Parliament in Spain allocated 125,000 *pesetas*,[78] which represented 22 percent of the budget assigned for development projects.[79] This fiscal allocation was insufficient to develop the road plan approved in 1868. In addition, the conservation of roads entrusted to road peons was unsatisfactory because most of this personnel engaged in other economic activities to supplement their income of 10 *reales vellón* per day,[80] a low remuneration if compared to agricultural workers earning 15 to 20

[76] "Ultramar- Orden de 9 de junio, aprobando el plan de caminos vecinales de la isla de Puerto-Rico (Gaceta de 14)," *Boletín de la Revista General de Legislación y Jurisprudencia, Periódico oficial del ilustre Colegio de Abogados de Madrid* (Madrid, Spain: Imprenta de la Revista de Legislación, 1869), 616-618.
[77] "Contaduría General de Hacienda Pública de la Isla de Puerto-Rico," *Gaceta del Gobierno de Puerto-Rico*, 29 July 1869, 3-4.
[78] The currency used in the budget for 1869 were *escudos* but in 1871 the budget used *pesetas* with a value of 25 *escudos* per one *peseta*. In absolut numbers the budget in 1871 increased the funding from 2,000 escudos to 5,000 escudos, however the percentage of the budget remained almost unaltered with an increase of 1 percent.
[79] "Presupuesto de gastos para los años 1871,72,73 y 74," AHN/ Ultramar, 5101, Exp. 32.
[80] 10 *reales de vellón* was equivalent to 4 *reales.*

reales vellón.[81] Lack of funding once again was the main obstacle for the creation of infrastructure as previously occurred with the road plan set under the rule of Norzagaray.

Abolition and coffee

On March 22, 1873 the National Assembly in Spain approved the abolition law for Puerto Rico. In its second article, the law mandated a transitional period by forcing the slaves to establish a contract with a planter, the state, or even their former owner, for three years. The law also granted indemnity for slave owners due six months after publishing the law in the Spanish gazette.[82] Initially, planters assumed they would receive reparations from the government during the transitional period and that money could be invested in new technology, but the government got idle and hold the payments for years.

At the height of 1880 the administrator of the French consulate in Puerto Rico, Argélian de Johannis, informed the French minister about the decadent situation of the sugar business after the abolition of slavery. Johannis indicated in his report that 505 sugar mills were in operation before the abolition, but in 1880 only 300 were functioning because landowners did not found laborers to work the fields. The Spanish government committed to pay slaveowners for their loss, however, political instability in Spain made the bonds worthless and many former slave owners traded them at only 20 percent of the original value. For Johannis the abolition of slavery in 1873 was a terrible

[81] "Expediente general de carreteras," AHN/Ultramar 392, Exp.4.
[82] "Parte Oficial. Gobierno Superior Civil de la isla de Puerto-Rico," *Gaceta del Gobierno de Puerto-Rico*, 1 April 1873, 1.

setback for the sugar business, but locally there were efforts to revitalize it.[83] Johannis recognized the work of the governor, the press, industrial and agricultural associations, towards promoting the establishment of sugar factories as a solution to the crisis. Emile Louhet, a French and agent of Casa Cail y Cía, established Central San Vicente in Toa Baja and had plans for two more factories, and in Loiza a corporation from the United States established another factory. The abolition of slavery in Puerto Rico, like every sugar producing country, "created a crisis in the cane industry;"[84] however, Argélian de Johannis encountered the crisis as an opportunity for french investors to partake in the incipient factory model of sugar production.

The crisis in sugar did not immerse the island in a complete economic collapse because another product emerged as the main source of wealth for the country: Coffee. The low temperatures and fertile soil of the mountains were exceptional for the production of premium quality coffee. From 1850s to 1870s coffee production was the second source of state revenue after sugar, but in 1875 a boom in coffee exports ensued with capital fueled from merchant houses as a result of the closing of many sugar haciendas. Access to credit was important because the first harvest of coffee bushes typically took four to five years, but in those years the farmer needed capital to pay for operational expenses and salaries for the peasants. Although the family worked in coffee farms, planters also had access to cheap labor from the highlands and from idle workers that

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[83] "Sobre la producción azucarera en Puerto Rico antes y después de la abolición de la esclavitud, Puerto Rico, 5 de diciembre de 1880," in Gervasio Luis García and Emma Dávila Cox, *Puerto Rico en la mirada extranjera: La correspondencia de los cónsules norteamericanos, franceses e ingleses, 1869-1900* (San Juan, PR: Decanato de Estudios Graduados y Centro de Investigaciones Históricas, 2005), 105-112.
[84] César J. Ayala, *American sugar kingdom: the plantation economy of the Spanish Caribbean, 1898-1934* (North Carolina, USA: UNC Press Books, 1999), 27.

migrated from the coast. Most coffee farmers were small or medium landowners, which planted coffee and other products like tobacco, corn, plantains, rice, tubers and had cattle for the work in the estate (*estancia*). The big coffee planter with access to credit, land with water sources to wash the beans, space to dry the bean in concrete floors, and capital to mechanize the process of taking out the husk of the coffee bean and to polish the coffee bean, could increase production by the purchase of raw coffee beans from neighboring small coffee farmers. The final aspect of the coffee business was the transportation of the product from the plantation to the port to be exported to Europe, the main market for Puerto Rican coffee. Most farmers did not engage in this phase because it was too expensive and opted to sell their coffee to merchants or planters with the resources to pay for the mule trains. Fernando Picó claimed that only big planters with warehouses in the plantation or in the town had the possibility to decrease the impact of carriage costs if they could hold the product for a while until the prices were favorable.[85] Laird Bergad argued that during the nineteenth century "transportation costs were a restraint to agricultural development."[86] Without doubt, it was beneficial for coffee growers to establish roads to link farms with the ports and then export markets; even though "coffee's high value in relation to weight makes excessive transportation costs more tolerable than for other marketable agricultural products."[87]

Producers of coffee and sugar alike needed new roads to decrease transportation costs, and

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[85] Fernando Picó, *Amargo café: los pequeños y medianos caficultores de Utuado en la segunda mitad del siglo XIX* (Río Piedras, PR: Ediciones Huracán, 1981).
[86] Laird W. Bergad, "Agrarian History of Puerto Rico, 1870-1930," *Latin American Research Review*, vol. 13, no. 3 (1978): 73.
[87] Laird W. Bergad, *Coffee and the Growth of Agrarian Capitalism in Nineteenth-Century Puerto Rico* (New Jersey, USA: Princeton University Press, 1983), 38.

railroads could complement the road infrastructure, although the establishment and operation of railroads in in the mountainous interior was much more expensive than on the coastal plains. Coffee was a highland crop and mule trains would be less expensive than the establishment of railroads. On the other hand, sugar producing flat coastal regions were ideal for railroads and the industry needed a resurgence because of falling market prices, obsolete technology, and lack of labor. Railroads could stimulate the growth of the sugar sector by decreasing transportation costs.

The state facilitated the approval of railroad "*sociedades anónimas*" (corporations) and granted extensions, when solicited, to conclude feasibility studies for the establishment of railroad or tramway lines. However, permission to establish businesses did not necessarily translate into the promotion of economic development. The island had an extant plan for road development since 1868, but little progress had been forthcoming. Only in 1876 did the Overseas Ministry finally commission a feasibility study to the Engineer-in-chief of the Bureau of Public Works, Leonardo de Tejada Morales, for the establishment of a national railroad. Tejada Morales was a Spaniard from Malaga graduated as Civil Engineer in road construction (*Ingeniero de Caminos*) in 1861. He studied the railroad plans for Murcia to Granada and Albacete to Jaén in Spain and later was appointed to the Public Works Ministry in Madrid until December 1872 when he was appointed Engineer-in-chief for Puerto Rico.[88] The *Revista de Obras Públicas* published the report, in which Leonardo de Tejada stated that railroads were superior to roads, because shipping would be easier, faster, and more convenient. The problem was the cost. Railroads were expensive, and private

[88] Fernando Sáenz Ridruejo, "Ingenieros de Caminos en Puerto Rico, 1866-1898," *Anuario de Estudios Atlánticos*, no. 55 (2009): 332.

initiatives assumed the economic risk only when there was a conviction that there would be a return in capital high enough to cover the costs for the development of the line. Private companies would not develop railroads in areas of potentially low profits. But with state-supported railroads those areas would promote the emergence of new industries, and would increase property values. In this case, railroads could improve national wealth.

There were two types of internal commerce, terrestrial and coastal trade. Overland movement of products through roads, mule paths, and rivers was difficult and costly. An alternative was the transportation of goods via the sea. In 1877, twelve ports were open for commerce: San Juan, Arecibo, Aguadilla, Mayagüez, Guánica, Guayanilla, Ponce, Arroyo, Humacao, Naguabo, Fajardo, and Salinas.[89] Steamships transported freight between all of the island's ports, but with the railroads, the competition would possibly lead to a reduction in transportation costs. Commonly, freight costs on steamships were more economical than on railroads, but loading costs were the problem. The necessity of multiple loadings and unloadings could be reduced once the railroads were developed because overland transportation could eliminate these multiple and expensive loadings. In 1877, the estimated cost of freight loading between ports in Puerto Rico was 5 *pesos* per ton. In that year the authorities reported approximately 50,000 tons transported between ports. Only two companies provided shipping services. A Spanish company linked San Juan, Fajardo, Humacao, Arroyo, Ponce, Mayagüez, Aguadilla and Arecibo, and a British company provided service from St. Thomas and St. Domingo

[89] Leonardo de Tejada Morales, "Memoria sobre el establecimiento de una red de ferrocarriles en la isla de Puerto Rico," *Revista de Obras Públicas*, tomo 25, núm. 16 (15 August 1877): 181.

to San Juan, Naguabo, Arroyo, Ponce, Mayagüez, and Aguadilla. Of all these ports, San Juan, Ponce, and Mayagüez were the most active. A final aspect to consider was the transportation of passengers. The companies reported an estimated income of 500,000 *pesetas* for 12,000 passengers.[90] From a current perspective it would be hard to imagine the sea as a safer and more reliable place for trade and movement of passengers than ground transportation.

Muddy and impassable roads required constant maintenance and improvement. The inclination of Spain was to continue with the construction of new roads, and in addition plans to integrate railroads into the landscape. Those railroads were going to be supervised by the state, but developed by private corporations thus defraying public investment costs. For Wenceslao Lugo Viña, Utuado's elected senator in the Spanish Parliament for the 1871 session, the establishment of a railroad should be a priority in order to improve the economy of the island. Lugo Viña's opportunity to represent the Province of Puerto Rico in the Spanish Parliament (a right ceded after the victory of the 1868 Glorious Revolution in Spain) allowed him to be an authoritative voice in Spain. Senator Lugo Viña denounced the harm of measures adopted by Spain to protect sugar produced in Andalucia, because it reduced the Spanish market for sugar produced in Puerto Rico. On the island farmers struggle with weather inclemency, proliferation of insects, limited irrigation systems, labor shortages, high salaries, and limited internal markets. Three different taxes, a direct tax named the *subsidio*, export tax, and municipal tax, asphyxiated local planters since 1848 when the tax law was approved. Wenceslao Lugo Viña wagered that progress could be obtained through a transformation of state policies. Among other reforms, it was necessary a revision of the tax law

[90] Tejada Morales, "Memoria," 182.

to aliviate the burden for the planters and the completion of the public interest railroad plan developed by D. Leonardo de Tejada was necessary. Lugo Viña could not conceive a better economy without railroads.[91] The call for reforms made by the Senator had to be approved in Spain to enhance the insular economy.

In October 1878, King Alfonso XII finally signed the project for the establishment of Engineer Tejada's national railroad.[92] This support from the Monarchy appeared to be a serious commitment, but modernity did not come as fast as the people on the island had expected. The experience with the expansion of roads was already disappointing. An impression of the disenchantment in the progress of road maintenance and construction is found in the report of the Colonial Exposition in Amsterdam of 1883. The Provincial Commission of Puerto Rico provided an infrastructural map of the island, including the status of public works at that moment. The insular administration was responsible for the development of general or first-class roads, which connected the island via five branch lines. The projected development of 476 kilometers of roads started in 1851 with the construction of Road no. 1 connecting San Juan in the north with Ponce in the south.[93] This road was important, because it crossed the mountains and connected the major export trade centers in Ponce and San Juan. However, the construction suffered from delays because the war between Spain and the Dominican Republic strained the finances of Puerto Rico.[94]

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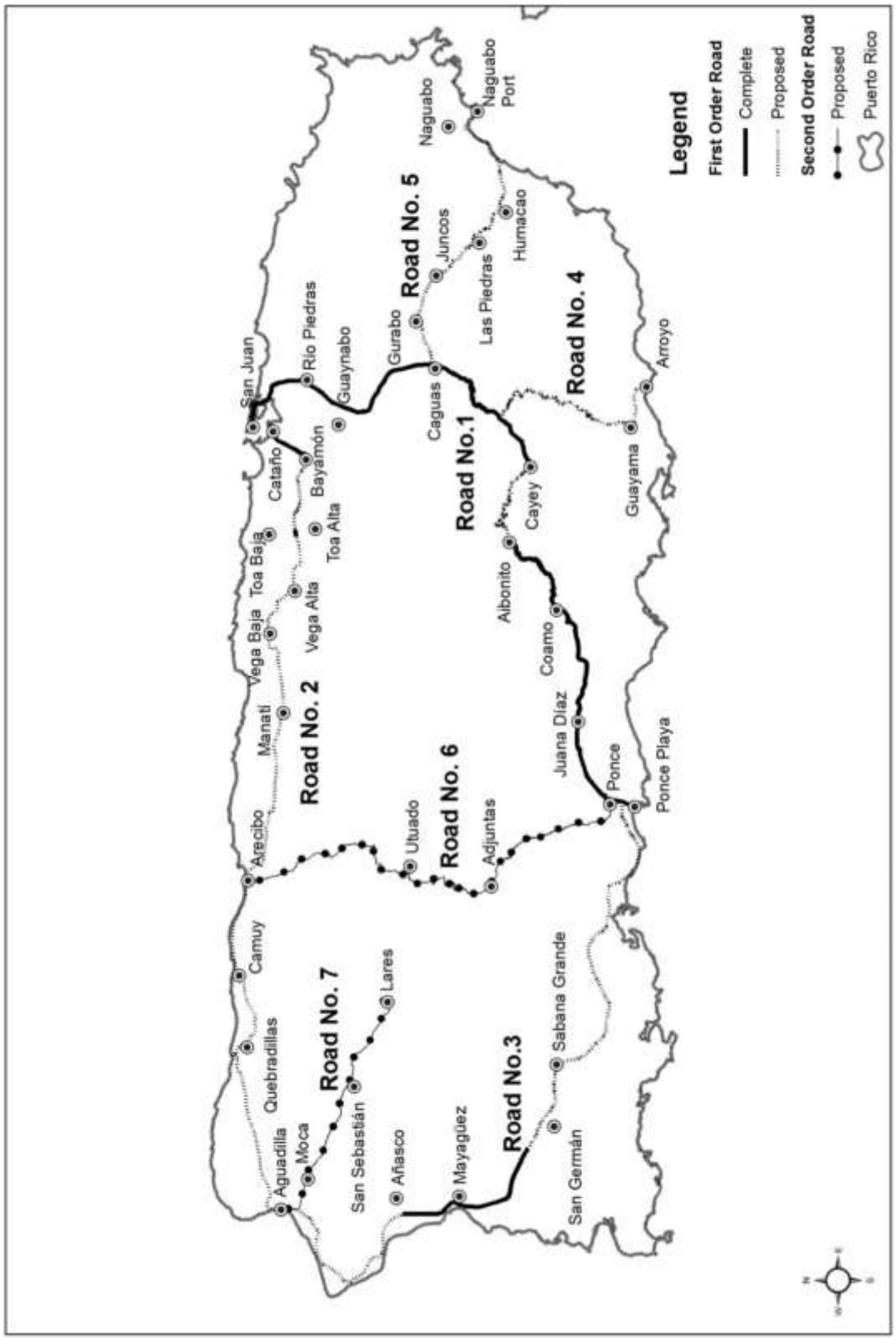
[91] Wenseslao Lugo Viña, *Memoria sobre las reformas de Puerto-Rico* (Madrid, Spain: Imprenta Diego Valero, n.d.)
[92] "Expte general de ferrocarriles," Archivo Histórico Nacional, Ultramar, 383, exp. 8, 28 October 1878.
[93] Luis F. Pumarada O´Neill claimed in *Los Puentes Históricos de Puerto Rico* that the construction of the road from San Juan to Caguas began in 1846.
[94] The report refers to the Dominican Restoration War fought against Spain from 1863 to 1865. Spain used soldiers and funds from Puerto Rico to reconquer Dominican Republic.

The Provincial Commission detailed the progress and the expectations for the road network. The government expected to finish the last 20 kilometers of Road no. 1, between the hilly towns of Cayey and Aibonito and to connect San Juan to Cayey (61 kilometers) as well as Aibonito and Ponce (50 kilometers) in six or eight months. Road no. 2 would have 162 kilometers when finished. The road departed from the port of Cataño in the north to the port of Mayagüez in the west, traversing the cities of Arecibo and Aguadilla along the northern littoral. This road had only three sections developed, eight kilometers from Cataño to Bayamón, one kilometer over the Catholic Kings' Bridge between Toa Baja and Toa Alta, and nine kilometers from Añasco to Mayagüez. Road no. 3, which was 97 kilometers in extension connected the coastline of Mayagüez and Ponce. Only fourteen kilometers were developed from Mayagüez to San Germán. Finally, there were two more roads planned: Road no. 4 would be 35 kilometers from Road no. 1 to the port of Arroyo in the south passing through Guayama, and Road no. 5 would be 48 kilometers from Caguas to the port of Naguabo in the east passing through Humacao. These two sections would not be started by the time the exposition opened in Amsterdam. There were also plans for second and third-class roads, but at the moment only sixteen kilometers were finished (Map 1.1). To supplement the plan three private tramways were in operations and a fourth one was under construction. In addition, Spain approved the development of an integral railroad system consisting of four sections running parallel to the first-class roads encircling the island.[95]

[95] *Reseña General de la Isla de Puerto Rico redactada para la Exposición Colonial de Amsterdam en 1883* (Puerto Rico: Imprenta Boletín Mercantil, 1883) in AGPR, Record Group (RG) 186: Records of the Spanish Governors of Puerto Rico, Government Agencies, Obras Públicas 1880, Box No. 351.

Map 1.1. Road System, 1880s.



This report of the Provincial Commission recognized the lack of roads as an economic limitation because the movement of commodities from the mountains to the ports in the coast was expensive and difficult.[96] However, the pamphlet did not center its account in the limitations, but presented a frank depiction of the country with a blueprint of the future projects of development to promote foreign investment.

Two years later the "seigniorial" city of Ponce was the site of a fair organized on the island, and in 1885 José Ramón Abad published a report about the Ponce Exposition Fair. The structure of the report was similar to the pamphlet published for the Colonial Exposition in Amsterdam, but in contrast was a detailed volume with exhaustive descriptions. In the first part Abad illustrated the island's condition by describing its geography, communications, history, and economy. In Abad's description of the geography he described the diversity of the soils for agriculture. The economy of the island depended on three agricultural crops for export trade: sugar, coffee, and tobacco. However, the island had the potential to develop other profitable goods such as wood for construction (candlewood or *Tabonuco*), cocoa, nutmeg, cinnamon, pepper, cotton, peanuts, sesame seeds, sunflower, plantains, bananas, corn, rice, beans, pigeon peas, and diverse tubers. In other countries these crops produced revenues, but in Puerto Rico they were harvested for family subsistence or merely found in the wild. Abad attributed the commercial failure to the farmers, because they had no knowledge of modern agricultural technology, they did not fertilize the soil, and they were not committed to strenuous work. The ignorance of the farmer was the main obstacle to economic progress according to Abad. The limitation in the production of food for

[96] Ibid., 21.

internal consumption produced trade imbalance because the national production relied only on the exports of sugar, coffee, and tobacco, and the cost of food imports were artificially inflated. The other obstacle for the economic progress was the "lack of communication lines, safe and fast."[97] Commercial exchange was overly expensive for the people living in the mountains because the cost of transportation to the ports was high and the pace slow. This problem affected people from all social classes in the mountains.

Abad's image was one of transportation decadence; for him the infrastructure on the island could be reduced to one road on the littoral. The road had an extension of 520 kilometers; however, several sections were in catastrophic shape due to significant rainfall throughout the year. The development of the Central Road (Road no. 1) through the mountains that would connect San Juan to Ponce continued under construction. In 1883 the pamphlet of the Colonial Exposition in Amsterdam assured that in less than eight months the road from Cayey to Aibonito would be finished. After two years this had still not occurred.

A second-class road was planned to connect the northern city of Arecibo with the southern city of Ponce, passing through Adjuntas and Utuado. Abad also mentioned the design of other second-class roads, one in the west connecting Aguadilla with Lares and another in the east connecting Caguas with Humacao. In the report there was no information about the progress of these roads. In the pamphlet of the Colonial Exposition in Amsterdam the government was studying the possibility of halting the construction of Road no. 2, and Road no. 3 due to the fact

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[97] José Ramón Abad, *Puerto-Rico en la Feria-Exposición de Ponce en 1882; Memoria redactada de orden de la junta directiva de la misma* (Ponce, PR: Establecimiento Tipográfico "El Comercio," 1885), 21.

that the projected state-sponsored railroad would cover the same routes. Consequently, roads no. 4 and no. 5 were chosen as priorities to be developed. Abad confirmed this decision in his report. Roads no. 2 and 3 were cancelled and in its place second-class roads would be constructed, although the project had not yet begun. That is to say, the central government was responsible for the Central Road and the development of the railroad, and the provinces were responsible for three second-class roads connecting mountainous towns with ports in the west, center and eastern areas of the island.

For Abad, a poor infrastructure was the principal economic problem faced by Puerto Rico. He claimed that the cost of transportation from one corner of the island to the other was the equivalent in time and cost to a voyage from Puerto Rico to New York. Abad concluded that economic backwardness could not be overcome until the state invested in new infrastructure. For him, state inaction was the main cause of poverty in Puerto Rico. By avoiding public debt the state circumvented the development of a railroad system and this implied and inefficient economy and enduring poverty.

Abad recognized that there was a plan being developed to build a railway system parallel to the coastal road, but while he was working on the report neither the railroad had begun the construction, nor had the coastal road had been repaired. The plan of the Bureau of Public Works included four sections of railways: [98]

No. 1- From San Juan to Mayagüez by way of Arecibo and Aguadilla.

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[98] Abad, *Puerto-Rico en la Feria-Exposición de Ponce en 1882*, 26.

No. 2- From Río Piedras to Humacao by way of Fajardo.

No. 3- From Ponce to Mayagüez by way of San German.

No. 4- From Ponce to Humacao by way of Arroyo.

In his assessment, Abad questioned why the Bureau of Public Works proposed the development of railroads in coastal area in lieu of developing them in the mountains to connect the center of the island to the coast. The state would have to repair many highland areas that were in poor condition and the coast already had the use of steam ships to connect the ports. Abad proposal was logic and coherent, because the economy in Puerto Rico relied mainly on the export of coffee, which was harvested in the mountains. The coast was producing sugar, but the price of sugar had plummeted and the competition made sugar revenues a secondary source of income after coffee. If the mountains were the major centers of production then the state would have to develop an infrastructure for the mountains. Abad proposed the development of narrow gauge railroads in place of second-class roads. The first "iron roads" operating in Puerto Rican soil were narrow gauge tramways. These narrow gauge tramways provided urban transportation from the towns to the ports. However, Abad's suggestions to establish railroads in the mountains fell on deaf ears.

Tramways

The Spanish government defined a tramway as a private railroad established on a pubic road. There were four tramway shuttles operating between the principal ports and town centers in the last quarter of the nineteenth century. Mayagüez had a 2 kilometers horse-drawn tramway; in Ponce there was a 4 kilometers tramway moved by steam power; and from San Juan to Río Piedras the longest tramway on the island of 12 kilometers was also powered by steam. This last tramway

was unique because it had 8 kilometers of tracks connecting Bayamón with the port of Cataño. There was also steamship service to transport passengers and freight from the port of Cataño to San Juan (Map 1.2).

The first tramway established in Puerto Rico functioned in Mayagüez. In 1872 José Antonio González y Echeverría received authorization to establish in a period of twelve months a horse drawn tramway from the town of Mayagüez to the seashore through Méndez Vigo Street. The tramway would have two rails, one in direction to the beach and the other in return to the town center.[99] The *Ferrocarril Urbano Mayagüez* imported from Britain two story wagons with wicker seats for its passengers.[100] In January 1873 Amalia Corchado y Ruiz received the rights to operate the tramway and the next year she transferred her rights of exploitation to Alfredo and Clara Cristy de Roselló.[101] The urban tramway operated for a decade, but in 1887 the government cancelled the franchise after a cease of operations. The government proceed to seize all the equipment owned by the company to cover the surety of 302.20 *pesos*.[102]

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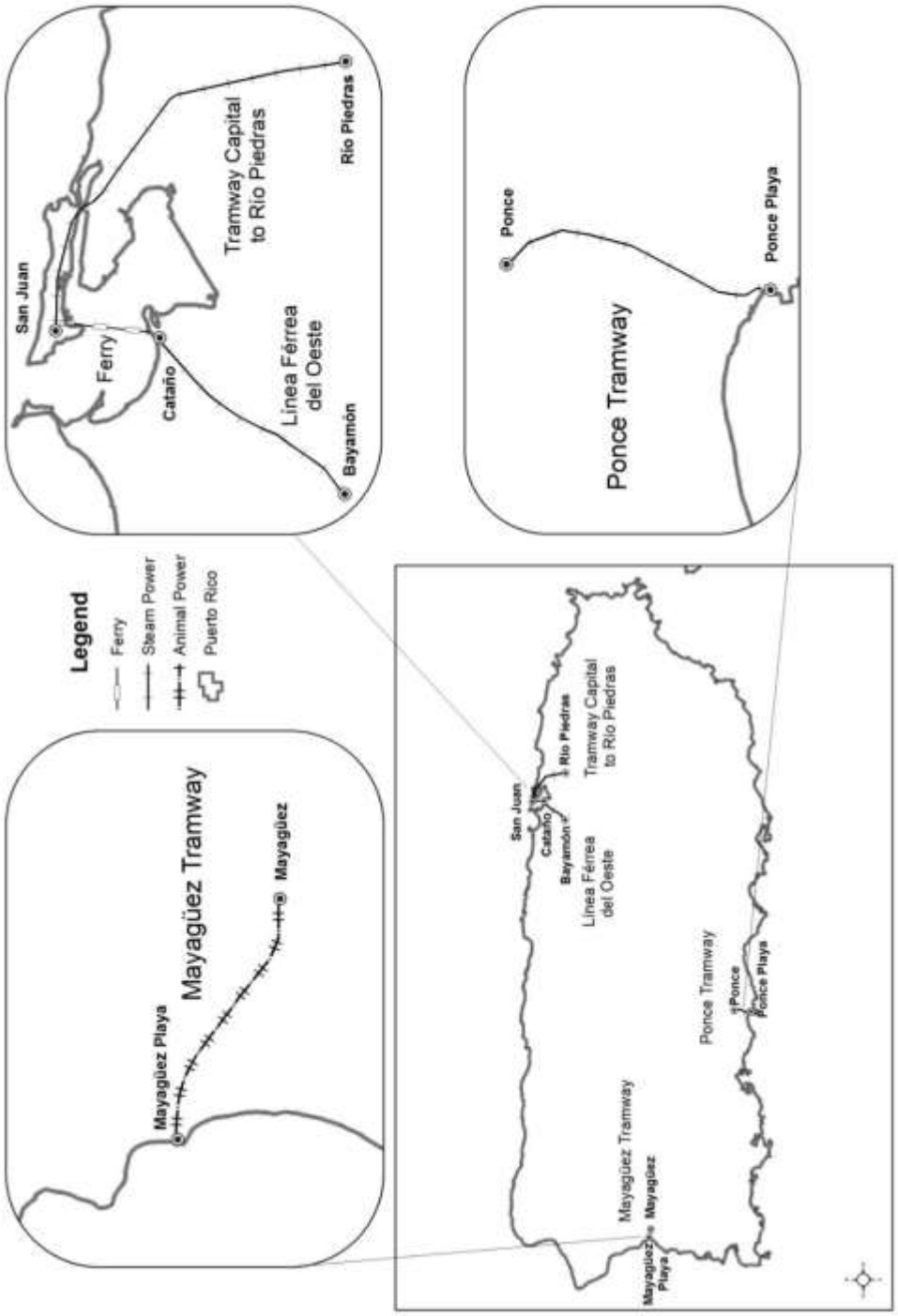
[99] "Inspección General de Obras Públicas de la Isla de Puerto-Rico," *Gaceta del Gobierno de Puerto-Rico*, 6 June 1872, 2-3.
[100] Lidio Cruz Monclova, *Historia de Puerto Rico (Siglo XIX)*,Tomo 2, Primera Parte (Río Piedras, PR: Editorial de la UPR, 1970), 245.
[101] "Parte Oficial; Negociado de Obras Públicas," *Gaceta del Gobierno de Puerto-Rico*, 22 August 1874, 1.
[102] "Tranvía de Mayaguez a su playa," *Gaceta del Gobierno de Puerto-Rico*, 5 February 1887, 1.

Map 1.2. The First Tramways.



The first tramway to use steam power was the *Tranvía Ubarri* between San Juan and Río Piedras. On February 18, 1878 Pablo Ubarri y Capetillo was granted the right to build and operate this one-track tramway. Ubarri had one month to pay 4,424 *pesetas* to the Department of Revenue, and also had to present blueprints and all the required documents to the Bureau of Public Works for the approval of the Engineering Inspector. The government approved the right of operation for sixty years.[103]

Don Pablo Ubarri y Capetillo was an important figure in late nineteenth-century Puerto Rico. He was originally from Santurce in Vizcaya and migrated to Puerto Rico in 1839 at the age of 16 years to live with relatives. He worked as a salesman in a small store, later he become a cattleman to supply meat to the walled city of San Juan and to produce leather. From 1850, Ubarri's home was Cangrejos, a little town that he later administrated after the Governor General appointed him the mayor. Historian Jesús Martín Ramos in his biographical study, described Ubarri as a humble garbage collector with an entrepreneurial vision. He purchased wetlands in Cangrejos to deposit garbage from the walled city of San Juan that eventually filled and dried the soil. Wealthy people eventually bought Ubarri's land to build luxury homes in the outskirts of the walled city, creating a "Puerto Rican Versailles." From this income he was a recognized capitalist, and developed friendships with important and powerful people through his active participation in politics as a conservative. Ubarri became a distinguished leader of the Conservative Party, a political group unconditional to Spain, and his political career provided him with enough influence

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[103] Cayetano Coll y Toste, *Boletín Histórico de Puerto Rico*, Tomo XIII (New York: Kraus Reprint Co., 1968 [1926]), 370-73.

to receive the rights over numerous profitable projects, among these a project to develop an aqueduct to supply water to the capital. However, the project, which gave him most notoriety, was a tramway which would be developed without any state subvention.[104]

Ubarri appointed the Puerto Rican engineer Tulio Larrinaga to supervise the construction of a tramway in San Juan. Ubarris' tramway started operations on January 28, 1880 and was an immediate success.[105] After three months of operation the neighbors of Cangrejos decided to change the name of the town to Santurce in honor of the native land of Ubarri. On October 15, 1880 by Royal Decree, Ubarri received the title of First Count of San José de Santurce from King Alfonso XII.

In 1880 the tramway to Río Piedras had a first class rate of 10 cents from the capital to San Antonio, and 10 cents from San Antonio to Martín Peña. A trip from the Capital to Martín Peña was 20 cents. In second class, the fare decreased to 6½ cents per adult.[106] Children paid half fare. The operation schedule published in April 1880 was:

Table 1.1. Daily departures of the Río Piedras Tramway

FROM SAN JUAN	FROM RÍO PIEDRAS
(1) 6:30 am	(1) 7:00 am
(2) 9:30 am	(2) 10:00 am
(3) 1:30 pm	(3) 4:00 pm
(4) 5:00 pm	(4) 6:00 pm

[104] Jesús Martín Ramos, "Bosquejo histórico-biográfico de Pablo Ubarri y Capetillo, Conde de San José de Santurce," *Los significados del 98: la sociedad española en la génesis del siglo XX*, edited by Octavio Ruiz-Manjón Cabeza and María Alicia Langa Laorga (Madrid: Fundación ICO: Biblioteca Nueva, Universidad Complutense de Madrid, 1999), 206.
[105] Pedro de Angelis, *Pablo Ubarri y Capetillo: su vida y su labor politico social* (San Juan, PR: Tipografía Real Hermanos).
[106] "Tranvía de la Capital a Río Piedras," *Boletín Mercantil de Puerto Rico*, 25 June 1880.

Ubarri's tramway provided service to passengers during week days, weekends, and even offered special trips for religious holidays at a roundtrip fare of 30 cents. During the festivities of *San Mateo*, the patron saint of Santurce, the tramway scheduled 13 trips to allow the people participate in the event. For the festivities of *Nuestra Señora del Pilar*, the patron virgin of Río Piedras, the tramway had a special holiday schedule, and even added a final trip after the dance.[107] An optimistic estimate in 1885 suggested that from a population of 40,000 inhabitants, 500 passengers used the tramway on a daily basis.[108]

To promote a judicious use of the tramway the company decided to educate potential commuters. The company published flyers with schedules on one side and tramway rules on the reverse:

> En los coches de pasajeros está prohibido: viajar borracho, proferir blasfemias, ir vestido indecorosamente, llevar animales, efectos inflamables, líos de ropa sucia, bultos de materias fétidas, estorbos en los asientos y todo lo que pueda causar perjuicios y molestias al viajante y a la Empresa.[109]

The company also needed to educate the public on how to avoid accidents. Deadly

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[107] Jefatura de Obras Públicas, "Tranvía de la Capital a Río Piedras, 4ª pieza, 1893," AGPR, Fondo Obras Públicas, Subfondo Ferrocarriles y Tranvías, Serie Expedientes y Proyectos de Construcción de Tranvías, Caja 63, Legajo 104, Expediente 108.

[108] *Las obras proyectadas. Importancia relativa de las mismas. Los Ferro-carriles base del progreso agrícola e industrial* (Puerto Rico: Imprenta de El Asimilista, 1885) 19.

[109] "In passenger wagons it is prohibited: traveling drunk, uttering blasphemies, to dress immodestly, bring pets, flammable effects, bundles of laundry, bags with fetid materials, clogs in the seats, and everything that can cause harm and inconvenience to travelers and the company." Ibid.

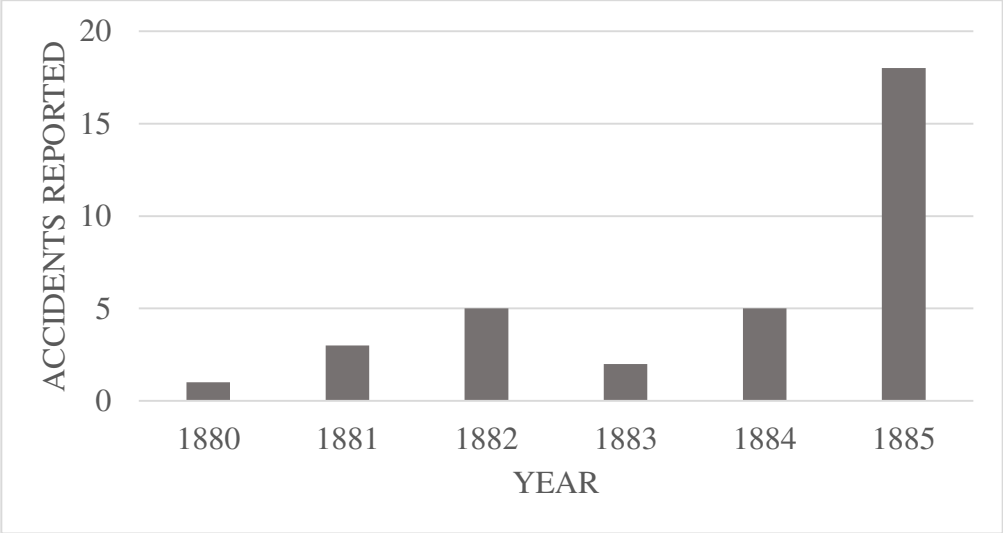
accidents had put the company under the watchful eye of the government and commuters. One incident reported the tramway having hit Don Francisco Casenave at the San Antonio stop at 10:15 in the morning, because he was lying down too close to the rails. Casenave died instantly, and the tramway derailed. Nearly a month later, at 4:15 in the afternoon, another tramway ran over a woman. Some passengers testified that they had heard the whistle blow, as required by law. In both accidents, the victims appeared to have been responsible, but the chief engineer decided to impose a lower speed limit on the company in response to an order by the governor. From the capital to Martín Peña the speed limit had to be decreased to 10 kilometers per hour, and from Martín Peña to Río Piedras to 15 kilometers per hour. The population density accounted for the variation of the speed limits. With this new speed, the machinists had a better probability of stopping the tramway in case of an emergency. Due to the new speed limits, on October 8, 1893 Ubarri presented a new schedule for the tramway. Ubarri requested a revision of the resolution, which eventually was granted by the governor.[110]

Juan R. González Mendoza and Héctor Sánchez Sánchez recorded the accidents which took place on Ubarri's tramway from 1880 to 1885 (figure 1.1). From their perspective the reprimand received by the government was lenient, because the company was only fined and no one was prosecuted for the accidents they had caused. Derailments, fires, and collisions between wagons resulted from a lack of organization, poor machinery maintenance, and inefficiency. The company did not followed security codes and operated under the impunity of the colonial

[110] Jefatura de Obras Públicas, "Tranvía de la Capital a Río Piedras, 4ª pieza, 1893," AGPR, Fondo Obras Públicas, Sub Fondo Ferrocarriles y Tranvías, Serie Expedientes y Proyectos de Construcción de Tranvías, Caja 63, Legajo 104, Expediente 108.

administration. One common complaint was the overcrowding of passengers in the wagons, particularly during special celebrations.[111]

Figure 1.1. Accidents reported by Ubarri's Tramway, 1880-1885



SOURCE. - Juan R. Gonzalez Mendoza and Hector E. Sánchez Sánchez, "Los orígenes del tranvía de San Juan a Rio Piedras, 1878-1885," *Anales de Investigación Histórica*, vol.1, no. 2 (1974): 27-28.

The data provided by González Mendoza and Sánchez Sánchez for the first half of the 1880s suggested that the authorities did not enforce security codes because a decade later the accidents continued. These historians suggested that Ubarri's political influences on the colonial administration may have influenced the special treatment he had received by the authorities, which allowed him to continue operating without any major inconveniences despite safety issues.

[111] González Mendoza and Sánchez Sánchez, "Los orígenes del tranvía de San Juan a Rio Piedras, 1878-1885," 27-32.

These accidents did not tarnish the good standing of the tramway. The tramway provided a modern alternative of transportation to the city, transported free of charge any uniformed police officer (*Guardia Civil*), and promoted religious and state celebrations. Ubarri's tramway was a symbol of both change and progress. Ubarri's tramway provides an interesting contrast between the ideas of progress and elite attitudes toward the "progress" of the country. Ubarri was the president of the Unconditional Spanish Party (*Partido Incondicional Español*), the political niche of the conservatives on the island. Although he was the man behind the establishment of the first steam power tramway in Puerto Rico he and his political party opposed the development of public education on the island. For men like Ubarri "progress" meant economic growth, not programs for the social development of common people. In 1894 Count Ubarri traveled to Madrid for health reasons and to attend business concerning his tramway.[112] Upon his return to Puerto Rico Count Ubarri died that same year.

On the third day of March, 1878 the *Gaceta de Madrid* published an approval in favor of Juan Nepomuceno Torruella y Andino for the development of a steam tramway from the town of Ponce to the port of the city. Torruella submitted his proposal on February 30, 1877 requesting the authorization for a feasibility study. Torruellas would assume all the costs for the development of a tramway after the final approval of the Bureau of Public Works. The government approved the franchise for 60 years although Torruellas requested the franchise on perpetuity.[113] Torruella created a corporation named *Sociedad Anónima del Tranvía de Ponce* for the administration of the

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[112] "para defender sus negocios ferroviarios," in Martín Ramos, "Bosquejo histórico-biográfico de Pablo Ubarri," 208.
[113] "Ministerio de Ultramar: Reales órdenes," *Gaceta de Madrid*, 5 March 1878, 521-522.

tramway that began operations in October 1880 departing from Atocha Street near the *Plaza del Mercado* and arriving at *Comercio* Street in the sector of *Ponce Playa*.[114] The average speed was 6.5 kilometer per hour between stops with high flux of public and 11 to 14 kilometers in safe areas. The tramway was not cheaper than a cart but it was more comfortable.

The tramway almost immediately encountered problems. The corporation had limited capital needed to spend on machinery repairs. The technicians were not experts in tramway machinery, and the repairs were short-terms solutions rather than permanent. Mechanical problems and multiple derailments resulted in fines by the government.[115] The inevitable happened on January 1882 when all four steam engines broke down. This was the beginning of the end. The corporation resumed operations, but it was not long before operations ceased because of similar problems. From January 2 the corporation operated intermittently with a total of 93 days with no service to October 2 when the company finally concluded the service. The mechanical problems could be solved, but losing the public's confidence was irreparable. The public desired a dependable tramway service, but they were disappointed with the erratic service. The government cancelled the permit of the Ponce tramway in 1883, however, there were three possibilities to resume operations: (1) The original corporation could make a commitment to complete all the repairs needed to reinitiate operations, (2) the government could assume the administration of the tramway, or (3) a new corporation could acquire the equipment and assume the administration of

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[114] "Se adjudica concesión línea de tranvía de Ponce a su playa," PARES/AHN, Ministerio de Ultramar, Unidad 369, Expediente 1, 1878.
[115] "Tasación de terrenos y tranvía de Ponce por Manuel Maese," PARES/AHN, Ministerio de Ultramar, Unidad 405, Expediente 3, 1885.

the tramway. On March 29, 1885 the line was up for public auction with an appraisal of 13,316.26 *pesos*.[116]

A decade later, in November 1895, Vicente and José Usera received the approval to develop an electric tramway from the Ponce town center to the coast (*Playa de Ponce*).[117] José Usera migrated from Valencia, Spain and owned Hacienda Las Gabias in the towns of Coamo and Santa Isabel. Vicente Usera was the son of José Usera and the inheritor of the family lands planted with cane, cotton, tobacco, corn, beans, pumpkins, coffee, other minor fruits, and pasture for the cattle.[118] The Usera family justified the project by arguing that the people of Ponce needed an alternative to the horse-driven carriages. The problem with carriages was the time they consumed to customers. Passengers had to wait until all four seats were occupied or could pay for the empty seats in order to leave. In addition, passengers had to have the exact fare because the driver would usually claim to have no change, forcing passengers to pay more for a 25 minute per 3 kilometer trip.

Electricity was a novelty in Puerto Rico. The municipal assembly in Mayagüez debated in 1888 the substitution of hydrogen carbonate gas used in urban lighting for electric lights.[119]

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[116] "Parte Oficial, Gobierno General de la Isla de Puerto-Rico, secretaría, Negociado de Obras Públicas, Construcciones civiles, Montes y Minas, Tranvía de Ponce a su Playa," *Gaceta del Gobierno de Puerto-Rico*, 29 December 1885, 1.
[117] "Parte Oficial, Gobierno General de la Isla de Puerto-Rico, secretaría, Negociado de Obras Públicas," *Gaceta del Gobierno de Puerto-Rico*, 21 November 1895, 1.
[118] Diana López Sotomayor, "De Las Gabias a La Esmeralda una hacienda decimonónica entre la caña y el algodón," *6to Encuentro de Investigadores de Arqueología y Etnohistoria* (San Juan, PR: Instituto de Cultura Puertorriqueña, 2005) 10.
[119] "Extracto de los acuerdos de los ayuntamientos y juntas municipales: Mayagüez," *Gaceta del Gobierno de Puerto-Rico*, 25 September 1888, 8.

However, two years later the assembly decided to maintain traditional gas lamps.[120] It was in a hilly town that electricity made its first appearance in Puerto Rico. In 1893 Don José Ramón Figueroa y Rivera, a wealthy coffee planter and founder of Villalba, installed the first electric lighting system in his town of Villalba. Figueroa y Rivera did not rely on public funding to generate electric light; instead he used his own capital.[121] In San Juan, that same year, the Sociedad Anónima Luz Eléctrica inaugurated an electric lighting system set forth in a royal decree from 1890. The proposal for an electric tramway in 1895 by Vicente and José Usera required the construction of an electric power plant because there was no source for electric power in Ponce at the time. The new tramway would promote the progress of Ponce and would expunge the failure of the previous steam tramway:

> Momento era el año 1880 en que el mundo asombrado por los adelantos que en la locomoción al vapor se habían hecho en el extranjero, aplicaba este sistema a toda clase de ferrocarriles, y Ponce, entusiasta y anhelante de progreso empleolo en su tranvía, para muy pronto convencerse como se convenció todo el resto del mundo, de que para este objeto no resultaba adecuado el vapor como método de propulsión.[122]

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[120] "Alcaldía municipal de la ciudad de Mayagüez," *Gaceta del Gobierno de Puerto-Rico*, 5 April 1890, 4.
[121] Eugenio Latimer Torres, *Historia de la Autoridad de Energía Eléctrica: Implantación de los Sistemas de Luz y Fuerza en Puerto Rico 1893-1993* (San Juan, PR: First Book Publisher of Puerto Rico, 1997), 44-51.
[122] "In was in the year 1880 when the world amazed with the advances in steam locomotion done abroad, this system applied to all kinds of railways, and Ponce, enthusiastic and eager to progress employed it in his tramway to very soon be convinced, as the rest of the world was convinced , that for this object it was not appropriate the steam as a propulsion source." Pedro Hernandes, "Proyecto de tranvía eléctrico de la ciudad de Ponce al Barrio de la Playa," 15 March 1895, AGPR, Fondo Obras Públicas, Sub Fondo Ferrocarriles y Tranvías, Serie Expedientes y proyectos de construcción de tranvías, Box 54.

The possibility of establishing a tramway moved with electric power offered a transportation alternative for commuters in Ponce after the demise of the steam railroad. However, the shift from steam to electric power was not the fundamental reason for the success of the project, as the promoters advocated. The problem was not steam power *per se*, the challenge of the former Ponce steam tramway was the bad administration of the company and lack of capital to invest in repairs and new equipment. Electric power came to Ponce after the Spanish Government granted the Compañía Anónima de la Luz Eléctrica the permit to generate electric lighting in 1897, but Usera's electric tramway did not materialize.

The last successful project for a tramway was granted on February 20, 1881. The crown granted to *Línea Férrea del Oeste* the right to build a port in Cataño, and a tramway from the port to Bayamón for 70 years.[123] On August 9, 1881 the *Línea Férrea del Oeste* requested the general gobernor extra time to begin the construction, because they expected the arrival of more materials from overseas, and the Crown granted a four months deferment.[124] It was on August 1883 when the Governor General approved the operation of the tramway.[125] The objective of this tramway was not so much to transport passengers, but cattle and produce from the rural areas near Bayamón. The society *Línea Férrea del Oeste* built a 7 kilometers tramway of one-meter gauge. The tracks ended in a terminal that had two ferries navigating between the ports of San Juan and

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[123] *Colección Legislativa de España: Continuación de la Colección de Decretos Primer Semestre de 1881*. Tomo CXXVI (Madrid, España: Imprenta del ministerio de Gracia y Justicia, 1881), 591.
[124] "Negociado de Obras Públicas, Construcciones Civiles, Montes y Minas. Tranvía de Cataño a Bayamón. – Material," *Gaceta del Gobierno de Puerto-Rico*, 1 October 1881, 1.
[125] "Negociado de Obras Públicas, Construcciones Civiles, Montes y Minas. Tranvía de Cataño á Bayamón," *Gaceta del Gobierno de Puerto-Rico*, 1 October 1881, 1.

Cataño. In 1888, Ramón Valdés Cobián, a Spaniard, acquired the control of the entire company.[126]

From the many efforts in bringing iron roads to the island, only four tramways resulted. Two of them were out of business in a short time. More importantly, nothing suggested that tramways had had a substantial impact in the insular economy. Iron roads alone were not the solution to the economy, but this was just the beginning of the story. A state sponsored belt railroad provided real hope for a population dreaming about an island of economic opportunities.

[126] Luis E. Santiago, "Breve historia de los servicios del tren y las lanchas de Cataño," *Claridad*, 17-23 January 1992, 14-15.

CHAPTER II. A BELTWAY RAILROAD

Rafael María de Labra, deputy in the Spanish Parliament representing the municipality of Sabana Grande, defined the economy in Puerto Rico as deplorable and the condition of public works shameful in 1885. In his speech to the *Cortes* (Spanish Parliament) in relation to the budget for the next fiscal year deputy Labra demanded a revision of the state priorities. He proposed less salaries for government officials, starting with the governor, and more funds for public works. The island had only 20 kilometers of railroads and two or three roads for the use of horse or ox carts, Labra said. This limitation made the export of local products unviable because transportation expenses increased the prices of the products. Tobacco increased in price twelve or thirteen times when transportation costs were added, and for the coffee sector the situation was similar. The coffee produced in Puerto Rico was premium quality but transportation costs inflated prices which affected the competition with other countries producing lesser quality coffee. From Labra's perspective the country had everything to generate wealth but the lack of infrastructure hindered the island to move forward.[127]

For a better understanding of the island's necessities Labra cited the report made by Enrique Gadea, a Spanish engineer and chief of the Bureau of Public Works in Puerto Rico. Gadea mentioned in his report the existence of a plan for the development of the following infrastructure: (1) railroads, (2) first-class roads, (3) lighthouses, and (4) ports. The railroad plan was already

[127] Rafael M. de Labra, *Puerto Rico en 1885* (Madrid, Spain: Imprenta de Aurelio J. Alaria, 1885), 29-30.

approved but the ministry needed more technical personnel to start the project. The road plan had 147 kilometers of road constructed, 19 kilometers in the process of construction and 310 kilometers waiting to be constructed. The lighthouse plan included 9 lighthouses, with 4 in operations (el Morro in San Juan, Cabezas de San Juan in Fajardo, Morrillos in Cabo Rojo and one in the port of Ponce), 2 under construction (Culebrita Island in the east and Caja de Muertos Island in the south), and 3 under study to be established in Mona Island in the west, Mala-Pascua in Maunabo and Punta Borinquen in Aguadilla. The port plan included maintenance works already done in San Juan and Mayagüez and studies to improve the ports in Ponce and Mayagüez. At the provincial level the plan included the construction of 154 kilometers of second-class roads although at the time of the report only 20 kilometers were finished. At the municipal level the road plan included 991 kilometers, plus multiple buildings like town halls, markets, slaughterhouses, cemeteries, schools, and aqueducts. The budget needed to develop all these projects was the following:

Table 2.1. Budget for the development of public works in Puerto Rico, 1885

	BUDGET NEEDED	BUDGET PROPOSED	BALANCE
Railroads	7,644,000	1,500,000	6,144,000
First-class roads	3,439,000	3,439,000	0
Lighthouses	150,000	150,000	0
Ports	4,000,000	2,000,000	2,000,000
Buildings for civil uses	518,600	518,600	0
Second-class roads	1,872,000	1,872,000	0
Third-class roads	4,331,250	4,331,250	0
Total	21,954,850	13,810,850	8,144,000

SOURCE.- Rafael María de Labra, *Puerto Rico en 1885*.

The proposed budget discussed by the Spanish Parliament did not cover all the costs for the establishment of railroads and ports, both essential to promote the export economy. Deputy Rafael María de Labra used Enrique Gadea's report in his speech because he could legitimize his position with a report made in Puerto Rico about the need of new infrastructure, instead of just providing a speech from the view of a politician in the metropolis without touch with the Puerto Rican reality. Deputy Labra was not Puerto Rican, he never lived in Puerto Rico, but he was the only liberal and autonomist elected in the insular elections to represent the district of Sabana Grande in the Spanish parliament.

Autonomy in Puerto Rico evolved from the liberal movement organized in the context of the Third Constitutional Period (1870-71) and the First Republic (1873-74) in Spain. In its beginnings the liberal movement included people from different political trends: those in favor of the complete assimilation to Spain, others in favor of autonomy from the metropolis, and followers of a monarchical government or followers of republicanism. In the elections of 1884 only three deputies were liberal and Labra was once again elected. He ardently criticized political and economic centralization and promoted the autonomy for the islands of Puerto Rico and Cuba. Long years of royalist censorship eclipsed the short periods of liberal freedoms and political representation in the Spanish Parliament. Labra's discourse in the Spanish Parliament showed the view of one leader of the autonomist movement about the need to allocate more funds to establish railroads and other infrastructure in Puerto Rico.

The rival political current of the autonomy proposed an unconditional union to Spain in

times of liberal reforms and in times of monarchical rule. The "unconditionals" to Spain promoted their conservative ideas in the newspaper *El Asimilista.* In 1885 *El Asimilista* published a compilation of articles about "future projects" for Puerto Rico.[128] These projects consisted of roads and railways to promote commerce, industry, and agriculture. For conservatives the country had to improve its infrastructure, yet it was not clear how these expensive projects would be financed. The solution would be a public and private partnership. The government should share the costs of these expensive projects with local capitalists. A serious impediment, however, was the shortage of native capital for investment. The first bank in Puerto Rico opened its doors in 1877, but it took more time until the island had a banking system financially secure enough to fund these ventures.[129] With few local investors, and an incipient banking system, they advocated that the government of the island should encourage foreign investment for the construction and administration of railroads.

Since 1880 the Spanish Parliament with the endorsement of the Constitutional King of Spain, Alfonso XII, established a state commitment to facilitate the construction of railroads in Puerto Rico. In the absence of a railroad law, they decided to adjust the Spanish railroad law to the island by extending some articles and modifying others. A decree established a standard track gauge measure of one meter for any railroad offering public service for passengers or freight. The railroad franchises would be granted for ninety-nine years but after this period the state would

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[128] *Las obras proyectadas. Importancia relativa de las mismas. Los Ferro-carriles base del progreso agrícola e industrial* (Puerto Rico: Imprenta de El Asimilista, 1885).
[129] Ángel Sanz, *Reseña histórica de la Banca en Puerto Rico* (Santurce, PR: Departamento de Instrucción Pública, 1969), 4.

assume the ownership of the railroad. To attract investors the government would provide some incentives, which included a guarantee of 8 percent per year over the investment made in the development of railways and a waiver for the payment of duties on the importation of railroad equipment into the island. The government agreed to yield public land without charge and allowed the expropriation of private estates with indemnity.[130]

The budget approved for the fiscal year 1880-81 indicated this shift in public policy. The government approved 12,000 *pesetas* for feasibility studies and new construction of railroads, and 170,000 *pesetas* for the construction of new roads, more feasibility studies, and road maintenance.[131] This consignment for railroads showed a significant increase in comparison with the previous two budgets when the sum was limited to only 4,000 *pesetas*. The difference between the money allocated for roads and railroads also confirmed the course of action adopted by the metropolis based on leaving to private investors the responsibility of railroad projects while the state centered its efforts in road infrastructure. "Public-service railroads" was the classification coined by the state in reference to private financed railroad for public use. Under this premise, most railroad promoters claimed to be motivated by the public benefit of their projects. Although it is obvious that behind any lucrative business there was the desire for profits and capital accumulation, the petitioners always stressed how the project would benefit the country more than themselves. In the proposals, at least nominally, public benefit came before private profits. In this

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[130] "Ministerio de Ultramar: Ley," *Gaceta de Puerto Rico*, 17 July 1880, 2.
[131] Presupuestos generales de gastos e ingresos de la Isla de Puerto-Rico para el año económico de 1880-81 (Madrid, Spain: Tipografia de Manuel Ginés Hernández, 1880), 19. In "Expte general de ferrocarriles," PARES/ AHN, Ministerio de Ultramar, Unidad 383, exp. 8.

framework, the benefits of railroads were not individual but social. That was the case of Miguel Saralegui from San Juan, who proposed the establishment of a horse-driven tramway for the port in 1882. The plan consisted in one track to transport freight from the port to the customs house and commerce warehouses. This tramway would not jeopardize the business of Ubarri's tramway because the former offered freight service while the later only provided service for passengers. The requisites to obtain a franchise included public hearings to allow the public to express their opinions about the project. Don Pedro G. Baró, D. Antonio Llopes, D. Sergio Bacenes, Pedro Rondon, Gerardo Arana, Carlos Romero, Mateo Castro, and Roman Montañez opposed the project. All of them owned small haulage companies which used *carretones* (horse-drawn carts) to transfer merchandise from the ports to warehouses. They opposed the establishment of the tramway for various reasons. The first and foremost was the possibility of competition and possible bankruptcy if the tramway displaced them. They claimed that the tracks would impede the movement of their carts. Finally, the owners of haulage companies reminded the government that once the tramway absorbed all freight transportation they would lose revenues from taxes. In conclusion, to benefit one tramway company over multiple small haulage companies was "sobreponer el bien particular al general."[132]

Miguel Saralegui, the proponent of the tramway, reacted to the attacks. The people displaced by the tramway should not be frightened for their families and their sustenance because

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[132] Translation: "to superimpose private over public benefit."
Jefatura de Obras Públicas, "Don Miguel Sara Legui solicita autorización para establecer un tranvía en los muelles de esta capital, 1882," AGPR, Fondo Obras Públicas, Sub Fondo Ferrocarriles y Tranvías, Serie Expedientes y proyectos de construcción de tranvías, Caja 65, Legajo 108, Expediente 129.

the tramway would generate numerous jobs. The tracks would be established adjacent to the road without impeding the movement of horse-drawn carts. Finally, the country would benefit with the establishment of the tramway because the goods would not suffer damages as had occurred with the *carretones*. Mr. Maese, Chief Engineer of the Bureau of Public Works, approved Saralegui's tramway over the protests of the haulage companies. The government was the judge in the dispute over "public interest." It is hard to believe that anyone involved in the dispute would conduct his business for the public good rather than his own profits. Yet, all of them claimed to be the real promoters of the country's progress.

Narrow gauge debate

The Crown and the Spanish Parliament agreed in facilitating the construction of private railroads in the 1880s but also urged the construction of the state-sponsored beltway railroad. This railroad would benefit the island economy by improving transportation offerings in agricultural areas of production. In 1882 the town of Yauco requested the Bureau of Public Works to receive preference in the construction of the future beltway railroad. Yauco was a coffee producer town and coffee generated great revenues to the state in the 1880s. However, the Chief Engineer of the Bureau of Public Works, Manuel Maese, did not commit to a preferential treatment for Yauco. An auction would be conducted to pick the best corporation for the construction of the beltway railroad and the corporation conferred with the contract would decide the agenda for the construction of the railroad.[133] In the time being an investor appeared with a proposal to develop a railroad in Yauco.

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[133] "Expte general de ferrocarriles," PARES/ AHN, Ministerio de Ultramar, Unidad 383, exp. 9.

In 1883 a banker residing in France submitted paper work for a permit to develop a railroad in Yauco with a route to the east to Santa Isabel passing through Guayanilla and Ponce. Marquis José María Rojas submitted his petition from Paris to develop a narrow track gauge railroad of 0.76 meters. Rojas did not request any state subvention but the gauge width became problematic. In 1880 the government had approved one meter as the standard track-gauge width for public-service railroads. The Yauco project had no future because the government had no intention of consenting to Rojas' petition. Marquis Rojas wrote a missive to the government citing article five of the railroad law: "el ancho de la vía será el aprobado para los ferrocarriles de Puerto Rico (un metro), pero en casos especiales, y justificados debidamente, podrá ser menor."[134] Marquis Rojas had to provide solid justification to construct a 0.76 meters gauge railroad in place of the one meter gauge required by the state. He claimed that the distance was short, only 30 *leguas* (approximately 165 kilometers), and in a poor country there was no need to invest in an expensive one meter gauge track railroad if there was a more economical alternative:

> Pobre, muy pobre dicha Isla, solo puede construir vías económicas.
> Naciones poderosas como los Estados Unidos, tienen millares de kilómetros de ferrocarriles con un ancho de setenta y seis centímetros y con ellos se realizan todos los servicios con la celeridad y perfección de todos conocidas.
> Inglaterra, Chile, Perú, Venezuela, Sajonia, Bosnia, Francia, Bélgica y otras

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[134] Translation: "for railroads in Puerto Rico the approved gauge width had to be one meter, but in special cases with all due justifications the width could be lesser."
"José Mª Rojas pide concesión de una línea de ferrocarril," PARES/ AHN, Ministerio de Ultramar, Unidad 369, Expediente 18, Img. 34.

naciones que poseen líneas económicas de setenta y seis centímetros, van aumentándolas considerablemente.

Periódicos tan respetados como *The Times* de Londres, califica de despilfarro los capitales invertidos en Inglaterra en anchos de via, cuando la experiencia demuestra que con líneas de setenta y seis centímetros puede hacerse perfectamente los servicios.[135]

The dispute over the width of the track gauge was crucial for railway developers. Marquis Rojas considered it an error to mandate a standard track gauge width for the entire island. All the tramways at that time had 0.76 meters gauge lines because narrow gauge meant lower costs of development. It was evident that after the approval of the one-meter gauge limitation the progress of the railways was halted. For Rojas, the imposition of a wider track gauge impeded the establishment of new railroads because construction costs increased unreasonably.

Another advocate of the narrower track gauge was Don Mateo Lucchetti. This planter from Corsica, Spain, published a pamphlet defending the advantages of narrow-gauge railroads to promote agriculture and industry. Lucchetti claimed that railroads were essential for the improvement of the economic situation and to overcome the "primitive" state of the island. He proposed 76 centimeters as the ideal gauge measurement for all the railroads on the island. The

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[135] Translation: "Poor, very poor is this island that only could built economic railroads. Powerful nations like the United States had thousands of railroad kilometers built in 76 cm rail gauge and everyone recognized the swiftness and perfection of the rail service.

England, Chile, Peru, Venezuela, Saxony, Bosnia, France, Belgium and other nations with economic rails of 76 cm are increasing considerably. Recognized newspapers like *The Times* of London described the investment of capital in widen gauges a wastefulness after the experience demonstrated that 76 cm rail gauge could offer a perfect service." Ibid., Img. 34-35.

idea behind this proposal was to merge different lines. For Lucchetti, iron roads instead of roads for oxcarts would help avoid the hardships encountered in the transportation of coffee and sugar. With the railroads the island would duplicate, or even triple the transportation of agricultural products, and new industries (such as mining) could be promoted. The best example of the economic possibilities of railroads was Ubarri's tramway. People were able to travel between San Juan and Cangrejos, and an economic advantage was that properties near the route increased in value. Ubarri's tramway was narrow-gauged and the new law of 1880 jeopardized the construction of future tramways or railroads narrower than a one-meter gauge.[136] Indeed, Ubarri tried to acquire the right to operate a tramway from Río Piedras to Carolina but the government rejected his proposal for the gauge width. Marquis Rojas also mentioned the obstacles to Ubarri's project for a tramway to Carolina and Caguas, because he wanted to continue operations in 0.76-meter gauge tramways. Lucchetti and Marquis Rojas shared their frustrations with the government's ruling on the one-meter gauge width.

After three years waiting for the approval, Marquis Rojas abandoned this dispute and changed his request to a one-meter gauge railroad. Marquis Rojas also requested a permit to extend the length of the route from Mayagüez to Arroyo. To his amazement, the government rejected his project because his railroad had no need in view of the future projected development of the beltway railroad with a station in Yauco. A Spaniard named Ivo Bosch won the right to develop the beltway railroad and Marquis Rojas lost his interest in building a railroad in Puerto Rico.

In 1886 the Oversees Minister finally approved the opening of the auction for the beltway

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[136] Mateo Lucchetti, *Los ferro-carriles en Puerto-Rico* (Puerto Rico: Imprenta de "el Agente," 1884.)

railroad. The companies would compete for a franchise to construct and operate a single-track public-interest-railroad.[137] The beltway railroad was ready to become a reality as Don Leonardo de Tejada had planned a decade earlier. To register in the auction the bidders had to deposit 100,000 *pesos* and the winner of the auction had to deposit a guarantee of 300,000 *pesos* to be return by the state at the end of the project. The government decided to divide the route of 546 kilometers into five rail lines: (A) San Juan-Mayagüez, (B) Río Piedras-Humacao, (C) Ponce-Mayagüez, (D) Ponce-Humacao, and (E) Caguas-Humacao.[138] The auction called for one company to undertake the construction of the five lines of railroad in a period of 6 years. The state would pay an 8 percent annual interest over the capital invested in the construction of the rail lines. The company had the right to request the subvention payment after the completion of each section of a rail-line up to 9,929,000 *pesos*. To calculate the interest the state established the following rates:

[137] Lidio Cruz Monclova, *Historia de Puerto Rico (Siglo XIX)*. Tomo 3, Primera Parte (Río Piedras, PR: Editorial de la UPR, 1970), 319.
[138] "Negociado de Obras Públicas Construcciones Civiles, Montes y Minas," *Gaceta del Gobierno de Puerto-Rico*, 20 January 1887, reprinted on 14 May 1887.

Table 2.2. Length of rail lines and its sections with its rates to calculate state subvention.

RAIL-LINE	RAIL-LINE LENGTH IN KILOMETERS	SECTION NUMBER	SECTION LENGTH IN KILOMETERS	RATE PER KM IN PESOS
Line A	185 km	1st	85	18,000
		2nd	60	20,000
		3rd	40	18,000
Line B	96 km	1st	60	18,000
		2nd	36	18,000
Line C	90 km	1st	55	18,000
		2nd	35	18,000
Line D	125 km	1st	18	19,000
		2nd	12	22,000
		3rd	25	19,000
		4th	70	15,000
Line E	50 km	Unique	50	20,000

SOURCE.- Royal Decree approved on December 17, 1886 published in the *Gaceta de Puerto Rico*.

On January 1887 Queen Regent of Spain, María Cristina, representing her son Alfonso XIII, scheduled the beltway railroad auction for April 20, 1888. However, in November the approval of Royal Decree 636 moved the auction to March 5, 1888 at 11:00 AM in San Juan and 3:00 PM in Madrid.[139] The auction did not attract any investors and this meant the scheduling of a second auction, which also had no bidders.

The nonattendance of investors to the railroad auction occurred because of the Spanish condition of a wide track gauge, concluded José de Jesús Domínguez, a distinguished autonomist

[139] "Negociado de Obras Públicas Construcciones Civiles, Montes y Minas," *Gaceta del Gobierno de Puerto-Rico*, 6 January 1887, 1; and 27 December 1887, 1.

from Mayagüez. De Jesús criticized the administrative control of Spain over Puerto Rico, although the island was a province not a colony. This centralization of power affected the economic progress of the island. The ills of administrative centralization were evident in the difficulties confronted by Count Ubarri to undertake from the construction of the beltway railroad. Ubarri was the chief of the Conservative Party, had wealth and influence in Madrid, yet his efforts to prolong his tramway were rejected. Ubarri's 76 centimeters gauge tramway in Río Piedras would not connect to the proposed beltway railroad because it would be a one-meter gauge railroad. After two unappealing auctions, the government had to reconsider the reduction of the track gauge to allow Ubarri to participate in the project. Ubarri demonstrated his commitment to the economic progress of the island when he built the first steam railroad without state subvention and he continued with the energy and desire to invest in the progress of Puerto Rico, asking that the state had to be more flexible. In a final consideration, De Jesús questioned the benefit of an eight percent state subsidy for the construction of the beltway railroad when that money could be used to promote the decadent sugar industry.[140]

In the third auction Don Ivo Bosch y Puig, a Spanish banker, won the rights for the construction of the one-meter gauge beltway railroad. In a Royal Decree sealed in May 15, 1888 the state officially adjudicated the auction to Bosch and indirectly concluded the debate over the width of the line-gauge. Narrow gauges railroads had their advantages such as "facilitating sharper curvatures, enabling railway lines to follow the contours of rugged landscape and reducing the

[140] José De Jesús Domínguez, *Problemas antillanos: La autonomía administrativa en Puerto Rico* (Mayagüez, PR: Tip. Comercial, 1887).

need for expensive cuttings, tunnels, embankments, and bridges."[141] However, once the beltway railroad started operations it was more advantageous for narrow gauge tramways and railroad companies to adopt the one-meter track gauge to integrate their tracks to a wider network with more users. In the railroad world, a one-meter track gauge was a narrow-gauge railroad still; however, for Count Ubarri and Marquis Rojas the standardization of track gauge was an insurmountable obstacle.

Bosch was a powerful man with other investments in railways constructed in Spain, Venezuela, Colombia, and France. He transferred his rights for the construction of the railroad to a French company named *Societé d'Entreprises et des Constructions des Colonies Espagnoles*. In 1888, the French company decide on Mr. Sauvan as the chief engineer. Mr. Sauvan was former General Director of the *Chemin de fer Ottomans*.[142] French presence in the railway sector was evident in a number of countries such as Spain (*Compagnie Des Chemins de Fer du Nord de L'Espagne, Compagnie Des Chemins de Fer Andalous,* etc.), Argentina (*Chemins de Fer de la Province de Santa-Fé*), and Brazil (*Chemins de Fer Brésiliens*). French investors acquired the right for the construction of the beltway railroad, and local capitalists had the opportunity to develop branch lines or secondary railroads with connection to the trunk line.

Sugar and railroads

The construction of the beltway railroad was important for the island. The tramways had been significant initiatives but the country needed railroads to boost the economy. Sugar planters

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[141] Douglas J. Puffert, "The Standardization of Track Gauge on North American Railways, 1830-1890," *The Journal of Economic History*, vol. 60, no. 4 (2000): 942.
[142] "Chemins de Fer de Porto-Rico," *Le Pour et le Contre*, 11 November 1888, no. 46, 851.

were particularly attracted to the establishment of the beltway railroad because it would operate in coastal towns where the cane was grown and produced. Already sugar planters invested in different technologies in response to the crisis that started in mid-nineteenth century and became critical with the abolition of slavery in 1873. Historian Andrés Ramos Mattei argued that the fall of the sugar plantation system during the last third of the nineteenth century was due to a combination of factors: "the abolition of slavery; the difficulty of forming a labor force of freed men; the absence of an adequate monetary system; the difficulty in obtaining capital at reasonable interest rates in the island; regional droughts; the fall in the price of sugar on the international market; the unstable relations with Puerto Rico's major sugar markets and the increasing consumption of beet sugar internationally. The latter was a superior product to the muscovado sugar manufactured by the plantations. As a result of this combination of factors, the crisis broke out in the 1870s. The spark which started the fire was, undoubtedly, the abolition of slavery."[143]

The response to limited labor was efficiency in production. To increase efficiency was imperious the complete mechanization of the sugar business. Historian Teresita Martínez Vergne proposed that "both abolition and the drop in the price of sugar dictated the need for change, some planters entertained the idea of experimenting with new methods of manufacturing sugar. Those who envisioned the establishment of efficient enterprises as the basis for a prosperous future took the bold step of investing capital in modern equipment and rationalizing the production

[143] Andrés Ramos Mattei, "The Plantations of the Southern Coast of Puerto Rico: 1880-1910," *Social and Economic Studies*, vol. 37, no. 1/2, (1988): 365.

process."[144] It was necessary a shift from producing sugar in *haciendas* to produce sugar in *centrales*. The *haciendas* used a rudimental technology which allowed the planter to produce brown sugar (*moscabada*), but the *central* produced white refined sugar in highly mechanize mills. Precisely in 1873 the first central, Central San Vicente, started operations in Vega Baja, but the agricultural-industrial complex initiated in San Vicente was difficult to replicate for most planters without the capital or credit to import that technology. For some planters the solution was to partially mechanize their production.[145] It was in this juncture that planters started to introduce portable tracks to transport raw cane from field to mills. Mainly two companies, Aine Decauville from France and Manlove Alliott from Britain, received the orders for portable tracks from planters in Puerto Rico.[146]

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[144] Teresita Martínez Vergne, "New Patterns for Puerto Rico's Sugar Workers: Abolition and Centralization at San Vicente, 1873-92," *The Hispanic American Historical Review*, vol. 68, no. 1 (1988): 48.
[145] Andrés Ramos Mattei, *La sociedad del azúcar en Puerto Rico: 1870-1910* (Río Piedras, PR: Universidad de Puerto Rico, 1988), 32-33.
[146] Ramos Mattei, *La sociedad del azúcar en Puerto Rico*, 48.

Figure 2.1. Hacienda La Fortuna

Figure 2.2. Hacienda Buena Vista

Francisco Oller, a distinguished Puerto Rican artist, depicted in his painting *Hacienda la Fortuna* (1885) the portable tracks with ox-drawn carts moving forward in direction to the mill building (Figure 2.1). Historian Andrés Ramos Mattei explained that sometimes half of the land for planting was dedicated to food crops and pastures for the oxen: "These animals formed the axis of transportation of cane from the plantation to the factory. They were also used to transport sugar from the plantation to the loading dock."[147] Evidently, this practice limited the land for cane planting and steam power for cane transportation became a better alternative because it was faster and liberate land previously used for pasture.

In another painting titled *Hacienda Buena Vista* (n.d.), Francisco Oller depicted a step forward in the growth of sugar transportation (Figure 2.2). Oller painted a steam railroad crossing the plantation with seven carts full of cane. In his paintings Oller gave us a pictorial representation of the changes in the rail transportation in the sugar industry. However, the incorporation of railroad tracks was expensive and the transition was slow, as was the establishment of *centrales*. For instance, *Central Mercedita* in Ponce "mechanized the transportation system with the purchase of a locomotive from the English firm Manlove Alilot and Company. Even so, they continued using portable tracks and oxen carts to take the cane from the cane fields."[148]

Planters needed an efficient transportation system in two segments: first to transport raw cane from the estates to the mill (including neighboring estates), and second to transport refined

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[147] Andrés Ramos Mattei, "The Plantations of the Southern Coast of Puerto Rico: 1880-1910," *Social and Economic Studies*, vol. 37, no. 1/2 (1988): 371.
[148] Ibid. 371-372.

sugar from the mill to the ports. Historian Humberto García Muñíz claimed that "the introduction of movable tracks in 1869 and the railroad in 1888 extended the reach of the *central* and revolutionized the transport system."[149] Planters started to modernize their transportation system with tracks and were anticipating the completion of the insular railroad system. The possibility of link their private railroads with the beltway railroad or the establishment of secondary railroads (defined as railroads for public use but not in response to the public interest) was attractive for every planter. New competition from beet sugar in the United States and European countries prompted a drop in the sugar prices due to the saturation of the markets forcing local sugar producers to look for technological innovation and more efficient transportation.[150]

Finally the railroad

In 1890 Puerto Rico had a population of 810,394 inhabitants and the island participated actively in international trade. However, farmers and merchants, continued to rely on expensive and slow ox carts. Even the tramways in urban centers did not satisfy the demand for transportation. Adolfo de Hostos wrote: "Hacia 1892 el tránsito entre la ciudad y Santurce había aumentado a tal extremo que el tranvía de vapor era insuficiente. Estableciόse un servicio de omnibús [*sic.*] con asiento para diez personas, tirados por caballos."[151] The future of Puerto Rico

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[149] Humberto García Muñíz, *Sugar and Power in the Caribbean: The South Porto Rico Sugar Company in Puerto Rico and the Dominican Republic 1900-1921* (San Juan, PR: La Editorial de la Universidad de Puerto Rico, 2010), 34.

[150] Las obras proyectadas. Importancia relativa de las mismas. Los Ferro-carriles base del progreso agrícola e industrial (Puerto Rico: Imprenta de El Asimilista, 1885), 15.

[151] Translation: "Towards 1892 the traffic between the city and Santurce had increased to the point that the steam tramway was insufficient. A horse-driven cart service was established with seats for 10 passengers."
Adolfo de Hostos, *Historia de San Juan, Ciudad murada: Ensayo acerca del proceso de la civilización en la ciudad española de San Juan Bautista de Puerto-Rico, 1521-1898* (San Juan, PR: Instituto de Cultura Puertorriqueña, 1966.), 92.

was the beltway railroad, and the ox-carts would remain as symbols of the past.

The construction of the railroad required the expropriation of property. Edwin Borrero González in his master's thesis acknowledged the legal efforts of landowners to stop land expropriations. The Oversees Minister approved a law to carry out the expropriations for fair economic compensation. However, the corporation decided to pay only 5 cents per square meter an undervalue payment for most of the estates. As an example of landowner's dissention, Don Eudaldo J. Iglesias went to the courts claiming a compensation of 79 cents per square meter for his five estates in Puerta de Tierra.[152] His was the first of a wave of appeals in the courts against the railroad corporation. In general the values ranged from 5 cents to 1 *peso,* with the exception of the lands owned by Don Pablo Ubarri. Borrero González studied multiple court cases and found that Ubarri received the highest compensation for his lands. It is not surprising because Ubarri was a powerful leader in the "unconditional" movement. The author mentioned other property owners with emotional bonds to a family estate owned generation after generation, and the loyalty among neighbors; however, they accepted the compensation offered by the state because litigation was expensive and difficult to obtain a victory. The issue of fair compensation was eventually settled in the courts but it was a long process and added to the delay in the construction of the railroad.

The initial agreement of the government with Don Ivo Bosch established that the railway network would be fully completed in six years. Three years later the *Compañía de los Ferrocarriles de Puerto Rico* was ready to begin limited operations. The *Compañía de los Ferrocarriles de Puerto Rico* was a corporation created in Madrid, Spain, in 1888 with a capital of

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[152] Borrero González, *El ferrocarril de circunvalación*, 80.

16 million *pesetas* or francs (both currencies were equivalents in value) divided into 32,000 shares of 500 pesetas or francs each.[153] On March 1891, an article in the *Revista de Obras Públicas* publicized the opening of the first section in the north from the Martín Peña station in San Juan to the station in Arecibo.[154] This was a major step forward but the corporation was behind schedule. Several months later a local newspaper published: "Que progresamos, no hay duda, y es necesario seguir el movimiento de avance."[155] By 1892 the company had built only 191 kilometers of the projected 456 kilometers. Moreover the consul of Great Britain reported: "little seems to have been done during the years 1893 and 1894, only 2 more kiloms. (from Hatillo to Camuy) having been added since 1892".[156] The company decided to start providing service in the finished segments of the lines to start generating revenues.

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[153] *Estatutos de la Compañía de los Ferrocarriles de Puerto-Rico* (Madrid, Spain: Imprenta de Fontanet, 1888), 7.
[154] Juan Cervantes-Pinelo Sanz Andino, "El ferrocarril de Puerto Rico*," Revista de Obras Públicas*, vol.9, no.39 (1891): 139.
[155] Translation: "Without doubt we are making progress and it is necessary to continue moving forward." "Ferro-carriles," *La Bandera Española*, 8 November 1891, 2.
[156] Report of Consul Vecqueray to the Earl of Kimberly, *Foreign Office Annual Series*, no. 1566 (London: Harrison & Sons, 1895), 10.

Figure 2.3. Quarterly Gross Income for Line A-1st, 2nd and 3rd sections, 1892-1893.

SOURCE.- Income obtained by the Compañía de los Ferrocarriles in the first, second, and third Section of Line A. AGPR, Fondo Obras Públicas, Sub Fondo Ferrocarriles y Tranvías, Serie Expedientes y Documentos Relativos a Ferrocarriles, Caja 30, Legajo 44, Expediente 63.

The beltway railroad provided service for passengers and freight transportation at different fares. Income reports for the fiscal year of 1892-1893 illustrated the changing priorities in different geographical areas. Line A had three sections the first of which was the longest at 85 kilometers from San Juan to Arecibo. This first section reported higher income in freight transportation than it reported for passenger transportation (including baggage fees). However, the second section from Arecibo to Hatillo and the third section from Aguadilla to Mayagüez reported higher profits from passenger transportation. Figure 2.3 illustrates the income variances for each section of Line A.[157]

The first section of Line B (San Juan-Carolina) and the second section of Line C (Yauco-Ponce) also were in operations during 1892. Those sections did not generate the income of Line A because the distances were smaller. There was also a relation between the income of the section and the port it serves. Line A Section 1 offered service to port in San Juan, the most active in the island, Line C Section 2 offered service to the port in Ponce and Line A section 3 to the port in Mayagüez. The total income for each section per quarter is shown in the following table:[158]

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[157] Jefatura de Obras Públicas, "Estado que manifiesta los ingresos obtenidos por la compañía de los ferro-carriles en la 1ª, 2ª y 3ª sección de la línea A durante el primer semestre del año económico de 1892-93," AGPR, Fondo Obras Públicas, Sub Fondo Ferrocarriles y Tranvías, Serie Expedientes y Documentos Relativos a Ferrocarriles, Caja 30, Legajo 44, Expediente 63.

[158] Jefatura de Obras Públicas, "Datos pedidos por el ministerio de Ultramar acerca del producto bruto kilométrico y gastos correspondientes a cada una de las secciones en explotación de los ferrocarriles de Puerto Rico. 1893," AGPR, Fondo Obras Públicas, Sub Fondo Ferrocarriles y Tranvías, Serie Expedientes y Documentos Relativos a Ferrocarriles, Caja 30, Legajo 44, Expediente 63.

Table 2.3. Quarterly Gross Income for operating sections in Line A, B and C, Fiscal Year 1892-1893.

RAIL-LINE /SECTION	THIRD QUARTER 1892	FOURTH QUARTER 1892	FIRST QUARTER 1893	SECOND QUARTER 1893
A/1	$20,950.64	$23,005.93	$28,814.51	$30,677.20
A/2	433.84	893.43	1,130.83	1,685.93
A/3	0	106.81	12,234.19	6,596.28
B/1	703.37	785.68	1,441.91	821.92
C/2	6,058.15	6,977.78	8,834.59	10,964.01

NOTE.- Line A Section 2 started operation in August and Line A Section 3 started operation in December.
SOURCE.- Data from the Overseas Ministry about the gross income for each section under operations of the railroads in Puerto Rico, 1893.

In 1894 the contract expired and the beltway railroad continued under construction. The railroad company had merged section 1 and section 2 in Line A making possible the service "from the Capital to Camuy, and from the Capital to Carolina; from Aguadilla to Mayagüez; and from Yauco to Ponce."[159] The railroad company started to earn income from these four sections under operation but also started to experience accidents as was the case with tramways. The law of the railroads stipulated in its article 173: "Notice shall be given immediately by the Station Masters to the Inspectors and to the Governor General, of any accident which may place in jeopardy the safety of the trains or endanger the passengers or employees of the Company or any other persons."[160] In compliance with the law, the Company reported three derailments in 1892 without injury to the

[159] "Porto Rico Railways," *The Railway Engineer*, vol. 16, no. 8 (1895): 247.
[160] War Department, *Translation of Police Law of Railroads of Puerto Rico and Regulations for its Application* (Washington, USA: Government Printing Office, 1899), 32.

passengers or crew members, but producing delays of an hour or more. In 1893 two derailments and the impact of hurricane San Roque produced undesired delays but no injuries or casualties were reported.[161] These ongoing mishaps eventually ended in tragedy. In February 13, 1894 a wagon derailed after a crash with an ox. In the report the company claimed that the machinist used the whistle to announce its arrival 100 meters before the Hacienda San Vicente Station in Vega Baja. The sound of the whistle startled the ox and it ran in front of the railroad. At 5:42 p.m. the telegraph station received the news from the chief station officer in Vega Baja. This accident caused the deaths of Don Pedro Estañol, two children, Víctor and Altagracia Alonso González, and a civil guard, Teodoro Cazón Paz. A child named Joaquín Álvarez Soler was critically injured. The parents of the two dead children, civil guard Francisco Alonso López and his wife Balbina Calvo, were wounded. The government imposed a fine of 1,000 *pesos* on the company. The company appealed, but in April 24, 1897 the government of Puerto Rico informed the company of the final decision from Spain to maintain the fine of 1,000 pesos. Their rational was that the company had failed to provide a barrier to avoid people or cattle from accessing the rails.[162] That same year the *Compañía de los Ferrocarriles de Puerto Rico* saw its board of directors split into two opposing groups each of which claimed to be the legitimate voice of the company.

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[161] Gobierno General de la Isla de Puerto Rico, AGPR, Fondo Obras Públicas, Sub Fondo Ferrocarriles y Tranvías, Serie Expedientes y Documentos Relativos a Ferrocarriles, Caja 36, Legajo 59, Expediente 220, 221, 222, 223, 225, 227.

[162] Jefatura de Obras Públicas, "Descarrilamiento del tren número 3 en el km. 43 de la línea A de los ferrocarriles de Puerto Rico, ocurrido el 13 de febrero. 1894," AGPR, Fondo Obras Públicas, Sub Fondo Ferrocarriles y Tranvías, Serie Expedientes y documentos relativos a ferrocarriles, Caja 37, Legajo 59, Expediente 229.

The split

On December 9, shareholders of the *Compañía de los Ferrocarriles de Puerto Rico* had scheduled a general meeting for December 27 and 28, 1892. However, three days earlier the board called for a special meeting without providing any justification to the shareholders. In the *Gaceta de Madrid* of December 25th, Ivo Bosch, president of the Board, and Wenceslao. Martínez, administrator, announced the cancellation of the general meeting that had been scheduled for December the 27th. Bosch and Martínez also published the agreements adopted by the Board in the special meeting on December 24th. The board approved the payment of 50 *pesetas* per share to be paid in two disbursements.[163] Alejandro Pidal, Joaquín María López Puigcerver, Duque de Sexto, and Lastres y Guardia, all members of the board, resigned their positions in protest of the impromptu meeting. Although the board had canceled the general meeting, a group of shareholders from Spain and France arrived on December 27th, but the office was closed. They moved the meeting to the office of the notary Francisco Moragas y Tejeras. In the absence of any administrators the assembly elected Alberto Porlitz to chair the meeting and Loriz as secretary. Porlitz was proxy to 12,240 shares, which represented 244 votes from the *Societé de Credit Mobilier* of Paris, so it was no surprise that he was chosen to direct the assembly. Another important delegate was Ratisbonne with 4,000 shares from the *Societé d'Enterprisses et de constructions aux colonies Espagnoles*.[164]

Three-fifth of the shareholders assembled and agreed to dismiss the board and proceeded to

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[163] "Compañía de los Ferrocarriles de Puerto Rico," *Gaceta de Madrid*, 25 December 1892, 935.
[164] "Sobre consecuencias de divergencias en la cía. ferrocarril," PARES/ AHN, Ministerio de Ultramar, Unidad 386, Expediente 12.

choose a provisional board to operate the company. On December 30, 1892 the shareholders represented by the new board published a note in the *Gaceta de Madrid* announcing the annulment of the agreements that had been made on December 24th by the former board of the company.[165] On January 3, the *Gaceta de Madrid* and three more newspapers (two of them Parisian) published a summons to meet again on January 21, 1893 to ratify the decision to revoke the board. They also elected new administrators for the *Compañía de los Ferrocarriles de Puerto Rico*. Of the 32,000 shares, the owners of 18,449 shares participated in the meeting to elect the administrators. The first action of Juan Bautista de la Torre y Vega, Count of Torrepando, and president of the new board was a petition for an injunction against Wenceslao Martínez, Pablo Bosch and Ivo Bosch to force them to surrender the company's official documents and its offices. The election of a new administration created a crisis in legitimacy. In 1893 the company should have received from the Spanish government a dividend of 8 percent for the Line A in operation. On February 19, 1893 by Royal Decree the ministry declared a suspension of payments until the company overcame internal controversy, or until the courts clarified the status of the board.[166]

In the *Gaceta de Madrid* Raimundo Le Brun published a notice that shareholders of the *Compañía de los Ferrocarriles de Puerto Rico* separated into two factions. One group followed Ivo Bosch and his fiscal decisions while the other group opposed Bosch. The main reason of discontent among the shareholders was because of a loan of 360,000 *pesetas* made to the *Banco General de Madrid* by Bosch without their consent. Ivo Bosch was the president of the bank,

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[165] "Noticias Oficiales," *Gaceta de Madrid*, 30 December 1892, 991.
[166] "Sobre consecuencias de divergencias en la cía. ferrocarril," PARES/ AHN, Ministerio de Ultramar, Unidad 386, Expediente 10.

which later closed. The second scandal was the economic relation of the *Compañía de los Ferrocarriles* with the *Credit Mobilier*. Don Ivo Bosch as an administrator of the *Credit Mobilier* provided capital for the establishment of the *Societé d'Enterprisses*, the company in charge of the construction of the beltway railroad. When the *Credit Mobilier* pressured the *Compañía de los Ferrocarriles* for payments, Bosch quit his position in *Credit Mobilier* and rejected any settlement from the *Compañía de los Ferrocarriles* to pay the millions of francs that had been invested in the *Societé d'Enterprisses*.[167] Because of the economic decisions that had been made by Don Ivo Bosch, the presence of *Credit Mobilier* and the *Societé d'Enterprisses* at the meeting provided an opportunity to clarify any questions the shareholders may have had.

On January 29 the *Gaceta de Madrid* published two identical summons for a general meeting of shareholders, one signed by Conde Torrepando as "president of the board" and the other also sign as "president of the board" but by Ivo Bosch. [168] In other words, the call for the meeting came from two factions calling their people to assemble to elect a new board in consensus. Behind this initiative was the need to raise funds to complete the railroad. The meeting took place on February 14, 1894 with representatives of 24,934 shares, which was more than half of the total shares. Both boards agreed to step down, and proceeded to elect a new board. The assembly elected Count Torrepando as President, Charles Wallut as Vice-president, Marquis Fressangne, Fernando Fernandez de Cuellar, José F. Silva, Max Proper, Luciano Dubost, Wenceslao Martínez,

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[167] Compañía de los Ferrocarriles de Puerto Rico, *Memoria leída en la junta general extraordinaria de accionistas de 20 de junio de 1893* (Madrid, Spain: Est. Tipográfico «Sucesores de Rivadeneyra», 1893).
[168] "NOTICIAS OFICIALES: Compañía de los ferrocarriles de Puerto Rico," *Gaceta de Madrid*, 29 January 1894, 380.

José Feliu y Codina, and Enrique Ucelay as administrators. On February 20, 1894 the newly elected board sent a communication to the Oversees Minister informing him that the internal controversy had been resolved to expedite the payment of the dividend owed to the company by the state.[169]

The government established a commission on April 1894 to study the amount of money to be disbursed to the *Compañía de los Ferrocarriles de Puerto-Rico* in response to a Royal Decree declared on March 1894. The commission decided to pay 153,683.82 *pesos* after the company settled a tax debt, and paid the government the costs of line inspections and repairs. However, the administration of the company demanded a revision of the decision and made a request to the Overseas Minister for 150,000 *pesos* in advance until the commission reviewed the decision. The company wanted the payment of 150,000 *pesos* expedited to resume the construction of the beltway railroad. They claimed that the payment would benefit the entire country, not only the corporation. The rational of the company was that Puerto Rico was caught in an economic crisis that could be surpassed through an injection of capital, and this subvention could be the breath needed by the insular economy:

> …los 150,000 pesos citados, no han de salir de esta Isla, ni van a entrar en una caja para no salir de ella, sino que, por el contrario, van a quedar en este país, se repartirán entre los diversos elementos que cooperan á la construcción de una via férrea, y contribuirán por manera eficaz y poderosa al gran fenómeno ecco. De la

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[169] "Sobre consecuencias de divergencias en la cía. ferrocarril," PARES/ AHN, Ministerio de Ultramar, Unidad 386, Expediente 16.

circulación de la riqueza.= En este orden de ideas resultará además que la clase más favorecida con tal decisión lo será la clase obrera, en los actuales momentos en que una crisis económica se ensoñoréa de todos los países, en esos instantes que acaban de hacerse aquí los últimos embarques de café, y que terminan sus faenas las fincas azucareras, es cuerdo, es oportuno, es sensato, y es, si bien se mira, hasta político y patriótico que el obrero no permanezca ocioso por falta de trabajo; que pueda con un jornal atender al pan cotidiano; obteniendo a una obra pública de utilidad general el trabajo que no halla en las fincas de cultivo de esta Isla.[170]

After reviewing its decision, the commission decided to maintain the initial sum of 153,683.82 *pesos*. For the state the issue raised by the *Compañía de los Ferrocarriles de Puerto-Rico* was simply an effort to increase their own profits. Furthermore, if there had been a delay in the payment it was a result of their internal disputes. This split between shareholders resulted from the company's financial problems which could have been overcome with the income generated from the operation of the first sections.

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[170] Translation: "The 150,000 pesos will not leave this Island, nor will enter a vault forever, on the contrary, the money will stay in this country for its distribution among those who are cooperating with the construction of the railroad and will efficiently and with power cooperate to the resonance phenomenon of wealth circulation. With these ideas the working class will be the most favorable social group in moments that economic crisis hit every country. In this moment of the last coffee embarks and the end of the sugar harvest it is sound, opportune, sane, it is even politic and patriotic to avoid idleness among agrarian workers with the creation of jobs in public works to provide the income for the daily bread."
"Sobre consecuencias de divergencias en la cía. ferrocarril," PARES/ AHN, Ministerio de Ultramar, Unidad 386, Expediente 17, Imgs. 94-95.

Income

On August 4, 1890 the governor general approved the tariffs for passengers and freight transportation submitted by the *Compañía de los Ferrocarriles de Puerto-Rico*. The tariffs differed if the railroad was regular or high speed and the passenger also chose first, second, or third class seats. In first class an unescorted woman would have at her disposal a seat intended for two, as well as the choice a non-smoking wagon. Children under seven years paid half price while infants traveled free of charge. Adults were allowed baggage no heavier than 30 kilograms, and children were allowed 15 kilograms. Passengers also had the alternative to transport fresh food, domestic animals, and cattle paying the following tariffs:

Table 2.4. Selected general tariffs for high and low speed railroads, 1890

	HIGH SPEED		LOW SPEED	
Fresh Food	*Price per ton and kilometer*	*Minimum allowed*	*Price per ton and kilometer*	*Minimum allowed*
Fish and crustacean	0.300	0.15	0.150	0.15
Oysters	0.270	0.15	0.135	0.15
Milk	0.210	0.15	0.105	0.15
Cheese and Butter	0.180	0.15	0.090	0.15
Eggs	0.090	0.15	0.045	0.15
Hunting pieces (dead)	0.270	0.15	0.135	0.15
Ice	0.210	0.15	0.105	0.15
Domestic animals	*Price per piece and kilometer*	*Minimum allowed*	*Price per piece and kilometer*	*Minimum allowed*
Dogs	0.018	0.15	0.009	0.15
Cats	0.012	0.15	0.006	0.15
Gamecocks	0.015	0.15	0.0075	0.15
Parrots	0.012	0.15	0.006	0.15
Birds	0.009	0.15	0.0045	0.15
Poultry	*Price per kilometer and dozens of birds*	*Minimum allowed*	*Price per kilometer and dozens of birds*	*Minimum allowed*
Chicken	0.018	0.15	0.009	0.15
Turkey	0.036	0.15	0.018	0.15
Ducks	0.030	0.15	0.015	0.15
Livestock	*Price per piece and kilometer*	*Minimum allowed*	*Price per piece and kilometer*	*Minimum allowed*
Horses, mules, donkeys	0.102	1.00	0.051	1.00
Ox, cows	0.108	1.00	0.054	1.00
Veal, pigs	0.054	0.50	0.027	0.50
Lambs, sheeps, goats	0.030	0.50	0.015	0.30
Horses, mare, mules transported in stock car	0.153	1.50	0.0765	1.50

SOURCE.- Compañía de los Ferrocarriles de Puerto Rico, *Cuaderno de Tarifas Generales; Grande y Pequeña velocidad* (Paris, France: Imprimerie Schiller, 1890), 52, 54-58. In AGPR, Fondo Obras Públicas, Sub Fondo Ferrocarriles y Tranvías, Serie Expedientes y documentos relativos a ferrocarriles, Caja 34, Legajo 34, Expediente 270-271.

All the routes had "mixed trains": passenger wagons and freight wagons. In 1893 the commuter had three options of travel: first class, second class, and third class (Table 2.5).[171] Theoretically, railroads provided cheaper service than horse or ox carts, making transportation accessible to "the people" and by consequence benefiting "the nation" through a decrease in transportation costs. To test this assumption I made a comparison between transportation provided by an animal-driven cart company and the beltway railroad. A newspaper announced that a cart service from Arecibo to Utuado had a cost of 4 *pesos*.[172] The distance between these towns was approximately 31 kilometers. There was no rail line to Utuado, but from Arecibo to Vega Baja the distance was similar and the cost in third class was 1.64 *pesos*. Even in first class the tariff was lower than that of the cart company with a cost of 3.61 *pesos*. The cost per kilometer was significantly cheaper on the railway line than on animal-driven cart, nevertheless railroad transportation was only an alternative for the people on the northern coast. This section was an important step towards the development of the coastal railroad but until the company completed the project other areas continued relying on traditional transportation. In the mountains the people had no alternatives since railways were expensive to establish in the highlands, and even on the eastern coast seagoing vessels were the best transportation option.

When traveling by railroad there was a significant savings in time compared with ships. Until railway lines were constructed in eastern Puerto Rico, ship service was the most efficient transportation alternative for the towns of Fajardo, Vieques, Humacao, Naguabo, and Yabucoa. The

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[171] "Cuadro de aplicación de las tarifas para el transporte de los viajeros," *La Balanza*, 20 January 1893, 4.
[172] "Empresa de coches," *La Correspondencia de Puerto Rico*, 13 January 1897, 1.

company *Vapor Ivo Bosch* had a ferryboat for passengers and freight with two fares: 6 *pesos* in the stern, 4 *pesos* in the bow. On Mondays it departed from Humacao to Vieques, Fajardo and the Capital; Tuesdays and Wednesdays the boat loaded in the Capital; Thursdays at 2:00 a.m. it left the Capital to Fajardo, Vieques, Humacao, Naguabo and Yabucoa. From Friday to Sunday it was available to merchants for chartered trips.[173] To conclude, a round trip from the eastern towns to San Juan took about one week. If we ask ourselves why the railroad took so long to develop in the eastern part of the island, it was probably because Don Ivo Bosch already had control of the transportation through his shipping service. His priority was to establish his presence through railroads in areas where he did not control shipping.

Table 2.5 illustrates the differences between first, second, and third class fares, in which most first class tickets was double the price of a third class seat. Throughout the years the company realized they were losing money from the sale of second and first class tickets. The company had sold few of these tickets so they decided to drop the prices to attract more passengers. The Law of Railroads approved in 1888 required that the company notify the changes in fares to the government in advance. The company also had to announce the fare changes to the public six months before rates became effective. The company received the approval of the state to lower the prices because reduced rates would benefit the company and consumers alike.[174]

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[173] "Ruta del mes de febrero," *Boletín Mercantil*, 9 February 1893, 3.
[174] Gobierno General de la Isla de Puerto Rico, "Expediente sobre la tarifa especial número 2 para billetes de 1ª y 2ª clase con reducción de precios, presentada por la Compañía de los ferrocarriles de esta isla. 1895 – 1896." AGPR, Fondo Obras Públicas, Subfondo Ferrocarriles y Tranvías, Serie Expedientes y Documentos Relativos a Ferrocarriles, Caja 34, Legajo 51, Expediente 158

Table 2.5. Fares for passengers in different accommodations, 1893.

	San Juan	Martín Peña	Bayamón	Dorado	Vega-Baja	Manatí	Barceloneta	Cambalache	Arecibo
	1st:$0.37	....	....	....	....	....	....	....	....
Martín Peña	2nd:$0.27	....	....	....	....	....	....	....	....
	3rd:$0.17	....	....	....	....	....	....	....	....
	1st:$0.56	1st:$0.19	....	....	....	....	....	....	....
Bayamón	2nd:$0.39	2nd:$0.14	....	....	....	....	....	....	....
	3rd:$0.26	3rd:$0.09	....	....	....	....	....	....	....
	1st:$1.85	1st:$1.48	1st:$1.30	....	....	....	....	....	....
Dorado	2nd:$1.35	2nd:$1.08	2nd:$0.95	....	....	....	....	....	....
	3rd:$0.84	3rd:$0.68	3rd:$0.59	....	....	....	....	....	....
	1st:$3.15	1st:$2.78	1st:$2.59	1st:$1.30	....	....	....	....	....
Vega-Baja	2nd:$2.29	2nd:$2.02	2nd:$1.89	2nd:$0.95	....	....	....	....	....
	3rd:$1.43	3rd:$1.26	3rd:$1.18	3rd:$0.59	....	....	....	....	....
	1st:$4.16	1st:$3.79	1st:$3.61	1st:$2.31	1st:$1.11	....	....	....	....
Manatí	2nd:$3.03	2nd:$2.76	2nd:$2.63	2nd:$1.68	2nd:$0.81	....	....	....	....
	3rd:$1.89	3rd:$1.73	3rd:$1.64	3rd:$1.05	3rd:$0.51	....	....	....	....
	1st:$4.81	1st:$4.44	1st:$4.26	1st:$2.96	1st:$1.76	1st:$0.65	....	....	....
Barceloneta	2nd:$3.50	2nd:$3.23	2nd:$3.10	2nd:$2.16	2nd:$1.28	2nd:$0.47	....	....	....
	3rd:$2.19	3rd:$2.02	3rd:$1.94	3rd:$1.35	3rd:$0.80	3rd:$0.30	....	....	....
	1st:$6.38	1st:$6.01	1st:$5.83	1st:$4.53	1st:$3.33	1st:$2.22	1st:$1.67	....	....
Cambalache	2nd:$4.64	2nd:$4.37	2nd:$4.24	2nd:$3.30	2nd:$2.42	2nd:$1.62	2nd:$1.21	....	....
	3rd:$2.90	3rd:$2.73	3rd:$2.65	3rd:$2.06	3rd:$1.52	3rd:$1.01	3rd:$0.76	....	....
	1st:$6.75	1st:$6.38	1st:$6.20	1st:$4.90	1st:$3.61	1st:$2.59	1st:$1.95	1st:$0.37	....
Arecibo	2nd:$4.91	2nd:$4.64	2nd:$4.51	2nd:$3.57	2nd:$2.63	2nd:$1.89	2nd:$1.42	2nd:$0.27	....
	3rd:$3.07	3rd:$2.90	3rd:$2.82	3rd:$2.23	3rd:$1.64	3rd:$1.18	3rd:$0.89	3rd:$0.17	....
	1st:$7.86	1st:$7.49	1st:$7.30	1st:$6.01	1st:$4.81	1st:$3.73	1st:$3.15	1st:$1.58	1st:$1.21
Hatillo	2nd:$5.72	2nd:$5.45	2nd:$5.31	2nd:$4.37	2nd:$3.50	2nd:$2.76	2nd:$2.29	2nd:$1.15	2nd:$0.88
	3rd:$3.57	3rd:$3.41	3rd:$3.32	3rd:$2.73	3rd:$2.19	3rd:$1.73	3rd:$1.43	3rd:$0.72	3rd:$0.55

After the scandal with the board it was not secret that the company was confronting solvency problems. In a report from the British consul's office, the railroad company built tracks on a steady pace until 1893 although in 1894 the company only added one more section, from Hatillo to Camuy.[175] The company tried to accumulate more capital from the initial sections under operation to finance the rest of the construction. Apparently the profits were not enough to keep the rhythm of construction possibly because the fares were not competitive for passengers or freight.

In 1894 Don Bianchi, Jr. representing the land owners of Añasco sent a letter to the

[175] Great Britain Foreign Office, *Diplomatic and consular reports on trade and finance: Spain* (London: Harrison and Sons, 1895), 9-10.

Governor General, Don Antonio Dabán, requesting his support for a revision of the rates for sugar and coffee transportation.[176] These planters considered the rates too high. Tobacco planters had a similar problem but in 1895 the railroad company revised the tariffs approved on February 20, 1893 for tobacco transportation. The government accepted a fare reduction for transporting tobacco from Hatillo to San Juan:

TABLE 2.6. Tobacco Fares in the *Compañía de los Ferrocarriles de Puerto-Rico*, 1895.

STATION	FARE (IN PESOS)
Río Piedras	0.84
Bayamón	0.90
Carolina	1.54
Toa Baja	2.10
Dorado	2.24
Vega Baja	3.86
Manatí	4.06
Barceloneta	4.16
Arecibo	4.67
Hatillo	4.95
Camuy	4.95

NOTE.- Departing from San Juan Station (fares based on 1,000 kilograms of tobacco).
SOURCE.- "Expediente sobre la tarifa número 4 presentada por la Compañía de los ferrocarriles. 1895." AGPR, Fondo Obras Públicas, Subfondo Ferrocarriles y Tranvías, Serie Expedientes y Documentos Relativos a Ferrocarriles, Caja 34, Legajo 51, Expediente 157.

[176] Gobierno General de la Isla de Puerto Rico, "Expediente relativo a instancia de varios agricultores y comerciantes solicitando se modifiquen las tarifas que rigen el transporte del azúcar y café en la 3ª sección de la línea A de los ferrocarriles. Añasco. 1894." AGPR, Fondo Obras Públicas, Subfondo Ferrocarriles y Tranvías, Serie Expedientes y Documentos Relativos a Ferrocarriles, Caja 34, Legajo 51, Expediente 153.

The company changed the rates because they needed to increase revenues. They identified tobacco transportation as an undeveloped market because high rates discouraged tobacco growers from using the railroad:

> En zonas productivas de tabaco, los transportes de este son muy reducidos y sin embargo llega en cantidades considerables a San Juan por la vía marítima y por carros lo que hace suponer que la tarifa en vigor sea la causa de ese alejamiento del ferro-carril. A encausar por el dicho tráfico y aumentar los productos de explotación tiende la modificación que se presenta.[177]

The railroad company gave tobacco growers an additional incentive: they returned 10 percent of the rates paid by any tobacco farmer who transported more than 10 tons in a year. This tonnage probably was high for small tobacco farmers; however, in 1895 when the incentive was approved, there were two big tobacco factories with more than one hundred workers located in the two main urban centers, San Juan and Ponce. These large tobacco companies would benefit from the incentive. In the late nineteenth century, Puerto Rican tobacco famers exported the leaf to Cuba to produce the renowned "habanos" (cigars). In small artisans workshops known as "chinchales"

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[177] Translation: "In tobacco producing zones transportation offerings are very limited however considerable amounts of tobacco arrives in San Juan by means of maritime transportation and automobiles which suggests that the tariff is the cause to keep tobacco away from the railroad. A different tariff must increase the goods transported in the railroad."
"Expediente sobre la tarifa número 4 presentada por la Compañía de los ferrocarriles. 1895." AGPR, Fondo Obras Públicas, Subfondo Ferrocarriles y Tranvías, Serie Expedientes y Documentos Relativos a Ferrocarriles, Caja 34, Legajo 51, Expediente 157.

groups from three to fifteen cigar makers prepare cigars for the local and European markets.[178] In 1895 the island exported 3,657,370 pounds of tobacco with a value of 698,225 *pesos,* standing behind coffee and sugar with exports valued in 9,492,212 *pesos* and 4,047,399 *pesos* respectively.[179] The coastal route of the railroad provided service to the sugar plantations but tobacco workshops in coastal towns would also benefit from the service. The railroad company had to make itself an attractive alternative for tobacco farmers and cigar makers to became more profitable.

Each railroad section offered merely one round-trip per day. Upon analyzing the schedule it is evident that passengers and freight spent only four hours commuting from San Juan to the farthest station in the northern town of Camuy (Table 2.7):

[178] Lydia Milagros González, and Angel G. Quintero Rivera, *La otra cara de la historia: La historia de Puerto Rico desde su cara obrera, vol.1/Album* (Río Piedras, PR: CEREP, 1984).
[179] Gilberto R. Cabrera, *Historia económica del comercio y la industria en Puerto Rico* (Hato Rey, PR: Fundación Socio Económica de Puerto Rico, 1982), 20.

TABLE 2.7. Schedule for section A, 1896.

SAN JUAN-CAMUY					
	Morning			Afternoon	
Station	Arrival	Departure	Station	Arrival	Departure
San Juan	---	6:00	Camuy	---	2:38
Martín Peña	6:19	6:24	Hatillo	2:42	2:44
Bayamón	6:46	6:48	Arecibo	3:09	3:16
Toa Baja	7:14	7:14	Cambalache	3:23	3:25
Dorado	7:17	7:24	Barceloneta	3:59	4:04
San Vicente	7:44	7:44	Manatí	4:17	4:19
Vega Baja	7:50	7:52	Vega Baja	4:42	4:44
Manatí	8:15	8:17	San Vicente	4:50	4:50
Barceloneta	8:30	8:35	Dorado	5:12	5:17
Cambalache	9:09	9:11	Toa Baja	5:21	5:21
Arecibo	9:18	9:25	Bayamón	5:46	5:48
Hatillo	9:50	9:52	Martín Peña	6:10	6:15
Camuy	9:56	---	San Juan	6:34	---

SOURCE.- "Compañía de los Ferrocarriles de Pto.-Rico; Trenes regulares y facultativos," *La Correspondencia de Puerto Rico*, 14 January 1896, 1.

This timetable shows the connection of ten towns in the north coast in an expedient period of time making the railroad faster and cheaper than animal-drawn carts. For the general public, farmers, and merchants of the region the railroad offered a new convenient alternative for terrestrial transportation. However, from an outsider's view, the schedule and the service it provided was inadequate. *Harper's Weekly Magazine* special correspondent in Puerto Rico, William Dinwiddie, wrote in 1899: "It is not essential to discuss the defective methods existing in railroading in Porto Rico-beyond stating that the service consists of one mixed train of two cars

each way in 24 hours, and that the average speed is ten miles an hour."[180] This schedule may have been an alternative for long distances, but not for short ones. An "omnibus" service (horse-drawn wagon for passenger transport) with a route from *Plaza Alfonso XII* (today *Plaza de Armas* in Old San Juan) to the Church in Santurce had hourly departures from eight o'clock in the morning to six in the afternoon, and the tramway from San Juan to Río Piedras also provided hourly departures. [181] In other words, railroads were the best means of transportation for long distances. However, for shorter distances and areas in which railroads were not easily available the traditional means of transportation were the best alternatives.

The Company had to increase the rhythm of construction because the contract expired in 1895. In five years the *Compagnie des Chemins de Fer de Porto Rico* had built 72.5 kilometers (Map 2.1), much slower than the 46.7 kilometers of railroad constructed in Cuba from Habana to Güines between 1837 and 1838, over a half century earlier.[182] The corporation concentrated its efforts in obtaining an extension from the government to conclude the project. The *Compañía de los Ferrocarriles* was indeed granted extra time to finish the western side of the route from San Juan to Ponce through Mayagüez by July 15, 1898. For the eastern part of the route (this section departed from San Juan to Ponce through Humacao) the Company was granted an extension to July 15, 1900. If the company failed to accomplish these deadlines, the government would annul the concession. [183]

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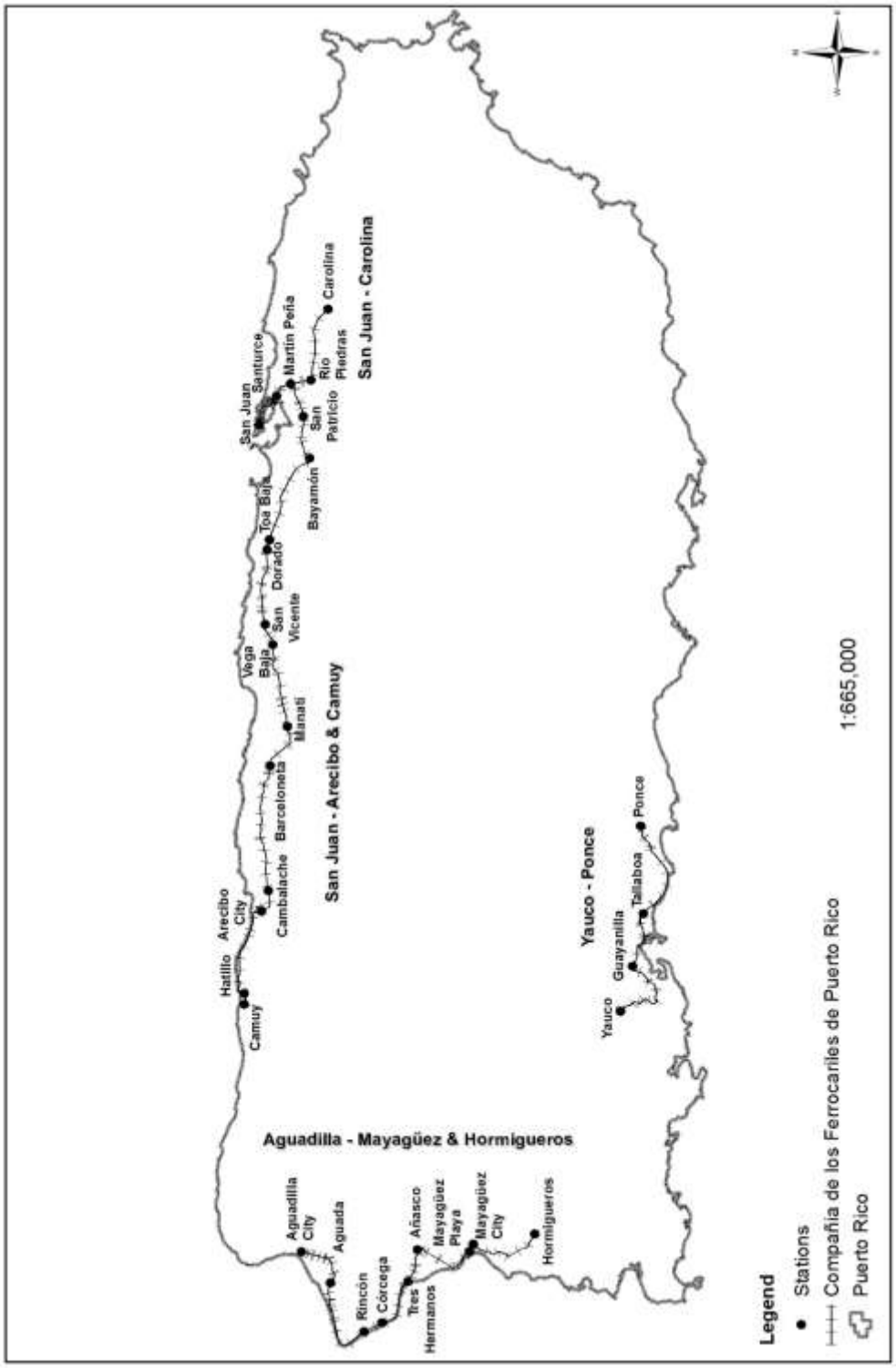
[180] "Business Opportunities in Porto Rico," *Timely Topics*, vol. 3, no. 26 (1899): 412.
[181] "Empresa de Ómnibus," *Boletín Mercantil*, 1 January 1893, 3.
[182] Emma A. Dávila Cox, *Este inmenso comercio; las relaciones mercantiles entre Puerto Rico y Gran Bretaña, 1844-1898* (San Juan, PR: Editorial de la Universidad de Puerto Rico, 1996), 290-291.
[183] Tomás Castellano y Villarojas, "Leyes," *Gaceta de Madrid*, 8 September 1896, 2.

Map 2.1. Sections of the Compañía de los Ferrocarriles de Puerto Rico, 1897.



Although the construction of the railroad was delayed, the economic advantage of the places with stations were the envy of those without railways. That was the case in Lares, which sought a railroad to Mayagüez, or the case in Caguas which wanted to connect with Río Piedras via the Ubarri's tramway.[184] Both towns continued using the slow and costly mule trains to transport merchandise. It is logical to imagine that sugar, coffee, and tobacco growers were not the only sectors demanding the use of railroads. Diverse products could be moved via rail lines. A long list of merchandises, listed in Appendix 1, submitted by the railroad company to the state in compliance with the railroad law of Puerto Rico suggests that small merchants and farmers also viewed the railroads as an alternative to transport their products. Imported consumer products and locally produced foodstuff could equally be moved by railways.[185]

In 1896 the "French railroad," as the beltway railroad was popularly known, had 195 kilometers in service. The British Consul in Puerto Rico reported that "137,422 passengers travelled in these lines during 1896, about 16½ per cent more than in 1895."[186] Freight transportation also would increase after the addition of new branch-lines to connect internal rail systems of sugar-producing estates with the beltway railroad. The purpose of merging both rail systems was to facilitate the transfer of refined sugar to the ports for maritime shipping. As a case in point, *Hacienda Córsica*, which was located on the third section of line A (between Añasco and

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[184] "De la capital a Caguas," *La Correspondencia de Puerto Rico*, 16 January 1896, 2.

[185] (Article 148): "The Companies are not responsible for the natural wear and tear of the merchandize when its greater than ordinary, nor can it be for fraud of carelessness." The records listed multiple merchandise transported by railroads (Appendix 1). War Department, *Translation of Police Law of Railroads of Puerto Rico and Regulations for its Application* (Washington: Government Printing Office, 1899), 28.

[186] Gervasio Luis García y Emma Dávila Cox, *Puerto Rico en la mirada extranjera: La correspondencia de los cónsules norteamericanos, franceses e ingleses, 1869-1900* (San Juan, PR: Decanato de Estudios Graduados y Centro de Investigaciones Históricas, 2005), 222.

Rincón) submitted a proposal to construct a branch-line on May 1897. *Hacienda Córsica*'s commitment was to transport a minimum of 1,000 tons of sugar per year. The railroad administration claimed this branch line would benefit the *hacienda*, the railroad company, and the general public. As a result, *Córsica* had a station on line A of the beltway railroad.

The opening of the sections finished by the *Compañía de los Ferrocarriles de Puerto Rico* was necessary to increase the funding for the conclusion of the construction phase. The railroad company failed to meet the terms of the contract jeopardizing the continuation of the franchise granted by the government.

Initial challenges

The law of railroads established mandatory maintenance for the railroads. On April 19, three Manatí sugar planters filed a complaint with the governor general requesting action against the railroad company for fires the company had provoked. Don Federico Calaf, owner of *Hacienda Monserrate*, Doña Luisa Guayta de Benero owner of *Hacienda Luisa*, and Don Ángel Villamil, owner of *Hacienda Providencia* suffered from seven fires on their estates. They claimed that the fires resulted from sparks expelled by the train's chimney. The town was also in jeopardy, because one the fires occurred very close to the station, the public was afraid of the possibility of future fires and their consequences. The Bureau of Public Works fined the company 300 *pesos* because the company did not maintain the areas in optimal conditions. The sparks were impossible to control, but the company was responsible for weeding the areas beside the railway lines to diminish the possibility of sparks causing fires.

In November 1891, the newspaper *La Bandera Española* published an article about two

work trains that crashed between the Manatí and Vega Baja stations. As a result of this accident one stocker died, two suffered serious injuries and five had minor injuries. The newspaper concluded the article by suggesting that the victims be compensated.[187] On July 18, 1894 another casualty involving a railroad worker occurred in Manatí. The result was the death of Francisca Morales, a level crossing guard who died at 7:30 in the morning. Some months later, still another work train crashed with a horse-driven cart in Añasco at 4:45 in the afternoon. The horse died, the cart was destroyed, and five workers suffered injuries.[188] A woman at the level crossing tried to stop the cart but the driver ignored her. The railway industry did not hire female workers with the exception of the level crossing guards. The government fined the railroad company 200 *pesos*.[189]

The company had to prevent accidents to maintain the confidence of customers, to avoid fines and reparations, and to offer a safe working environment. Railroad laborers typically worked ten hours per day, six days a week. Unskilled workers received low salaries as expected, but skilled workers could earn good wages in comparative perspective (Table 2.8 indicates the salaries for different occupations in the railway industry).

Historian Jesús Martín Ramos found that during the construction of the beltway railroad some workers (labors, technicians, and managers) fell victim to yellow fever. Indeed, Martín

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[187] "Ferro-carriles," *La Bandera Española*, 8 November 1891, 2.
[188] Jefatura Obras Públicas, "Expediente dando cuenta de haber ocurrido en los km. 4, 5, 7, 33 (plano) 35 de la línea A y 15 punta del Rincón, grandes desprendimientos que impiden el paso de los trenes. 1894 - 1896." AGPR, Fondo Obras Públicas, Sub Fondo Ferrocarriles y Tranvías, Serie Expedientes y documentos relativos a ferrocarriles, Caja 37, Legajo 59, Expediente 231.
[189] Gobierno General de la Isla de Puerto Rico, "Expediente sobre incidente ocurrido el día 17 de julio del corriente año al paso del tren descendente en el km. 54.359 de la línea A. 1894." AGPR, Fondo Obras Públicas, Sub Fondo Ferrocarriles y Tranvías, Serie Expedientes y documentos relativos a ferrocarriles, Caja 37, Legajo 59, Expediente 230.

Ramos claimed that one reason to explain the slow advancement of the railroad construction was the disease.[190] Since the 1870s artisans in Puerto Rico organized mutual aid societies, cooperatives and *casinos* (club houses), but it is unknown if railroad workers in particular benefited from the health support offered by mutual aid societies. These groups and the emergence of newspapers published by workers were the first expressions of labor activism. The highest point of the labor movement in the nineteenth-century was in 1895 with strikes in San Juan and Ponce demanding for higher wages to help alleviate increasing prices of commodities. Inflation arose after the adoption of the provincial *peso* in substitution of the devalued Mexican *peso*. The provincial peso was a silver standard currency for local use with an exchange value of 120 Mexican *pesos* per 100 provincial *pesos*. Governor General José Gamir in a letter to the Overseas Minister Tomás Castellano acknowledged the negative impact of the currency exchange for the popular masses.[191] Consequently, longshoreman, tailors, masons, carpenters, typographers, tobacco, sugar and railroad workers participated in strikes. Gervasio L. García argues that political and economic transformations from 1872 to 1895 accelerated the development of labor organization.[192] In sum, workers in the railroad industry participated from the earliest political activism in the Island's labor history.

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[190] Martín Ramos, *Las comunicaciones*, 144.
[191] "…directamente afecta a la masa pobre del país que es la mayoría…" (Translation: "…directly affected the poor masses of the country which are the majority…") Letter from Governor General José Gamir to the Overseas Minister Tomás Castellano, 14 November 1895. PARES/ AHN, Ministerio de Ultramar, Unidad 6315, Expediente 1.
[192] Gervasio L. García, *Historia crítica, historia sin coartadas: algunos problemas de la historia de Puerto Rico* (Río Piedras, PR: Ediciones Huracán, 1985), 67-86.

Table 2.8. Wages of railroad employees, 1897

OCCUPATION	NUMBER OF EMPLOYEES	WAGES PER HOUR (PROVINCIAL PESOS)
Agents, station	22	0.1150
Blacksmiths	10	0.2000
Boilermakers	2	0.2500
Carpenters	14	0.1500
Clerks	32	0.0964
Conductors	5	0.1534
Engineers	10	0.1917
Firemen	10	0.1342
Fitters	6	0.2500
Freight handlers	9	0.0613
Hostlers, locomotive	3	0.1150
Inspectors	1	0.1457
Laborers	23	0.0750
Machinists	5	0.2500
Mechanic's apprentices	15	0.0150
Mechanic's helpers	5	0.0800
Painters	6	0.1000
Switchmen	13	0.0575
Turners	3	0.1250
Watchmen	4	0.0834
Water station tenders	2	0.0613

SOURCE.- Department of Commerce and Labor, *Bulletin of the Bureau of Labor, No. 61* (Washington: Government Printing Office, November 1905): 820-821.

The island had tramways in the principal urban centers and the beltway railroad had some sections in operation. Passengers could start their journey on a tramway and transfer to the beltway railroad or vice versa. In the case of the *Línea Férrea del Oeste,* the tramway had six round trip departures between Cataño and Bayamón. The tramway had one morning and one afternoon trip

that connected in Bayamón with the beltway railroad operated by the *Compañía de los Ferrocarriles de Puerto Rico*.

A complement to the web of tramways and the beltway railroad was the second-class-railroads. A second-class railroad was defined as a private railroad that offered passenger and freight service to the general public. In 1897 *Ferrocarriles de vía estrecha de Mayagüez* inaugurated a 17 kilometers second-class-railroad between the town of Añasco and Altosano in San Sebastián. Originally, this railroad was conceived only for freight transportation to promote agriculture mainly coffee. In order to obtain the incentives provided by law for public-service railroads the company decided to incorporate passenger service to comply with article 45 of the railroad law that stated: "Every railroad shall have two distinct uses - for passengers and for freight."[193] However, the proponents needed to convince the government that they were going to offer safe transportation for passengers. In Europe it was unusual to find railways with less than one meter gauge offering passenger service. Though, Ubarri's tramway was a precedent, because he provided service for passengers from San Juan to Río Piedras on a 0.76 meters gauge tramway. The proposed railroad of 0.60 meters would eventually have a route of 42.5 kilometers in a trajectory with close curves; in contrast, in San Juan the distance was only 11.5 kilometers, with some wide curves along the route. The government concluded that the transportation of passengers was unsafe unless the railroad ran at a speed no higher than 15 kilometers per hour. The company received a provisional permit to begin operations in 1897 under the speed limit of 15 kilometers

[193] *Law of Railroads for the Island of Puerto Rico* (Washington, USA: Government Printing Office, 1899), 9.

per hour because the zone was prone to landslides, particularly in rainy days.[194]

The *Ferrocarriles de vía estrecha de Mayagüez* had plans to prolong the line to the town of Lares. The project of a railroad to Lares started early in the 1880s. The plan was to establish a steam railroad to connect Lares, Moca, San Sebastian, and Aguadilla (instead of Añasco) to reduce transportation costs paid by the farmers. In general, the roundtrip cost of a mule train from Lares to the port in Aguadilla was 40 *pesos*, and the cost per *quintal* of coffee was 2 *pesos*.[195] The merchandise was in transit for ten to fifteen days and arrived to the ports humid, dirty, and muddy. The proponents of the railroad, not only stressed the importance of the access to the ports, they also expressed the importance of transporting agricultural products through the interior of the island. Rural towns such as Utuado and Adjuntas would also benefit from this railroad. The company proposed to build the railroad parallel to second-class Road No. 8 to reduce expenses and the governor approved the project on February 7, 1882.[196] In 1885 Don Salvador Mestre y Mora requested the approval of a new study for a railroad from Mayagüez to Lares. Later in 1889 Don Francisco Lastres y Ruis proposed the establishment of another railroad from Añasco to Lares. All these studies received the approval of the government. Don José Pastor, the mayor of Lares, with the approval of the municipal assembly provided unconditional support for the establishment of any railroad to promote agriculture and commerce. In essence, *lareños* considered the railroad to

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[194] Jefatura de Obras Públicas y Diputación Provincial, "Expediente referente al ferrocarril en construcción de Añasco a Lares, año de 1897," AGPR, Fondo Obras Públicas, Sub Fondo Ferrocarriles y Tranvías, Serie Proyectos de construcción, Subserie Ferrocarriles secundarios, Caja 26, Legajo 95, Expediente 17.
[195] One quintal was equivalent to 100 kilograms.
[196] Jefatura de Obras Públicas, "Expediente promovido por D. Gonzalo Firpo y D. Salvador Ferrer en demanda de autorización para hacer los estudios de un ferrocarril económico de Aguadilla a Lares," AGPR, Fondo Obras Públicas, Sub Fondo Ferrocarriles y Tranvías, Serie Proyectos de construcción, Subserie Ferrocarriles secundarios, Caja 25, Legajo 94, Expediente 5.

be the keystone to progress and civilization: "el día [que] por su jurisdicción corra la locomotora señalando un paso más en la senda del progreso y de la verdadera civilización."[197] Some people would pay a higher price to enjoy the progress of the railroad after the expropriation of their lands. Lastres y Ruis the partner of Don Joaquín Fornabelles claimed that land expropriation was not a problem because the railroad would pass through land owned by those benefiting from the project. Coffee producers would lose some land, but they would enjoy the service of a narrow-gauge railway of 0.60 meters to transport their products to the ports.

It was in 1895 when a new corporation under the name *Compañía de Ferrocarriles de vía estrecha de Mayagüez* assumed the project because the previous corporation had run out of funds. The opening of the first kilometers in 1897 was made public by Don Juan José Potous, former mayor of Ponce and the General Manager of the company. The station in Añasco provided a transfer point to the beltway railroad, which connected with the port of Mayagüez, the most active in the western region. Like the *Linea Ferrea del Oeste* the *Compañía de Ferrocarriles de vía estrecha de Mayagüez* strengthened their services with the transfers to the beltway railroad. The country could count in more efficient transportation system thanks to this transfer points and the synchronization of the schedules among different private rail companies; however, the *Compañía de los Ferrocarriles* did not meet the terms of the contract and the future of the beltway railroad

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[197] Translation: "The day that in this jurisdiction run the railroad it signaling another step forward in the path to progress and real civilization."
Jefatura de Obras Públicas y Diputación Provincial, "Expediente promovido por D. Francisco Lastres solicitando se declaren de utilidad pública las obras del ferrocarril en proyecto de Añasco a Lares por San Sebastián," AGPR, Fondo Obras Públicas, Sub Fondo Ferrocarriles y Tranvías, Serie Proyectos de construcción, Subserie Ferrocarriles secundarios, Caja 26, Legajo 95, Expediente 10.

was uncertain by the end of the century.

CHAPTER III. RAILROAD BOOM

Ambiente de estación: espera, conversaciones con desconocidos, nuevas amistades, ruidos de maletas, olor a mecanismo engrasado, inquietud, miradas soñadoras…

La llamarada
Enrique A. Laguerre

In 1897 Spain granted autonomous governments to the islands of Cuba and Puerto Rico attempting to maintain loyalty from Puerto Rico, and as an ultimate effort to halt the independence war in Cuba. From the Spanish Constitution of 1876, in which Cuba and Puerto Rico "shall be governed by special laws," the Puerto Ricans were no closer to obtaining self-government by the late 1890s.[198] The hopes for "special laws" never materialized, but on November 1897 the Crown approved the Autonomous Charter. It was already too late to convince the Cubans that peaceful autonomy was a better choice than an independent Cuba. Máximo Gómez, leader of the Cuban insurgent army, regarded autonomy as a strong evidence of the Spanish military incapacity to win the war.[199] If the rebels were winning the war of independence and the United States declared its support for an independent Cuba, then autonomy was undesirable.

The Puerto Rican and Cuban independence movements had a clear convergence in 1868

[198] *Documents on the Constitutional History of Puerto Rico* (Washington D.C.: Office of the Commonwealth of Puerto Rico, 1964), 21.
[199] Pilar Barbosa de Rosario, *Historia del autonomismo puertorriqueno: El ensayo de la autonomía* (San Juan, PR: Editorial La Obra de José Celso Barbosa, 1994), 70.

when the islands declared their independence from Spain in two separate revolutionary actions. In Puerto Rico the revolution named *Grito de Lares* was militarily unsuccessful, the leaders were in exile, and local authorities reinforced the surveillance of political dissenters. In Cuba the outcome of their *Grito de Yara* was different because it was the beginning of a ten year war, followed by a second short war in 1879-1880. After the wars the Cubans created an Autonomous Party in demand for political reforms and economic liberties under the Spanish sovereignty.

In the 1880s the Puerto Rican independence movement was weak and demobilized but a new political force evolved from liberals demanding political and economic reforms. Román Baldorioty de Castro was the founder of the Puerto Rican Autonomous Party in 1887. Historian Astrid Cubano Iguina argued that in the initial years of the Puerto Rican Autonomous Party a radical wing of urban workers organized a boycott movement against merchant houses owned by Spaniards.[200] General Governor Romualdo Palacios unleashed an unprecedented persecution of the militants from the Autonomous movement with massive arrests and torture. Spain removed Palacios from office, but the radicalism of the Autonomous movement finished after the ruthless result of the boycott and the death of Baldorioty de Castro two years after the arrests. The moderation of sugar *hacendados* became prominent in the 1890s in a party directed by a new leader: Luis Muñoz Rivera.

Cuba restarted the war against Spain in 1895 and that same year a group of autonomists from Puerto Rico led by Luis Muñoz Rivera made an agreement with the Spanish politician

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[200] Astrid Cubano Iguina, "Política radical y autonomismo en Puerto Rico: conflictos de intereses en la formación del Partido Autonomista Puertorriqueño (1887)." *Anuario de Estudios Americanos*, vol. 51, núm. 2 (1994): 155-173.

Práxedes Mateo Sagasta on the creation of an autonomous home rule government for Puerto Rico. In 1897 Sagasta was appointed Prime Minister of Spain, after the assassination of Antonio Cánovas del Castillo, and he complied with his promise.[201] In the text of the Autonomous Charter, the second article of the transitional provisions declared that "In case the insular government should desire to use for some other kind of public works the 250,000 *pesos* made available for subventions to narrow gauge railways by the law of August 24, 1896, the insular government shall make to the home government whatever proposal is considered opportune."[202] The Autonomous Charter thus provided the backbone for the development of a modern infrastructure for an autonomous Puerto Rico.

The island was already *en route* to establishing a beltway railroad but the *Compañía de los Ferrocarriles de Puerto-Rico* did not meet the contractual deadlines and the construction was behind schedule. On May 28, 1897 the company submitted a petition for a new time extension to the Governor General of the island, plus an amendment to the original concession. The company proposed to divide the project into two separate concessions for the construction and operation of the beltway railroad: the western lines (192 kilometers) and the eastern lines (254 kilometers). The western section would continue under the control of the French/Spanish *Compañía de los Ferrocarriles de Puerto-Rico*, and the eastern section would be developed by the English corporation named East Porto Rico Railway Company. Both corporations had a deadline of four years to develop their sections. The government would have to continue granting an 8 percent

[201] Antonio Cánovas del Castillo was a prominent politician, a monarchist, appointed to be the Spanish Prime Minister and was mudered by Michele Angiolillo an italian anarchist.
[202] *Documents on the Constitutional History of Puerto Rico*, 46.

interest for the sections in operations.[203] Days later the Autonomous Cabinet assumed control of the country and the decision to extend the concession now rested on the shoulders of the new cabinet. However, the new autonomous government had more immediate situations to deal with as a result of the Spanish-American War.

The United States declared the war to Spain in April 1898 in response to the sinking of the Battleship Maine in Havana harbor on February. From the beginning of the Cuban War for Independence in 1895 different sectors in the United States exhibited interest in the Cuban conflict: the press, humanitarians, industrialists, investors, and imperialists. Although the cause of the war was the Cuban independence struggle, the other Spanish possessions in the Caribbean and the Pacific would be involved in the fight between the United States and Spain.

María Eugenia Estades Font showed that Puerto Rico's geographic position was considered by naval admiral Alfred Thayer Mahan, a notable imperialist in the United States. Admiral Mahan considered the construction of an interoceanic canal a necessary step for the transformation of the United States into a commercial and military world power. The Caribbean would be the eastern access to the canal. In the Pacific it was necessary to annex islands like Hawaii, but in the Caribbean the U.S. should control Cuba, the bay of Samaná in Dominican Republic, and Puerto Rico for the control of four sea routes to a future canal: the Yucatan Channel between Cuba and Mexico, the Windward Passage between Cuba and Haiti, the Mona Passage between Dominican Republic and Puerto Rico, and the Anegada Passage between

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[203] Congreso de los Diputados, "Diario de las Sesiones de las Cortes." AGPR, Fondo Obras Públicas, Sub Fondo Ferrocarriles y Tranvías, Serie Expedientes y Documentos Relativos a Ferrocarriles, Caja 30, Legajo 50, Expediente 147.

Vieques and Saint Thomas. For the control of these maritime routes the U.S. Navy had to establish naval bases in the islands. Mahan ideas were heard by the U.S. Congress and certainly by president William McKinley because Mahan was military advisor to the president during the Spanish-American War.[204]

The United States established a naval blockade against Spanish possessions to strangulate the economy of the islands during the conflict. On April 4, 1898 the U.S. marines bombarded Matanzas in Cuba, on May 1 attacked Manila Bay in the Philippines and on May 12 the people in Puerto Rico were subjected to a naval bombardment of the city of San Juan. After three hours of combat Rear Admiral William Sampson halted the shelling and left the island.[205] The attack caused thirteen casualties and more than a hundred were wounded, mostly civilians. However, the authorities on the island alleged that the attack was a setback for the U.S. Navy. The official newspaper, *Gaceta de Puerto Rico*, published greetings from the insular and the Spanish government to the soldiers and the population thanking them for the heroic defense of the island.[206]

On May 31, two weeks after Sampson bombing, the *Compañía de los Ferrocarriles de Puerto-Rico* re-submitted to the Governor General a request for a new extension of the

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[204] María Eugenia Estades Font, *La presencia militar de Estados Unidos en Puerto Rico 1898-1918: Intereses estratégicos y dominación colonial* (Río Piedras, PR: Ediciones Huracán, 1988), 23-58.
[205] "Capitanía General de la Isla de Puerto-Rico, Estado Mayor, Sección 3ª, Orden general del distrito para el día 13 de Mayo de 1898 dada en San Juan de Puerto-Rico," *Gaceta de Puerto Rico*, 14 May 1898, 1.
[206] "Capitanía General de la Isla de Puerto-Rico, Estado Mayor, Sección 3a, Orden general del día 15 de Mayo de 1898, en San Juan de Puerto-Rico," *Gaceta de Puerto Rico*, 17 May 1898, 1.

contract.[207] The Autonomous Government had important issues to consider especially the scarcity of consumer goods caused by the naval blockade. The insular government enacted a special decree to allow the entrance of goods free of duty from neutral nations.[208] Fernando Picó claimed that the blockade against Puerto Rico demonstrated the "consequences of an excessive reliance on export crops."[209] Scarcity of flour, salted meat, ham, rice, potatoes, and other food forced the government to institute a rationing of products and this indicated the importance of diversifying the economy.

On June 1898 the *Atlanta Constitution* published a note identifying the benefits of gaining possession of Puerto Rico. The island could be a place for holiday vacations and a place to invest. The interest in Puerto Rico was not only as a coaling station, where ships could refuel, the island also had incredible unexploited fertile soil, islanders imported articles produced in the United States, and more than half of the population was white. At the end of the note it is mentioned that the lack of "railroad lines of any importance" was not a serious problem because: "Under American government the island would speedily be overrun with a network of rails and the commerce become of immense value."[210] This report shows the role media played in setting public opinion in favor of the war and the occupation of Puerto Rico. In August the *New York Times* published a page long essay about the economic possibilities of U.S. businesses in Cuba and Puerto

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[207] Gobierno General de la Isla de Puerto Rico, "Expediente relativo a plazos de concesión del ferrocarril de esta isla. 1898." AGPR, Fondo Obras Públicas, Sub Fondo Ferrocarriles y Tranvías, Serie Expedientes y Documentos Relativos a Ferrocarriles, Caja 30, Legajo 50, Expediente 147.
[208] "Gobierno Insular de Puerto-Rico, Secretaria del desapacho de Hacienda," *Gaceta de Puerto Rico*, 3 June 1898, 2.
[209] Fernando Picó, *History of Puerto Rico: A Panorama of its People* (New Jersey, USA: Markus Wiener Publishers, 2014), 234.
[210] "Porto Rico as a Summer Resort," *The Atlanta Constitution*, 19 June 1898, 10.

Rico. The tone contrasted with the approach that had been made by the *Atlanta Constitution*. The *New York Times* interviewed several firms which agreed with the trade potential on the island but recognized the difficulties involved. A firm of merchants from Wall Street, L. W. & P. Armstrong, declared in the interview:

> There has been more or less talk about people going to Puerto Rico and making money very fast. People who expect to find wealth easy to get there had better stay away. There are social problems, labor problems and financial problems to be solved in Puerto Rico.[211]

For L. W. & P. Armstrong Puerto Rico did not look like the "Switzerland of the Caribbean" as had been suggested in the *Atlanta Constitution*. The *New York Times* finished the article highlighting the disaster of the railroad companies under operation in Puerto Rico. It discussed the delays of the French company in the development of tracks and culminated with a narrative of the deplorable service of the railroad and ferries from San Juan to Bayamón. Consequently, the island had railroads, but none of the companies offered acceptable service. Even worse the companies operated with absolute impunity, making the possibilities for improvement difficult:

> Trains are run every two and three hours, and the trip from San Juan to Bayamón, or vice versa, a distance of six miles, is supposed to be made in an hour, but this

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[211] "Cuba and Puerto Rico; The Possibilities of the Commercial Expansion of the Islands Very Great," *The New York Times*, 28 August 1898, 20.

> has never been done. Accidents are numerous. There are only two engines and two boats, all in a very poor condition. This line issue tickets from San Juan to Bayamon, connecting at that point with the Arecibo train; very often the west railroad train is late, the passengers misses the Arecibo one, and, as there is only a daily train, has to wait till next day at his own expense. Civil or criminal suits are never brought against any railroad, as the plaintiff is quite sure to have judgment rendered against him.[212]

The answer to this problem was occupation by the United States. The newspaper did not try to persuade the reader that the occupation was undesirable. To the contrary the article claimed that the difficulties could be surpassed if the United States would intervene on behalf of the people of Puerto Rico through a takeover of the government and with investments to foster the local economy.

The military occupation began on July 25 under the orders of General Nelson Miles. On July 29 Major-general Miles ordered the *Compañía de los Ferrocarriles de Puerto-Rico* "to transport the troops of the United States, and would receive compensation for services rendered at such rates as prevail in the United States, especially on the lines of the Pennsylvania Railroad."[213] Following the orders, the *Compañía* facilitated the control of the island by transporting U.S. military personnel, ammunition, and supplies. However, Miles did not keep his promise and

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[212] "Cuba and Puerto Rico; The Possibilities of the Commercial Expansion of the Islands Very Great," *New York Times*, 28 August 1898, 20.
[213] Report No. 1086, U.S. Senate, 60th Cong. (1909), 3.

Compañía de los Ferrocarriles de Puerto-Rico did not receive payments from the military.

On November 23, 1898 the *Compañía de los Ferrocarriles de Puerto-Rico* once again submitted a petition for an extension of the concession to the Bureau of Public Works.[214] No decision was possible because the country was waiting for the outcome of the negotiations between Spain and the United States. The Treaty of Paris officially ended the war and Puerto Rico became a territory of the United States under the powers of the Congress. In article XIII of the Treaty of Paris the government of the United States guaranteed the respect of property rights in the possessions. During the military occupation "means of transportation, such as telephone lines and cables, railways and boats, may, although they belong to private individuals or corporations, be seized by the military occupant, but unless destroyed under military necessity are not to be retained."[215] In other words, during the military occupation railroads continued operating but there was no certainty about the legal status of the companies. Tramways and railroads were in legal limbo after the military commander General Guy V. Henry "ordered the revocation of all the concessions and franchises heretofore granted by the Spanish authorities."[216] Prior to this order, the construction of new lines had been halted.[217]

The continuation of the military regime after the Treaty of Paris was a surprise in Puerto Rico. It was difficult to understand why the "land of freedom" maintain military commanders as

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[214] Gobierno General de la Isla de Puerto Rico, "Expediente relativo a prórroga solicitada por la Compañía de los ferrocarriles. 1898." AGPR, Fondo Obras Públicas, Sub Fondo Ferrocarriles y Tranvías, Serie Expedientes y Documentos Relativos a Ferrocarriles, Caja 30, Legajo 50, Expediente 148.
[215] Memorandum of J. C. Gilmore, Brigadier-General, US Vols. in *Report of the Military Governor of Porto Rico on Civil Affairs*, 1900 (Washington: Government Printing Office, 1902), 21.
[216] "Franchises in Puerto Rico," *New York Times*, 28 December 1898, 3.
[217] "No Concessions in Island," *The Atlanta Constitution*, 24 December 1898, 1.

chiefs of government in Cuba, the Phillippines, and Puerto Rico instead of instituting democratic systems in the islands. Brigadier-General George Whitefield Davis, Puerto Rico's military governor in 1899, commissioned reports from each military department in the island to understand every aspect of the civil life, the geography, climate, principal crops, its markets and value, taxation system, mineral and water resources, the state of education; in sum, collect all relevant information to make an assessment of the life in Puerto Rico. From those reports the Secretary of War could decide if the territory needed reforms to promote "the general welfare and advancement of the inhabitants."[218] General Davis included in his report a section titled "Inland Transportation Facilities." In this section all districts informed roads in poor conditions with the exception of the districts in the "military road" (the road from San Juan to Ponce), and wagon roads in good conditions from Mayagüez to San German and from Ponce to Adjuntas.

Inland transportation was expensive. Departing from Ponce to San Juan using the only line of carriages in operation costed $30 Puerto Rican currency. The length of the route involved eighty-two miles with five relays of horses in a period of thirteen hours. Davis reported for Ponce the following:

> Hundreds of carriages, in lieu of street cars, carry passengers from one part of the city to another for about 8 cents each passenger per trip, or 60 cents an hour, and besides these a line of busses runs from Ponce to the port for about 10 cents

[218] Puerto Rico, Embracing the Reports of Brig. Gen. Geo. W. Davis (Washington, USA:, Goverment Printing Office, 1900), 3.

(these prices being in United States currency).[219]

The report also included the costs of transportation between towns in the north coast and to the mountainous interior. Davis included freight costs for the region which illustrated how expensive was transportation for farmers:

> Regular line of coaches from railroad terminus at Camuy to Aguadilla, single seat, $4.20; coach for three persons and driver, $9.60. No line from Arecibo to Utuado, but coach for this road can be procured in either city at $9, or single seat $3; saddle horse, to go and return, $3.
>
> No line to San Sebastian and Lares; the road will not permit the use of wheels. Saddle horse to go to Lares and return, $3.60.
>
> Freight by pack per quintal of 100 pounds: Arecibo to Utuado, 60 cents in good weather, 90 cents in wet weather; cart, 4 oxen, $7.20 in good weather and from $12 to $15 in wet weather. Arecibo to Lares, $l.20 in good weather; carts in dry weather, $15, but road rarely permits the use. [220]

In the section of railroads Davis focused in the "French Railroad Company" and its service without mentioning the existence of tramways. Davis recommended the acquisition of the railroad by a company from the United States:

> This railroad is a French concern, entirely managed by people in the interest of French stockholders, and the stock of this "flint-lock industry" being in possession of the people in

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[219] Puerto Rico, 60.
[220] Puerto Rico, 37.

France. For the interest of this island it would be most desirable if some enterprising American firm should freeze the present stockholders out and reorganize and complete the line as originally forechadowed and make it a paying investment.[221]

Davis suggestion was not a surprise and its view of the railroad as a company owned entirely by French people was not accurate. The *Compañía de los Ferrocarriles de Puerto-Rico* was a company with stocks owned by French, Spanish, British, and Belgian investors. Precisely on June 1899, Baron Erlanger from Britain sailed to the United States in search of answers to the future of the railroads in Puerto Rico. There was a great concern about the status of the company under the new regime and the risks of their investments.[222]

The first census after the island became a territory of the United States, conducted in 1899, reported that the transportation on the island was "scanty." The report continued: "There are altogether about 159 miles of railway in the island, but they are in disconnected pieces and closely parallel the coast, none extending into the interior."[223] This suggested two things: first, there was a need to join the fragments of railways and second, the railways had to be extended to the interior of the island. However, eventually the new U.S. controlled government allowed the development of railways on the coast, and financed the construction of roads to connect interior towns. The reason was directly related to the interests of particular economic sectors.

The economic possibilities of Puerto Rico were multiple. Karl Stephen Herrman, a soldier of the Independent Regular Brigade, noticed that pineapple plantations were profitable and did not

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[221] *Puerto Rico*, 40.
[222] "Looking after Porto Rico Railroad," *The Chicago Tribune*, 17 June 1899, 2.
[223] *Report on the census of Porto Rico, 1899* (Washington, USA:, Goverment Printing Office., 1900), 12.

require too much capital for investment; yet, local planters did not take part in this business. The reason, claimed Herrman, was the problem in finding "swift and adequate transportation from field to market."[224] By surpassing this problem local planters would consider pineapple-growing a "tempting industry".[225]

In 1900 the military governor indicated that banana plantations would be a profitable enterprise if a railway system was built to facilitate speedy transportation of the crops to the ports, and if the steamship lines increased the frequency of service from weekly to daily departures to the United States. To transform a subsistence crop to a profitable product a significant investment in infrastructure was essential. The banana trade never materialized because the coast was dedicated to sugar production and there was an absence of native capitalists or U.S. corporations "prepared to embark in the enterprise."[226] Puerto Rico never became a 'Banana Republic,' although plantains and bananas were central to the diet of the Puerto Ricans, and a product always in demand for local consumption. A decade after this report the production of plantains had a value of $336,577 and bananas $996,371.[227]

From the 1870s coffee was the main sector of the export economy and the main source of revenue for the island. However, from the perspective of George W. Davis, Brigadier-General of the U.S. Army and the fourth Military Governor, coffee raising was "essentially a poor man's crop,

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[224] Karl Stephen Herrman, *A Recent Campaign in Puerto Rico* (Massachusetts, USA: E.H. Bacon& Co., 1899, 1907), 97.
[225] Ibid.
[226] *Report of the Military Governor of Porto Rico on Civil Affairs*, 1900, 197.
[227] U.S. Census Bureau, "Tropical fruits, grapes, and nuts: 1909," *Census 1910, Supplement for Porto Rico*, 620.

for a small capital suffices."[228] For Davis, coffee was a crop of the past and sugar would be the plantation of the future. He added: "The Porto Rican trade in sugar will soon be doubled, tripled, or quadrupled and the laborers will be attracted from the mountains to the lower sugar land."[229] If the future of Puerto Rico lay on the coast, it was evident that the infrastructure should be developed on the coast. In the next report, this time by Governor Charles H. Allen, it was reported that only 20 percent of the soil was cultivated and most of the land was cultivated with "miscellaneous crops." Miscellaneous crops were corn, rice, beans, potatoes, and fruits harvested for home consumption.[230] This so called "miscellaneous" or "minor" crops occupied 201,815 acres followed by coffee with 166,164 acres.[231] These data suggests that a significant amount of the agro-production was for internal consumption followed by export crops.

The change of sovereignty led to a decline in the coffee industry. After the war Spain and Cuba, principal coffee markets before the Spanish-American War, imposed taxes on Puerto Rican coffee imports. In 1899 the coffee exported to Spain had a value of 8,337,807 *pesetas,* but paid 1,868,490 *pesetas* in taxes. Although coffee producers in Puerto Rico had to pay higher taxes than ever before in the history, coffee exports still represented 42 percent of all the coffee imported by Spain. The next year, in 1900, coffee exports from Puerto Rico to Spain dropped to 11.3 percent of Spanish coffee imports falling behind Guatemala with 31.8 percent and Venezuela with 19.1

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[228] *Report of the Military Governor of Porto Rico on Civil Affairs*, 1900, 187.
[229] Ibid., 191.
[230] Fruits included oranges, bananas, plantains, mangoes, avocados, guavas, grapes, lemons, mamee apple, pineapples, and cocoanuts.
[231] *Report of the Governor of Porto Rico*, 1901, 38.

percent of the coffee imported by Spain.[232] However, a natural disaster more than higher tariffs was the main cause behind the dramatic decline of coffee exports. Hurricane San Ciriaco destroyed the economy of the island on August 8, 1899 with 35,889,000 *pesos* in total property loses. The figures for coffee property losses amounted to 18 million *pesos*, in minor fruits amounted to 4.7 million *pesos*, and sugar property losses amounted to 3.2 million *pesos*.[233] The population suffered more than 3,000 casualties and thousands of people were left without shelter and food. The military government created a Board of Charities to distribute food and avoid starvation. One of the problems in the distribution of the relief was the limitation in transportation because roads and rail lines suffered serious damages and debris obstructed many lines and roads. The report of the officer in charge of the central depot illustrates the degree of damage:

> The storm had been specially destructive to all large bridges in the country, and the military road at a great many points was filled in with debris, caused by washouts and landslides; the ordinary country roads were obliterated; the railroads of the country were entirely gone for miles; all railroad bridges over large streams were gone, and shipping was badly demoralized.[234]

The food was successfully distributed by using mixed means of transportation. After the immediate assistance to people in need, the country had to rebuild its economy and infrastructure.

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[232] Luis Alberto Lugo Amador, "Amargo negocio: El café puertorriqueño y su comercialización (1898-1918)," *Op. Cit.,* no. 16 (2005): 274-275.
[233] Stuart B. Schwartz, "The Hurricane of San Ciriaco: Disaster, Politics,and Society in Puerto Rico 1899-1901," *Hispanic American Historical Review,* vol. 72, no. 3 (1992): 308.
[234] *Report of the Military Governor of Porto Rico on Civil Affairs*, 1900, 213.

Most railroad companies had to invest in the reconstruction of rail tracks to resume operations promptly, although the owners of the *Compañía de Ferrocarriles de vía estrecha de Mayagüez* (a 17 kilometer rail line) decided that "it does not pay its operating expenses" and decided to close the railroad after assessing the damages caused by the hurricane.[235]

The impact of the hurricane to the coffee production was worse than on other crops, because coffee shrubs could not recover as fast as sugar or tobacco plants. Coffee shrubs took several years to produce the first harvest. After a series of calamities including the plunge of the prices in the international markets in 1897, the impact of the blockade during the war in 1898, and the hurricane of 1899, the final blow was the Foraker Act of 1900. The Foraker Act established a civil government and the economic base of the island as a territory of the United States. The Act indicated that Puerto Rico's products had free access to U.S. markets and the tariff laws in the United States equally applied on the island. Sugar had a protective tariff because the states produced sugar, but coffee did not, because in the United States coffee was not produced but consumed. The ruined coffee production justified a special protective tariff only to Puerto Rican markets: "on all coffee in the bean or ground imported into Puerto Rico there shall be levied and collected a duty of five cents per pound."[236] Internal consumption was important for insular coffee growers, but more importantly was the establishment of a protective tariff in the United States to compete with the cheap Brazilian coffee. The Congress did not approve a coffee tariff for the United States to protect Puerto Rican coffee producers. As a result the urgency to connect the

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[235] *Report of the Governor of Porto Rico*, 1902, 41.
[236] *Documents on the Constitutional History of Puerto Rico*, 64.

mountains with the coast started to vanish.

Apart from the discussion of duties, the approval of the Foraker Act was contentious. Among the sectors behind the approval of the Foraker Act were potential investors in Puerto Rico. These capitalists lobbied for an end to the military regime in favor of a civil government with the authority to grant franchises to develop new railroads, or to administer companies already in operation.[237] The Congress approved the Foraker Act establishing the civilian government in April 1900. Governor Charles H. Allen was installed in May and received the first petition for a railroad franchise in September. The press in the United States favored speedy approval of railroad requests:

> surveyors and engineers have been in the field for some months exploring and surveying different routes and making estimates of probable cost. Considerable sums of money have thus been expended, and the several inchoate corporations are said to have been quite successful in securing rights of way and other privileges. If all the projects should be carried out, and the railroads built, the island of Porto Rico would be better supplied with that means of transportations than any State in the Union.[238]

The Congress gave the governor and the Executive Council, which was the insular legislative and executive branch of government, the authority to make Puerto Rico a place with the

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[237] "Anxiety Shown in the House," *New York Daily Tribune*, 13 March 1900, 1.
[238] "Porto Rican Franchises," *New York Daily Tribune*, 23 April 1900, 4.

best railway infrastructure of the United States. Although this idea was an exaggeration of the *New York Daily Tribune*, it was accurate that the new civil government would finally move forward with the economic development of the island.

The Executive Council refused to recognize the agreements signed by railroad companies made during Spanish rule. This determination was unfavorable for the *Compagnie des Chemins de Fer* because the company had finished 132 miles subject to an 8 percent dividend, but the military government did not disburse the payment, which the *New York Times* estimated at $28,000 per mile. The Attorney General issued an opinion establishing: "that Congress alone has authority to act in the premises."[239] Consequently, the Executive Council rejected any monetary responsibility with the *Compagnie des Chemins de Fer*.

New franchises

Railway franchises obtained under the Spanish government became null and void and this forced tramway and railroad companies to submit all the paperwork to acquire new permits. The Executive Council had the authority to receive, evaluate, and approve petitions from railway companies to develop and administer existing and new lines. In addition, the Executive Council was responsible for railway regulations.

J. G. White & Co., an engineering corporation from the United States, purchased Ubarri's tramway, which travelled from San Juan to Río Piedras.[240] This company began its operations in 1890 constructing power plants for electric lighting and power transmission and later expanded the

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[239] "Decision Concerning the Guarantee of a Dividend by Spain," *New York Times*, 27 July 1899, 3.
[240] National Archives of the United States (NARA), RG 350: Records of the Bureau of Insular Affairs Relating to Puerto Rico (1898-1934), Box 1.

business to street railways in several states.[241] This same company invested in the Phillipines and organized in Puerto Rico the San Juan and Rio Piedras Railroad Company with headquarters in the Borough of Manhattan in the state of New York.[242] The amount of its capital stock was $300,000. James Gilbert White, president of the company, not only acquired the rights for the operation of electric tramways, but also the permits to build hydroelectric plants for the generation of power. For this operation the company founded the San Juan Light and Transit Company with a capital stock of $600,000.[243] It was incorporated in Albany by P.H. McMillan, F.K. Curtis, J.J. Kenedy, R.B. Merchant, Waren H. Spurge, and Robert Seager.[244] J. G. White & Co. decided to change the machinery from steam to electric and increase rail gauge from 29½ to 40 inches (one meter), which was the standard gauge measurement for public service railroads in Puerto Rico. The passenger rates would be "5 cents between all points in San Juan proper and its barrios, or wards, of Puerta de Tierra and Santurce, including its branch line to the sea front at Borinquen Park."[245] The electric tramway was in operation for the first time in Puerto Rico after a year of construction. The local newspaper *La Correspondencia* published:

> Acaba de pasar por frente a las puertas de esta redacción el primer carro

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[241] *At work around the world; An illustrated description of some contributions by a Group of Engineering and Construction Companies to Commercial and Industrial Developments on Five Continents* (Philadelphia, New York, USA: Press of Edward Stern & Co., Inc., 1908).
[242] Statement of the San Juan and Rio Piedras Railroad Company. AGPR, Fondo Departamento de Estado, Serie Corporaciones Foráneas con fines de lucro, Caja 1, Expediente 29.
[243] Statement of the San Juan Light and Transit Company. AGPR, Fondo Departamento de Estado, Serie Corporaciones Foráneas con fines de lucro, Caja 1, Expediente 28.
[244] "Trolley Road for Puerto Rico," *New York Times*, 18 April 1899, 3.
[245] Department of Commerce and Labor, Bureau of the Census, *Electrical industries of Porto Rico*, *1907* (Washington, USA: Government Printing Office, 1909), 27.

eléctrico que entra en la ciudad de San Juan. Un gentío inmenso le seguía y el pueblo alborozado se felicitaba de este gran paso de adelanto por la vía del progreso.

LA CORRESPONDENCIA se honra enviando sus plácemes a la Compañía americana, que no ha tenido miedo de emplear sus capitales en nuestra tierra, dotando al país de un medio de comunicación fácil, rápido, decente y elegante.

Día de júbilo es este para todos los habitantes de San Juan y Santurce. Ya no hay distancias, entre la Capital y sus barrios.

¡Bien por la Compañía, que á pesar de todas las dificultades, ha sabido luchar y vencer![246]

This first franchise appeared to fulfill the expectations of the capital city residents, which were actively looking for and expecting change and progress. The *Correspondencia* reported the euphoria of the people waiting to see the new electric tramway. Electric power was a novelty in contrast to the steam power that was currently used. New technology translated into progress for the country and the people. This technology impacted the idea of space and the perception of

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[246] Translation: "the first electric car that enters the city of San Juan had just pass in front of the headquarters of this newspaper. A huge crowd followed it and jubilant people congratulate themselves for this great step ahead on the path of progress.

The CORRESPONDENCIA is honored sending their congratulations to the American company, which has not been afraid to use their capital in our land, providing the country with an easy, quick, decent and elegant means of communication.

This is a joyous day for all the inhabitants of San Juan and Santurce. There is no distance between the capital and its suburbs.

Bravo for the company, because despite all the difficulties has managed to fight and win!"
"Tranvía Eléctrico," *La Correspondencia de Puerto Rico*, 4 February 1901, 2.

distance at that time: "Ya no hay distancias, entre la Capital y sus barrios."[247] Geographer David Harvey said that "capitalism has long evinced a very practical interest in technologies that facilitates speed-up and reduce the friction of distance."[248] Students of railroads in the United States stressed the importance of railroads in connecting the east with the west, and stressed how long distances shrank to unite the country as a nation. But, in Puerto Rico distances were not as impressive as in the United States. Furthermore, the electric railroad only had 9.5 miles of tracks. More than the unification of the country, it was simply an improvement of the urban transit system. However, for the reporter of *La Correspondencia* this was a big step towards destroying the barriers of distance between certain neighborhoods in Río Piedras.

The new electric tramway proved the benefits of U.S. investments on the island. Under Spanish rule, the steam tramway in Río Piedras was indeed a step forward on the road to modernization, but now a U.S. corporation had developed an even more modern technology: the electric tramway. However, the idea to develop an electric tramway was not new because in 1899 T. Larrinaga submitted a proposal to establish an electric tramway from the Delicias Plaza to the port of Ponce. This tramway would transport up to 40 passengers using the latest electric technology at a tariff of 10 cents. In addition, the passengers could transfer to the beltway railroad. This project for Ponce did not materialize during the Spanish regime but capitalist of the new American empire did bring an electric tramway to San Juan. The people in Río Piedras finally

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[247] "There is no distance between the capital and its suburbs."
[248] David Harvey, "The Fetish of Technology: Causes and Consequences," *Macalester International*, vol. 13, Article 7 (2003): 14.

enjoyed an "easy, fast, descent and elegant" tramway.[249] It was the 9.5 miles electric tramway the initial step to overcome natural barriers that kept towns isolated.

In the south, the town of Ponce also moved towards the establishment of an electric tramway. W. S. H. Lothrop requested a permit to construct four miles of track from the city of Ponce to the port.[250] The Ponce Railway and Light Company was incorporated under the laws of New Jersey although the headquarters of the corporation were in Boston, Massachusetts. The object of the business was "the construction, operation and maintenance of street railway and electric light and power plants." They authorized $50,000 capital stocks at a value of $100 per share.[251] The members of the board were J. W. Hallowell, H. R. Hayes, H. B. Sawyer, H. H. Picking, and Eliot Wadsworth.[252] The project for an electric tramway developed during the last years of the Spanish regime by Don Vicente and José Usera finally materialized under a foreign corporation with the endorsement of the Insular Government. W. S. H. Lothrop business activities also included the development of power plants like J. G. White & Co. as had been done in Río Piedras. Both companies practiced vertical integration through the establishment of plants to generate, transmit and distribute power to tramways and the town.

Another initiative in the south came from Henry De Ford, an investor from Boston and

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[249] "Tranvía eléctrico de la plaza de las Delicia a la estación del ferrocarril, Ponce, 1899." AGPR, Fondo Obras Públicas, Sub Fondo Ferrocarriles y Tranvías, Serie Expedientes y Proyectos de Construcción de Tranvías, Caja 54, Legajo 97, Expediente 32.

[250] "A Franchise granting to W.S.H. Lothrop the right to construct an Electric Street Railway in the city of Ponce, etc.," NARA, RG 59: General Records of the Department of State, Ordinance Granting Franchises in Puerto Rico, 1901-1906, Box 1.

[251] The Ponce Railway and Light Company, Annual Report. AGPR, Fondo Departamento de Estado, Serie Corporaciones Foráneas con fines de lucro, Caja 3, Expediente 59.

[252] *American Street Railway Investments*, Tenth Annual Volume (New York: The McGraw Publishing Company, 1903), 304.

organizer of the Central Aguirre Sugar Company. Central Aguirre was a 1,950 acre sugar plantation in Salinas with a mechanize mill able to grind the sugarcane cultivated in estates from Juana Diaz to Guayama. The firm requested a permit from the Executive Council to construct and operate a railroad line under the franchise Ponce & Guayama Railroad Company to transport sugarcane from neighboring estates to Aguirre's mill.[253]

The Ponce & Guayama Railroad Company was incorporated under the laws of New Jersey with a capital stock of $500,000.[254] Initially the *Compañía de los Ferrocarriles de Puerto Rico* had the responsibility of developing the railways in that area, but in 1904 the government approved the transfer of the rights of exploitation to the Ponce & Guayama Railroad Company. Three years later the Ponce and Guayama Railroad Company requested permits to add branch-lines in Salinas, Santa Isabel, and Guayama to connect sugarcane estates.[255]

The interest of Henry De Ford in the railroad industry was part of a vertical integration strategy to decrease transportation costs. In 1898 De Ford established a bank firm in Ponce named Henry De Ford & Company, then in 1899 purchased the Central Aguirre in Salinas (a sugar estate with a 12-mile rail system to transport sugarcane to the mill), rented 2,468 acres to cultivate sugarcane, and obtained an agreement with three haciendas (Esperanza, Margarita and Los Canos) to grind their sugarcane. De Ford and his partners from Boston lobbied for the approval of a civil

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[253] César J. Ayala, *American sugar kingdom: the plantation economy of the Spanish Caribbean, 1898-1934* (North Carolina, USA: UNC Press Books, 1999), 108-9.
[254] *Ponce & Guayama Railroad Company, Annual Report*. AGPR, Fondo Departamento de Estado, Serie Corporaciones con fines de lucro, Caja 1, Expediente 13.
[255] Ordinance of the Executive Council of Puerto Rico. 17 January 1907. NARA, RG 59: General Records of the Department of State, 1763 – 2002. Box 1.

government in the U.S. Congress.[256] In 1900 investors from the United States were enticed to do businesses in Puerto Rico after the Foraker Act established: (1) the use of the United States currency, (2) open access to U.S. markets, and (3) the appointment of the island's governor and Executive Council by the President of the United States with the consent of the U.S. Senate. Consequently, Puerto Rico would be an ideal place for investment in the absence of tarrifs and political upheavals which threatened U.S. economic interests in other Caribbean islands. Finally, in 1904 the corporation secured the franchise to operate the Ponce & Guayama Railroad Company to transport the sugar produced in Central Aguirre to the port in Ponce. Vertical integration would be the norm for the succeeding U.S. sugar corporations in Puerto Rico. De Ford acquired control of every aspect of the sugar production: First the bank to finance the acquisition of land to plant sugar cane, the mill to produce the sugar, and the railroad to transport raw cane from the estates to the mill and to the ports. De Ford not only would monopolize the sugar business in the area, but also would control railroad transportation of freight and passengers.

In the west, in 1901, the *Sociedad Anónima Tranvía de Mayagüez* was incorporated with a capital stock of $48,000. This urban tramway, with offices on Concordia Street in Mayagüez, built four miles of tracks operated by horse carts.[257] This company had local directors: José Menéndez, president; Federico Philipi, vice-president, José L. Montalvo, secretary; José L. M. Castro, treasurer.[258]

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[256] Andrés A. Ramos Mattei, "Las Inversiones Norteamericanas en Puerto Rico y la Ley Foraker, 1898-1900," *Caribbean Studies*, vol. 14, no. 3 (1974): 54-56.
[257] *Sociedad Anónima Tranvía de Mayagüez, Annual Report*. AGPR, Fondo Departamento de Estado, Serie Corporaciones Foráneas con fines de lucro, Caja 5, Expediente 89.
[258] *American Street Railway Investments*, 304.

The *Compañía de Ferrocarriles de Vía Estrecha de Mayagüez* was another company founded with local capital in 1896 but halt its service on December 1902. This railroad had problems to finance the construction of the line and the tracks and other structures suffered serious damages after hurricane San Ciriaco. In 1905 the Department of State received a communication from Miguel Esteve declaring that the company was no longer operating. He also informed the Department of State that he was part of a lawsuit for compensation of $32,000, based on the loss of income, after the abandonment of the facilities.[259] The shutdown of the *Compañía de Ferrocarriles de Vía Estrecha de Mayagüez,* the only second-class railroad founded with local capital for the service to coffee farmers, may well relate to the decline in coffee exports after Hurricane San Ciriaco. The the railroad was acquired by Sucesores de Bianchi a sugar *central* interested in the transportation of sugar cane in Añasco.[260]

The *Compañía de los Ferrocarriles de Puerto-Rico*, like the other companies, submitted paperwork requesting the approval of a franchise. The Executive Council of Puerto Rico granted the franchise on October 28, 1901 and the Legislative Assembly passed an act on February 4, 1902 granting tax exemption from insular, municipal and local taxes for a period of twenty-five years.[261] After the approval of the franchise and tax exemption the *Compañía de los Ferrocarriles* reorganized with a capitalization of $1,000,000 from investors in the United States. The American

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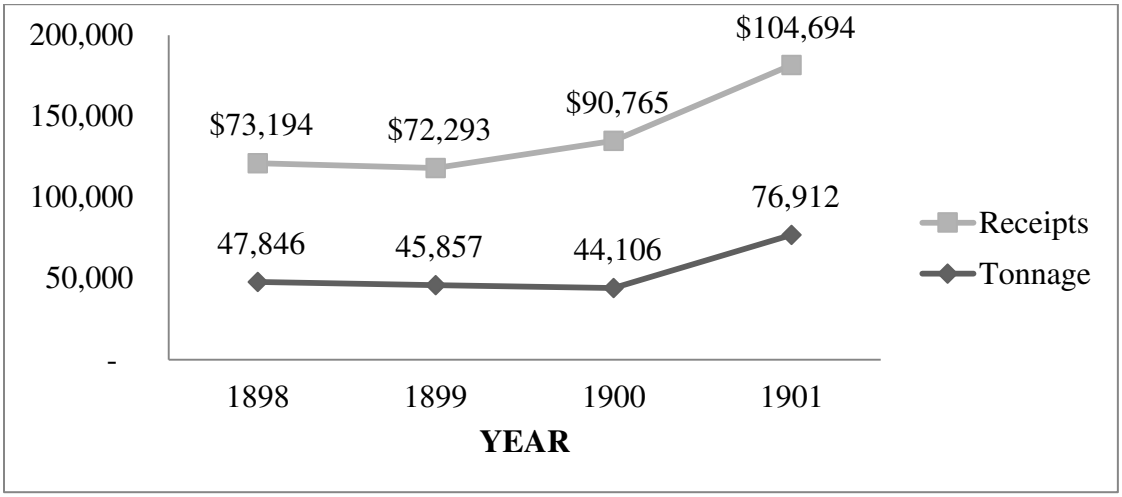
[259] Letter from Miguel Esteve to honorable Secretary of Puerto Rico, Mayagüez, P.R., 15 May 1905. AGPR, Fondo Departamento de Estado, Serie Corporaciones con Fines de Lucro, Caja 1, Expediente 19.
[260] *Informe del Comisionado del Interior al Hon. Gobernador de Puerto Rico* (San Juan, PR: Negociado de Materiales, Imprenta y Transporte, 1919), 136.
[261] George W. Wickersham, The Secretary of War, *American Railroad Company of Porto Rico-Assignment to-Exemption from Taxation*, 492, NARA, RG 350: Records of the Bureau of Insular Affairs Relating to Puerto Rico (1898-1934), Box 69.

Railroad Company of Porto Rico (ARRC) constituted in New York on May 1902, acquired the rights of construction granted initially to the *Compagnie des Chemins de Fer de Porto Rico* and the rights of operation from the *Compañía de los Ferrocarriles de Puerto-Rico*. The ARRC franchise was approved for 150 years. The board consisted of investors from New York as well as from France, and Puerto Rico. The Directors were "J. de Lapisse, Henry Wiener, Paul Leveque, and Gabriel Maurel of Paris, France; Eduard Lauterbach, Herbert R. Limburger, and Hernand E. Behn of New York City; Jean Charles Charpentier of San Juan, Porto Rico."[262] The new company decided to resume the construction of the beltway railroad as had been planned under the Spanish regime.

The ARRC operated the sections of the beltway railroad with initial success. In 1899 the ARRC transported 125,027 passengers, the next year 153,056 passengers, and in 1901 the corporation transported 149,597 passengers. Although the numbers for 1901 reveals a decrease in passengers, freight tonnage improved considerably (Figure 3.1).

[262] "A Porto Rican Railway," *New York Times*, 11 May 1902, 9.

Figure 3.1. ARRC Freight Receipts, 1898-1901.



SOURCE.- *Report of the Governor of Porto Rico*, 1902, 40.

To increase profits in freight transportation the company had to focus on finishing the beltway route. To assist in this effort the Executive Council of the insular government leased public land in San Juan to the *Compagnie des Chemins de Fer* for the establishment of a new terminal.[263] The permit also allowed the ARRC to add one-mile extensions to link sugar plantations to the main line. At the time of acquisition the sections under operations were: (1) San Juan-Camuy, (2) San Juan-Carolina, (3) Aguadilla-Mayagüez, and (4) Yauco-Ponce. The ARRC was committed to continuing with the development of new stations until the route became a single line. The company provided four trips per day for each section or route, until construction was completed. There was a morning departure and an afternoon return from each end of the line:

[263] "Porto Rican Legislation; Tax Rate Cut Down One-half-Land Lease to French Railroad," *New York Times*, 27 January 1901, 5.

Table 3.1. Timetable of the American Railroad Company of Porto Rico, 1901

SAN JUAN-ARECIBO-CAMUY					
Station	Morning	Afternoon	Station	Morning	Afternoon
San Juan	6:30	1:20	Camuy	---	3:00
Santurce	6:39	1:30	Hatillo	---	3:04
Martín Peña	6:46	1:39	Arecibo	---	3:32
San Patricio	---	1:49	Cambalache	---	3:40
Bayamón	7:09	2:07	Barceloneta	8:20	4:13
Toa Baja	7:31	2:34	Río Manatí	8:58	4:32
Dorado	7:35	2:40	Manatí	9:12	4:43
San Vicente	7:55	3:03	Vega Baja	9:43	5:10
Vega Baja	8:05	3:15	San Vicente	9:49	5:15
Manatí	8:29	3:51	Dorado	10:15	5:36
Río Manatí	8:53	4:36	Toa Baja	10:20	5:40
Barceloneta	8:58	---	Bayamón	10:47	6:30
Cambalache	9:33	---	San Patricio	11:00	---
Arecibo	9:56	---	Martín Peña	11:11	6:25
Hatillo	10:19	---	Santurce	11:18	6:30
Camuy	---	---	San Juan	---	---

SAN JUAN-CAROLINA					
Station	Morning	Afternoon	Station	Morning	Afternoon
San Juan	8:25	5:00	Carolina	7:00	3:40
Santurce	8:38	5:13	Río Piedras	7:28	4:08
Martín Peña	8:50	5:25	Martín Peña	7:42	4:22
Río Piedras	9:01	5:36	Santurce	7:50	4:30
Carolina	---	---	San Juan	---	---

AGUADILLA-MAYAGÜEZ					
Station	Morning	Afternoon	Station	Morning	Afternoon
Aguadilla	8:15	5:00	Hormigueros	5:55	---
Aguada	8:31	5:16	Mayagüez Ciudad	6:16	3:00
Rincón	8:56	5:41	Mayagüez Playa	6:22	3:06
Córsica	9:03	5:48	Añasco	6:46	3:30
Tres Hermanos	9:21	6:06	Tres Hermanos	6:54	3:38
Añasco	9:31	6:16	Córsica	7:13	3:57
Mayagüez Playa	9:56	6:40	Rincón	7:20	4:04
Mayagüez Ciudad	---	6:45	Aguada	7:45	4:30
Hormigueros	---	---	Aguadilla	---	---

YAUCO-PONCE					
Station	Morning	Afternoon	Station	Morning	Afternoon
Yauco	6:45	3:00	Ponce	8:30	5:00
Guayanilla	7:13	3:28	Tallaboa	9:02	5:31
Tallaboa	7:40	3:46	Guayanilla	9:20	5:49
Ponce	---	---	Yauco	---	---

SOURCE.- "Compañía de los ferrocarriles de Puerto Rico; Itinerario de trenes," *La Correspondencia de Puerto Rico*, 2 January 1901.

The unification of the railroad lines was closer after two years of construction. On October 12, 1903 the press in Puerto Rico and the United States published articles celebrating the opening of a railroad extension connecting Aguadilla and Ponce. The *New York Times* and *The Chicago Sunday Tribune* highlighted the presence of Governor Hunt and other high officials at the festivities, which included an inaugural ride, banquet, and concert. For someone unfamiliar with the island, the newspaper emphasized that "the road opened up a rich coffee, sugar and fruit territory," and even further the opening was "considered the most important railroad event in the history of the island."[264] Local newspapers provided a detail chronicle of the opening celebrations. The *Águila de Puerto Rico* published the long list of the guests at the banquet, and the creative dishes that were offered by the Français Hotel:

MENU

Hors d'œuvre Progress

Consomme Vitesse

Poulet Aguadilla

[264] "New Railway in Porto Rico," *New York Times*, 11 October 1903, 12; and "Porto Rico Railroad opened" *Chicago Sunday Tribune*, 11 October 1903, 13.

Patés Añasco

Petit-pois Mayagüez

Beignets Saint German

Filet Guánica

Viennas Guayanilla

Dessert Ponce

Sorbets Republique

Café Yauco

Vins. Champagne

Sauterne Medoc

The unique menu resembled a map, which traced the route of the railroad. Each stop had its corresponding course. To start the appetizer, which was called "progress", and then the menu went station to station ending with the Ponce dessert, the route's last stop. When Governor Hunt made his toast he stressed the influence railroads had had on the progress of the country and its people and the importance foreign investments played in the promotion of the island's economy. For this celebration, members of the *Partido Republicano* congregated at the station to welcome Governor Hunt and other "honorable" dignitaries.[265] The *Boletín Mercantil* published an article written poetically where it praised the benefits of the new section and stressed the progress and vitality created by railroads in Puerto Rico. Railroads were depicted as the blood that communicated different organs to provide life to an organism. The isolation of interior towns would disappear and

[265] "Inauguración del ferrocarril," *El águila de Puerto Rico*, 12 october 1903, 1.

goods would run to the cities and the ports without delay.

However, the tone of the article published by the *Boletín Mercantil* suddenly changed, and it criticized the slow development of infrastructure on the island. The *Boletín* used the celebration as a pretext to demand a more active role on the part of the government in the promotion of roads and the support of corporations like the ARRC.[266] The critique of the governmental handling of the infrastructure development was unfounded because U.S. administrators had allocated funds to develop new roads and also facilitated the influx of new U.S. railroad corporations.

In 1904, President Theodore Roosevelt granted the ARRC the right to build a branch-line from Lajas to Boquerón in Cabo Rojo.[267] This seven-kilometer branch-line formed an irregular ring to access land in the southwestern coast, but it did not solve the problem of the need to connect the island's interior. The following year, the ARRC requested a permit to develop another branch-line between Hormigueros and San Germán. The company also planned the establishment of branch-lines for the towns of Aguadilla, Arecibo, Carolina, Mayagüez, and Ponce. These initiatives were proof of the aggressive expansion of the railroad by the ARRC. In 1910 the company continued its construction with 23 kilometers of tracks to link the north (117 kilometers) with the southwest (160 kilometers) that is, to connect the station in Camuy with the station in Aguadilla.[268]

A petition for a railroad franchise in the municipal district of Caguas was submitted by the

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[266] "Nota del día," *Boletín Mercantil*, 12 october 1903, 2.
[267] U.S. Congress; Senate. *Construction of branch railway track in Porto Rico*, 58th Congress, 3rd Session, doc. no. 42, 1904.
[268] "Compagnie des Chemins de fer de Porto-Rico," *Annuaire Desfossés* (1910), 135.

newly created Port America Company. The initiative to establish a railroad in the Caguas region was not novel because the first efforts could be traced back to February 1885 when the Spanish Parliament approved the construction of a 0.762 meter narrow-gauge railroad.[269] This railroad would be a second-class-railroad designed to connect Caguas with the port in San Juan. The project did not prosper, thus a decade later Don Juan F. Vías, a lawyer and Property Registrar in Caguas, revived the plans to construct the narrow-gauge railroad. On October 23, 1896 the government granted the permit to organize the corporation and Vías directed the meetings for that end. In the first meeting 450 shares were sold at 100 *pesos* each and for the second meeting they sold another 430 shares.[270] Time passed and the railroad did not succeed, so the Port America Company represented a new hope for a railroad in the region.

In 1901 the Port America Company received the approval from the Executive Council of Puerto Rico to build and operate a railroad for the island's interior. The projected route consisted of two separate lines with Caguas at the heart and center. The corporation projected a line starting in San Juan, passing through Guaynabo and Caguas. Then, the railroad continued southward with stops at Aguas Buenas, Cidra, Cayey, Guayama, and Aguirre (Salinas). The second line ran to the east from Caguas with stations in Gurabo, Juncos, Naguabo, and Ensenada Honda (Ceiba); and, westward from Cidra with stops in Naranjito, Corozal, Morovis, Ciales, Utuado, Lares, San Sebastian, and Aguadilla. The Port America Company also projected the construction of branch-lines to provide service to the towns of Trujillo Alto, Bayamón, Toa Alta, Aibonito, Barranquitas,

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[269] "Tasación de terrenos y tranvía de Ponce por Manuel Maese," PARES/ AHN, Ministerio de Ultramar, Unidad 383, Expediente 14.
[270] "El Ferrocarril de Caguas a Río-Piedras," *Boletín Mercantil*, 29 November 1896, 2.

Barros (Orocovis), and Jayuya. This project was grandiose, and furthermore it had backers like General Roy Stone, an ardent supporter of the developments of road infrastructure in Cuba and the United States, which received from the military government the direction of the *Bureau of Good Roads*.[271]

The Port America Company tried to secure a tax exemption for twenty-five years, but the Attorney General did not approve it.[272] This route would have provided a real improvement to the infrastructure of the island because it complemented the beltway railroad by connecting the interior with the coast. Most of the projects approved by the Executive Council of Puerto Rico had just been continuations of the work started or planned during the nineteenth century. However, the Port America Company provided a new route benefiting the economic integration of the island. The linkage of coffee, tobacco, and food producing areas with coastal markets and export ports would strenghten the insular economy. After the corporation invested $25,000 in surveys, explorations and such procedures, it was discovered "that General Stone's calculations in regard to the practicability of the enterprise were mistaken, and that the railroad itself could not make a return upon the investment."[273] In 1905 the government declared the franchise "null and void" and forfeited the sum of $12,500 the corporation had given as deposit.[274]

With the breakdown of the Port America Company the possibility of connecting the

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[271] Ramos Mattei, "Las Inversiones Norteamericanas en Puerto Rico y la Ley Foraker, 1898-1900," 57.
[272] "More Railroads for Porto Rico," *San Francisco Chronicle*, 27 November 1901, 2.
[273] Charles Mc Veagh to Honorable James R. Garfield, Secretary of the Interior, New York, United States, 20 January 1908, 2. NARA, RG 126: Office of Territories Classified Files, 1907-1951, Box No. 788, File 9-8-26: Puerto Rico, Bonds; 9-8-48 Puerto Rico, Industrial & Political Conditions.
[274] Ordinance of the Executive Council of Puerto Rico. August 17, 1905. NARA, RG 59: General Records of the Department of State, 1763 – 2002. Box 1.

highlands with rails had vanished, but the desire to establish "iron roads" in the valley of Caguas continued. In 1901, the Vandegrift Construction Company, which was created by investors from Pittsburgh, Pennsylvania committed to "construct, maintain and operate a railroad" between Caguas and San Juan in just a year. The Vandegrift Construction Company was backed by J. G. White & Co., the owner of the San Juan and Rio Piedras Railroad Company. The company was to construct fifty miles in one year at a cost of $773.679 dollars.[275] The construction material would come from Pittsburgh: "all the steel rails will be manufactured by the Carnegie Company, while other material, such as machinery, will be produced from local concerns." [276] The Executive Council approved the franchise in 1903 but Vandegrift Construction faced problems meeting the deadlines. In 1905 the Executive Council revoked Vandegrift Construction Company's permit because the corporation had failed to perform the work as conferred in the franchise.[277] This situation frustrated the tobacco companies in the area of Caguas that would have benefited from cheap transportation to the ports.[278]

Tobacco was the second agricultural product, after sugar because of investments with U.S. capital after the occupation of the island by the U.S. military. The first civil ship to arrive in Puerto Rico after the military invasion carry a group of tobacco investors, among them a representative of the American Tobacco Company (ATC), to explore the economic potential of the tobacco business in the island. The delegate of the ATC promoted their cigarettes among the U.S. soldiers and

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[275] "Railways for Porto Rico," *Boston Evening Transcript*, 20 February 1902, 7.
[276] Ibid.
[277] Ordinance of the Executive Council of Puerto Rico. February 24, 1905. NARA, RG 59: General Records of the Department of State, 1763 – 2002. Box 1.
[278] "Want a new Railway in Porto Rico" *New York Times*, 15 July 1906, 4.

investigated the quality of the tobacco leaf cultivated on the island. Although tobacco in Puerto Rico did not have the high quality of the Cuban tobacco still it would be profitable.[279] John Blackwell Cobb, the representative of the ATC send to Puerto Rico, returned to the United States and incorporated the Porto Rican American Tobacco Company (PRATCO) in Newark, New Jersey. PRATCO would be the subsidiary of the ATC on the island. PRATCO negotiated the acquisition of two important cigar factories: (1) La Colectiva in San Juan owned by Fausto Rucabado and José Portela, and (2) Toro y Cía. in Ponce owned by Luis Toro Pasarel.[280] In 1901 the West Indies Cigar Company was incorporated in New York to produce cigars in Puerto Rico and became the strongest competitor of PRATCO.[281] 1902 the Porto Rico Leaf Tobacco Company was incorporated for the acquisition of land for the cultivation of the tobacco leaf. The Porto Rico Leaf Tobacco Company would supply the leaf for the cigars manufactured by PRATCO. Evidently the tobacco business in Puerto Rico experienced a quick transformation. In the nineteenth century tobacco was cultivated by peasants in small and medium family farms and the production of cigars occurred in urban artisanal workshops ("chinchales"), but after the arrival of U.S. corporations the cigar workshops became factories. Farmers were subject to the prices established by absentee capital factories, which produced cigars or exported leaves for cigarette factories in the United States. In a period of five years, from 1900 to 1905, tobacco exports value increased from $681,642 to $2,589,933 surpassing the value of coffee exports the main source of revenues in the

[279] Arturo Bird Carmona, Parejeros y desafiantes: la comunidad tabaquera de Puerta de Tierra a principios del siglo XX (San Juan, P.R. : Ediciones Huracán, 2008), 47-48.
[280] Juan José Baldrich, "The "Tobacco Trust" in Puerto Rico: From Cigarette Manufacturing to Agribusiness, 1899–1911," *Agricultural History*, vol. 89, no. 1 (2015): 35-36.
[281] Bird Carmona, Parejeros y desafiantes, 83.

nineteenth century.[282] This growing tobacco industry needed cheap transportation for the leaves and the cigars to the ports.

On August 1903 the Porto Rico Railway, Light and Power Company was incorporated in the state of New Jersey with a capital stock of $125,000. The directors were Thomas B. Hall, J. Holland Paist, and L.R. Holems.[283] This railroad would depart from San Juan with stops in Caguas, Cayey, Coamo, Juana Diaz, and finally arriving at Ponce Playa. But on November 1905 the insular Department of State received "a letter from Mr. Hawkins stating that the company no longer was doing business in the island."[284] Afterwards, the Executive Council authorized J. G. White & Co. in 1906 to construct, maintain, and operate a railroad from San Juan to Caguas.[285] It was public policy "to increase as far as possible railway facilities in the island" as Laurence H. Grahame, Commissioner of the Interior stated.[286]

The American Railroad Company of Porto Rico protested the government decision in favor of J. G. White & Co. claiming they already had the rights of exploitation for that area. The original plan was to extend a branch line from Carolina to Caguas but the ARRC decided to change the route from Río Piedras to Caguas because it was shorter and more favorable from an engineering perspective. In the struggle for the control of the railroad route between Caguas and Río Piedars a third corporation emerged. The Porto Rican American Tobacco Company also had interest in the

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[282] *Report of the Governor of Porto Rico, 1907*, 17.
[283] *Certificate of Incorporation of the Porto Rico Railway, Light and Power Company*. AGPR, Fondo Departamento de Estado, Serie Corporaciones foráneas con fines de lucro, Caja 6, Expediente 91.
[284] Memorandum relative to the Porto Rico Railway, Light and Power Company. San Juan, P.R., May 13, 1909. AGPR, Fondo Departamento de Estado, Serie Corporaciones foráneas con fines de lucro, Caja 6, Expediente 91.
[285] Ordinance of the Executive Council of Puerto Rico. July 26, 1906. NARA, RG 59: General Records of the Department of State, 1763 – 2002. Box 1.
[286] *Report of the Commissioner of Interior for Porto Rico to the Secretary of the Interior*, U.S.A., 1906, 27.

route because their tobacco factories were at and beyond Caguas. For this purpose the PRATCO "created the San Juan and Caguas Railway Company. This company was organized in the state of New Jersey on June 14, 1906, and was authorized on June 28, 1906, to do business in the island. Its capitalization was fixed at $300,000."[287] However, the PRATCO agreed with the ARRC to withdraw their application for the railroad franchise after the ARRC guaranteed satisfactory freight rates for their tobacco shipments. Likewise, PRATCO committed to fund part of the railroad construction and the ARRC resumed their attack against J. G. White & Co.

The government granted the franchise to either company, first the ARRC received the franchise for a steam railroad on July 19, 1906 and some days later, on July 26, J. G. White & Co. obtained their franchise for an electric railroad. This decision was uncommon because the insular government promoted the establishment of railroads but did not encourage competition between railroad corporations. After the decision, the ARRC offered J. G. White & Co. to abandon the Caguas route if they guarantee to turn over all the freight to the ARRC at their Río Piedras station and the ARRC also committed to transfer all freight to Caguas to the J. G. White & Co. railroad. In sum, freight from San Juan to Caguas would use the tracks of two railroad companies, 30 percent of the route would be under the ARRC operation and 70 percent under the J. G. White & Co.[288] The polemic for the control of the Caguas route was finally settled, but shortly thereafter J. G. White & Co. would be acquired by another company.

British investors formed a corporation in Canada to operate the San Juan Light & Transit

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[287] Department of Commerce and Labor, *Electrical industries of Porto Rico, 1907*, 25-26.
[288] Ibid, 26.

Co. and the Porto Rico Power & Light Co. The Canadian corporation built a hydroelectric plant to provide electricity for the metropolitan areas of San Juan, Santurce, and Río Piedras as well as provide power to the electric tramway from San Juan to Río Piedras, and the tramway from Río Piedras to Caguas.[289]

The Caguas Tramway Company was incorporated in Portland, Maine, on July 1907. Millard W. Baldwin, Clarence E. Eaton, and Charles D. Fullerton were the directors with a capital stock of $100,000.[290] The Caguas Tramway Company employed 1,400 men to develop roughly 25 miles of rail tracks "operated by electricity furnished from the Comerio water falls."[291] The Porto Rico Railways Company, Limited (PRRC) operated both the San Juan Light & Transit Co. and the Porto Rico Power & Light Co. In 1907 *Brill's Magazine* published a photo of the wagons that would be acquired by the Caguas Tramway Company. The corporation purchased eight wooden "Semi-convertible type" cars designed particularly for tropical areas.[292] The Caguas Tramway Company would start traffic service in 1908 with the guarantee they would profit from the sugar and tobacco production of the area:

> An agreement has been entered into with the Porto Rico Leaf Tobacco Company, under which that company gives all their freight, going and coming, to the Caguas Railway Company for ten years from completion of the road, which is expected to be ready for operation by January 1, 1908. This freight, with that of the Cayey-

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[289] *The Manual of Statistics: Stock Exchange Hand-Book* 34 (1912), 721.
[290] *Statement of Caguas Tramway Company*. AGPR, Fondo Departamento de Estado, Serie Corporaciones Foráneas con fines de lucro, Caja 12, Expediente 157.
[291] *Report of the Governor of Porto Rico*, 1907, 14.
[292] "Brill Semi-Convertible Cars for Porto Rico," *Brill's Magazine*, October 1907, 192-193.

> Caguas Tobacco Company, The Belgian Sugar Central and the general freight and passenger business of this populous territory, will undoubtedly show handsome profits upon the investment.[293]

In April 1911 all of the above noted companies merged under a new corporation registered and incorporated as the Porto Rico Railway, Light and Power Company. In the articles of incorporation the company expressed the desire to "take over all the assets, rights, properties and businesses of the said five companies and to carry on and continue such businesses."[294] These companies were the *Luz Eléctrica* organized in Puerto Rico; the San Juan and Río Piedras Railroad Company, and the San Juan Light and Transit Company organized in New York; and the Porto Rico Power and Light Company, and the Caguas Tramway Company organized in Maine. The corporation had a capital stock of $3,000,000 divided in 30,000 shares of $100 each. The directors were A. E. Ames from Toronto, Canada and F. W. Teele, George F. Abbott, C. S. Jenner and Henry F. Hord, residing in San Juan, Puerto Rico. The board immediately assumed the payment of debts and bonds from the companies they acquired. The corporation, which included power production and railways reported consistent increase in their earnings during the first years of operation (Figure 3.2).

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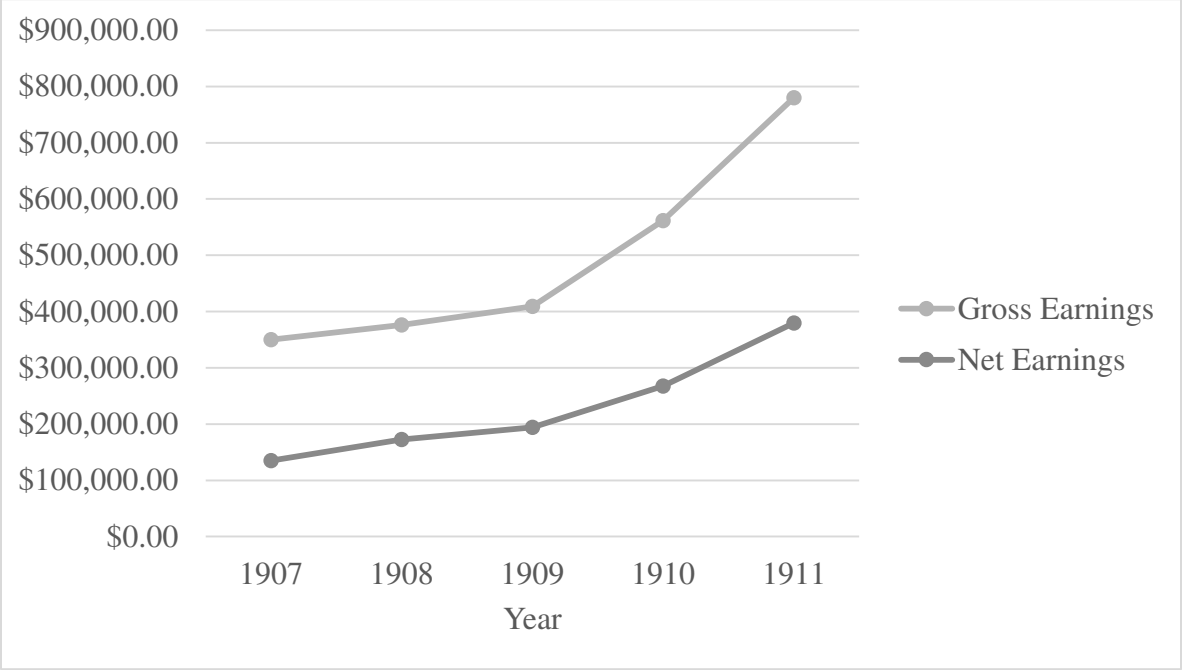
[293] Ibid., 194-195.
[294] *Articles of Incorporation of the Porto Rico Railway, Light and Power Company*, 1911. AGPR, Fondo Departamento de Estado, Serie Corporaciones con fines de lucro, Caja 15-B, Expediente 149.

Figure 3.2. Earnings of the PRRC, 1907-1911.



SOURCE.- "Porto Rico Railways Co., Limited." *The Times*, 21 May 1912, 21.

The *Línea Férrea del Oeste*, with a ferry from the port of San Juan to the port of Cataño, and a railroad between Cataño and Bayamón was a railroad line that used domestic capital and was able to survive the change in sovereignty. On 1901 the *Línea Férrea del Oeste* reported gross earnings of $30,518 and operating expenses of $24,602 for the transportation of 252,772 passengers.[295] In 1912 the legislature conducted a study of the service provided by *Línea Férrea del Oeste* in response to multiple complaints. The final report mandated "the formulation of 19 specific charges of failure to comply in as many respects with the obligations imposed upon the owner by the terms of his concession."[296] The company had a limited period of time to make the

[295] *Annual Report of the* Governor *Porto Rico*, 1902, 41.
[296] *Annual Report of the Governor Porto Rico*, 1912, 34.

necessary modifications to improve the service or the Executive Council would cancel the franchise. Two years later the *Línea Férrea del Oeste* offered 15 departures from San Juan and publicized its service as secure and comfortable:

> Estudiantes y oficinistas: recordad que esta empresa expende libretas de abono con 60 tickets, válidos en primera clase, entre San Juan y Cataño y vice-versa, al mínimo costo de un dollar. Le sale el viaje a un centavo y dos tercios, y viaja con seguridad y comodidad.[297]

In March of 1917 the company was incorporated with a capital stock of $75,000 divided in 750 shares of $100 each. The directors were Ramón, Alfonso, and Sabino Valdés, Frank Martínez, and Ramón Siaca Jr. all from San Juan.[298] The Valdés brothers inherited the direction of the *Línea Férrea del Oeste* from their father and an electric company in Mayagüez. In this town, the Valdés brothers established the *Compañía Cervecera de Puerto Rico* in 1937, which became a real success, more than the steam railroad.

In the eastern part of the island three sugar companies provided public-service railway for the region. The *Compañía de los Ferrocarriles de Puerto Rico* originally had the right to construct this section, but decided to keep the western side of the route, and release their rights in the east.

Antonio Roig received in 1905 the approval to "construct and operate a steam railway

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[297] Translation: "Students and office workers: Remember this company sell ticket-books for 60 rides, valid in first class, between San Juan and Cataño and vice-versa, at a minimum cost of a dollar. You get the ride for one cent and two-thirds, and travel safely and comfortably."
"Línea Férrea del Oeste," *Gráfico* vol. 5, no. 20 (30 May 1914).
[298] *Cláusulas de incorporación de la Línea Férrea del Oeste, Inc.,* 1917. AGPR, Fondo Departamento de Estado, Serie Corporaciones con fines de lucro, Caja 25, Expediente 290.

between the city of Humacao and Comercio Street in Humacao Playa. Antonio Roig was the owner of a Sugar Central in Humacao and his railroad would run through the lands of R. Fulladosa and Emilio Muñoz, Ramón Pou, Salvador Rocafort, Julio Guzman, José Toro Rios, Emilio Faura and Petrona Julbe. These men and women were owners of sugarcane lands and would benefit from the access of a railroad to transport raw cane and refined sugar but the Executive Council of Puerto Rico declared the railroad "to be of public utility for all purposes."[299] The track gauge approved for this railroad was 75 centimeters although the company had to change to one-meter standard gauge in a period of 10 years to allow the transfer of freight and passengers in a future transfer station to be constructed by the ARRC when they finished their route. The service would consist on two rides per day during working hours. The Executive Council approved a passenger rate of three cents per kilometer, children would paid reduced rates, and police, military, and any other justice department officer on duty had to be carried free of charge. The rate for transportation of freight in bulk would not exceed 20 cents per ton per mile. The final requisite for the approval of the franchise was the payment of "an annual royalty of five per cent on the gross amount of freight and passenger charges collected" by the railroad company.[300]

The Fajardo Development Company was organized in Connecticut in 1905 and that same year received the approval of the Executive Council to construct, maintain, and operate a railroad departing from Mameyes (Río Grande) with stops in Luquillo, Fajardo, Ceiba, and Naguabo. In Fajardo the corporation planned to extend two branches, one from Fajardo to Fajardo Playa and the

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[299] Ordinance of the Executive Council of Puerto Rico. August 8, 1905, 4. NARA, RG 59: General Records of the Department of State, 1763 – 2002. Box 1.
[300] Ibid., 6.

other "from Fajardo into the interior in a southwesterly direction to the barrio of Río Arriba in the Municipal district of Fajardo."[301] The Fajardo Development Company received the approval to construct a one-meter gauge railroad powered by steam or electricity with the exception of the branch between Fajardo and Fajardo Playa that would operate by animal force. Passenger and freight service would be offered between Mameyes and Naguabo, but the branch lines of the route to Fajardo would exclusively transport sugar cane. In 1912 the Fajardo Development Company had to be prepared to connect in Río Grande (Mameyes) with the ARRC *en route* to Carolina.

The Fajardo Development Company was in charge of the transportation of sugar for the Fajardo Sugar Company, incorporated in 1905 in New York by Jorge Bird Arias, a planter from Fajardo, and Charles P. Armstrong of New York. The Fajardo Sugar Company operated the mill and all the factory buildings and the planting of the sugar cane was controlled by the Fajardo Sugar Growers Association and the Fajardo Fruit Company. These four companies make the Central Fajardo a successful sugar complex in the eastern area. Furthermore, Sociologist César J. Ayala traced the participation of the board members in the Fajardo Sugar Company and found that Thomas A. Howell and James Howell Post were directors in Fajardo and director in the Aguirre Sugar Company. In addition, James Bliss Coombs was president of the Fajardo Sugar Company and the Fajardo Development Company, and also was in the board of directors with James Howell Post of the National Sugar Refining Company in New Jersey, The Cuban-American Sugar Company and the West India Sugar Finance Corporation with operations in Cuba and Dominican Republic. Ayala

[301] Ordinance of the Executive Council of Puerto Rico. October 27, 1905, 1. NARA, RG 59: General Records of the Department of State, 1763 – 2002. Box 1.

showed the networks among executives in the United States and the Spanish Caribbean islands occupying seats in banks, sugar mills, and railroad company boards simultaneously.

The Esperanza Sugar Company submitted a petition for a franchise to construct and operate a railway from Ceiba to Naguabo.[302] This decision provoked a conflict between the Fajardo and Esperanza Sugar Companies, because in Ceiba and Naguabo the routes overlapped. Fajardo Development Company protested because they had received their permit in 1905 and began the construction of 39 miles of tracks, but in 1909 the government approved a new franchise to Esperanza Central Sugar Company, which was in detriment to their economic interests. The reason for the Esperanza Central Sugar Company to build a railroad was to provide railway transportation to a new wharf to be built by Robert Sweeny in Ensenada Honda, Ceiba. The Fajardo Development Company had 30 miles of tracks in operation, but they had not finished the route because in the fall of 1907 a financial panic prevented the corporation from continuing the project. After the panic, the corporation applied for an extension in time to culminate the route. In the meantime, the Esperanza Central Sugar Company received the permit to construct 6 miles of railroad from the point the Fajardo Sugar Company ended their rail line to the projected wharf. The Fajardo Sugar Company complained that behind the railroad of the Esperanza Central Sugar Company lied unfair competition:

> the whole meaning of this attempted franchise was to shut off competition and

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[302] Secretary of the Executive Council to the Honorable Secretary of the Interior, San Juan, Puerto Rico, 4 January 1909. NARA, RG 126: Office of Territories Classified Files, 1907-1951, Box No. 785, File 9-8-1: Puerto Rico, Reports of the Treasurer; 9-8-3 Puerto Rico, Reports of Auditor.

> compel the planters to grind at the Esperanza factory rather than make the Esperanza and Fajardo Factories open competitors for the planters. That this franchise is an attempt to bolster up a company which is in the hands of a receiver at the expense of the planter.[303]

This clash between the Esperanza and the Fajardo Sugar Companies for the control of the public-service railroads was part of a tough competition for the control of the sugar business, and was not an effort to control the railroad service *per se*. Sugar corporations considered the railroads essential for the transportation portion of their sugar business. For this reason, Central Aguirre established the Ponce & Guayama Railroad in 1904, and Central Fajardo followed in 1905. Another sugar central incorporated in New Jersey in 1900 under the name South Porto Rico Sugar Company did not establish their own public-service railroad because at the time of the incorporation, the ARRC had railroad service near the mill in direction to the port of Ponce. Similar to the experience of the creators of Central Aguirre, investors of the South Porto Rico Sugar Company started their presence in Puerto Rico in the banking business in times of the occupation army. The New York bank firm Muller Shall & Company first made an alliance with the American Colonial Bank of Porto Rico and after the "Puerto Rican sugar was granted tariff-free entrance to the Unites States, Muller and Schall moved toward investment in sugar."[304] In other words, railroads were integrated into the complex industrial plantation system characterized

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[303] Garvan, Armstrong & Conger to Honorable James D. Garfield, Secretary Department of the Interior, New York, United States, 29 January 1909, 6. NARA, RG 126: Office of Territories Classified Files, 1907-1951, Box No. 785, File 9-8-1: Puerto Rico, Reports of the Treasurer; 9-8-3 Puerto Rico, Reports of Auditor.
[304] Ayala, *American Sugar Kingdom*, 116.

by Cesar J. Ayala as the "American Sugar Kingdom."[305] To understand the railroad industry in Puerto Rico it is necessary to consider how they participate in the metropolitan and colonial business networks.

In Arecibo Finlay Brothers and Waymouth Trading Company established a steam railroad from Vega Alta to Dorado. The route of the steam railroad included a transfer point to the ARRC station at Dorado. This railroad was approved in 1905 like the Roig Railroad in Humacao and the provisions for the operation was similar. The Vega Alta – Dorado railroad offered service to a region of sugar estates, the fare for the transportation of freight in bulk would "not exceed twenty cents per ton per mile," passengers would not pay more than "three cents per kilometer, equivalent to four and eight tenth cents per mile," children had to pay half rate, and justice department employees, military and police officers on duty had to be transported free of charge.[306] The main difference with the Roig Railroad was the gauge width, because the Vega Alta – Dorado railroad had to construct one-meter gauge tracks to allow the transfer in Dorado with the ARRC. Years ahead, the Vega Alta Railroad became the Northern Porto Rico Railroad Co.

The establishment of the Vega Alta – Dorado railroad was another initiative by a *central* for the control of public-service railroads to connect surrounding sugar cane lands with the sugar mill. This initiaves complemented the investment of narrow gauge railroad tracks for the private use of the *centrales*. Antoher example was the Central Canóvanas that interconnected seven *colonias* and villages (*poblados*) with their railroad network. Only three *centrales:* Soller in

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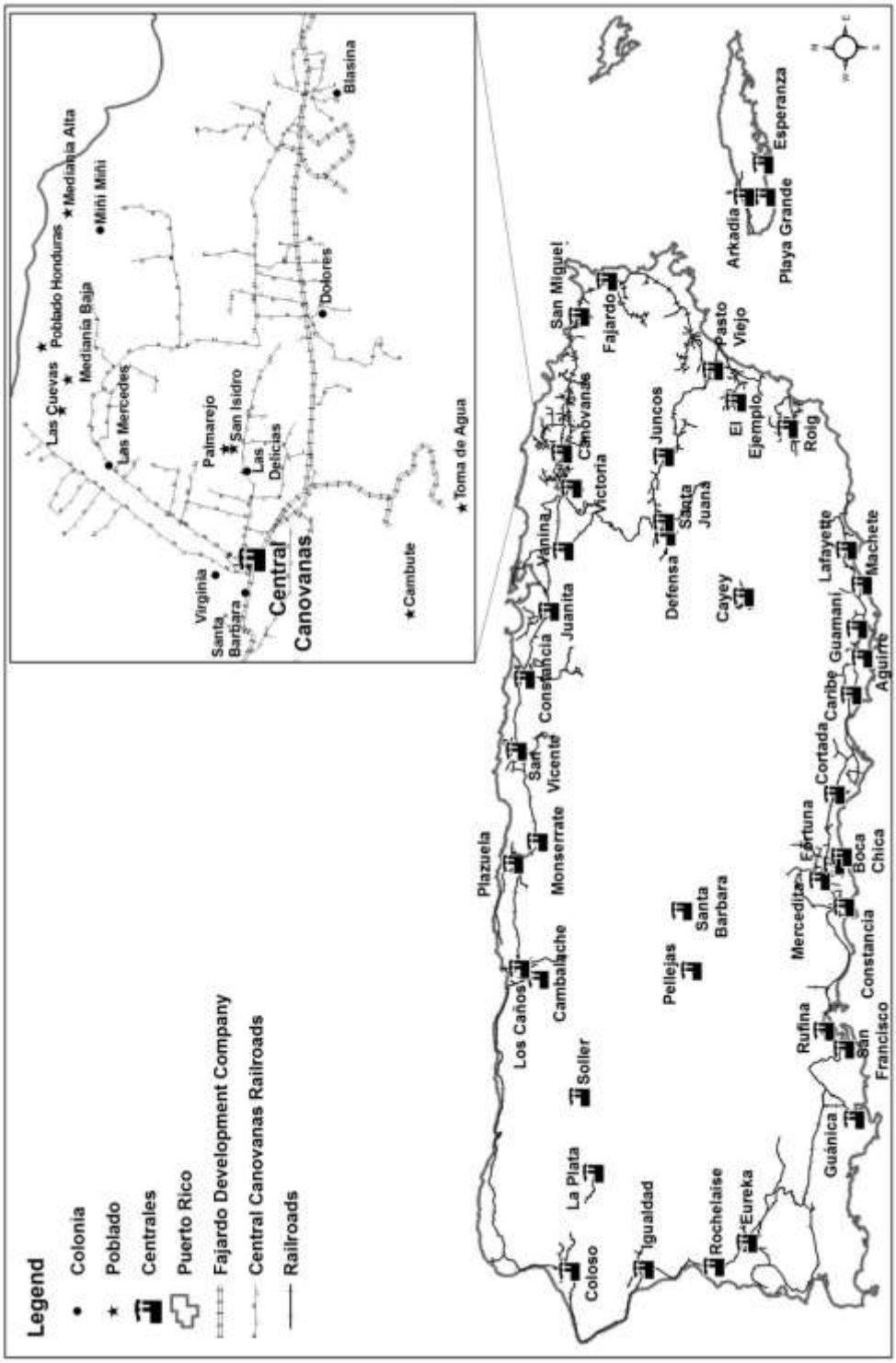
[305] Ibid., 19.
[306] Ordinance of the Executive Council of Puerto Rico. October 27, 1905, 1. NARA, RG 59: General Records of the Department of State, 1763 – 2002. Box 1.

Camuy, Pellejas in Adjuntas, and Santa Barbara in Jayuya did not invest in railways (Map 3.1). These internal railroad systems transported raw cane from field to mill and sugar processed in the *centrales* to the ports through the public service railroads. As shown, sugar centrales relied in the railroads for their sugar business and railroad corporations as the *Compañía de los Ferrocarriles de Puerto-Rico* equally relied in stations established near the *centrales* to profit from the freight of the sugar business.

In 1912 investors from Mayagüez incorporated the Mayaguez Tramway Company with a capital stock of $50,000 in 500 stocks of $100 each. The directors of the board were Don Julián Herencia y Gozalvo, Don Clemente Javierre y Lope, Don Matías Gil y Jaca, Don Félix Ramos y Jurado and Don Antonio Amill y Negroni. The Mayaguez Tramway Company acquired the assets and property of the *Sociedad Anónima Tranvía de Mayagüez* to continue with the operations of the tramway.[307] The company imported electric machinery to substitute horse-driven carts of the *Sociedad Anónima Tranvía de Mayagüez.* Almost five decades earlier Mayagüez had been the pioneer city in the establishment of urban tramways, although there was later the development of electric tramways in cities such as Río Piedras and Ponce. At this point, electric-urban-tramways were operating in the principal cities, the beltway railroad finally linked most of the section in the west, and in the east more kilometers were under construction.

[307] *Cláusulas de incorporación de Mayaguez Tramway Company* 1912. AGPR, Fondo Departamento de Estado, Serie Corporaciones con fines de lucro, Caja 18, Expediente 201.

Map 3.1. *Centrales* and railroads.



The first twelve years of the civilian government witnessed the establishment of electric-urban-tramways in three cities for the transportation of passengers, and the expansion and consolidation of steam railroad corporations providing passenger and freight service. The increasing number of "iron roads" clearly stimulated economic growth. The Register of Puerto Rico reported that estates near roads increased their value: "in the country districts, within easy access of the railroad or macadam roads, fairly good land average $40.00 per acre; and in the interior and in places remote from transportation, grazing land can still be purchased as low as $5.00 to $10.00 per acre."[308] The construction and operation of railroads also created jobs, which benefited unemployed workers.

All railroads in Puerto Rico were privately owned, however the state regulated the operations of railroads that provided services to the public. The Executive Council had the responsibility to review railroad tariffs every five years and accordingly the House of Delegates approved a study of freight rates to make an informed decision. Governor Beekman Winthrop went to Washington, accompanied by other governmental officials and business man from Puerto Rico, to hold a conference with members of the Interstate Commerce Commission on December 1906. Governor Winthrop requested "the Interstate Commerce Commission to instruct railroad officials and shippers alike in matters of transportations."[309] James Peabody from Chicago, with experience in the railroad industry, was the advisor to Governor Winthrop in the committee created to adjust freight tariffs in the public-service railroads. Mr. Peabody concluded that the rates had to increase

[308] *Register of Porto Rico for 1905* (San Juan, PR: Bureau of printing and supplies, 1905), 11.
[309] "Porto Rico Railroad," *The Sun*, 16 December 1906, 5.

to maintain profitability.[310] Sugar entrepreneurs rejected Peabody's suggestions, arguing that this would cause the ruin of their businesses.[311] There was a clash between railroad companies and sugar *centrales*. Passenger fares were not really an issue at the moment as the issue was mainly in freight transportation.

The state also observed the accomplishment of safety practices in public-service railroads. In 1907, Treasurer Groomer complained about the overcrowding of the wagons in the "trolley". The electric-street-tramway from San Juan to Río Piedras, known commonly as the "trolley", transported approximately 75 passengers in a wagon with a capacity of 37 passengers. This was unsafe, abusive, and uncomfortable for the commuter who paid a tariff of 5 cents. Unsurprisingly, the trolley had more than five derailments in only one week.[312]

Another controversy between the state and a railroad company occurred in 1910 in relation to the tax exemption granted to the ARRC. In 1901 the ARRC requested a tax exemption that was granted by the Executive Council for a period of 25 years. Later, the ARRC ceded their rights of development to other companies, including the Ponce & Guayama Railroad. The Ponce & Guayama Railroad believed they would enjoy the exemption granted originally to the ARRC in 1901, but in the eyes of the government this was not transferable. This controversy forced a discussion about the legal power of the Executive Council to allocate tax exemptions, although it was clear that they had the power to grant franchises and concessions. The end result was that the government rejected any exemption to the Ponce & Guayama Railroad.

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[310] "Chicago expert makes report," *Chicago Tribune*, 29 March 1907, 6.
[311] "Oppose Raise in Rates," *Washington Post*, 31 March 1907, 1.
[312] "En el Consejo Ejecutivo," *La Correspondencia de Puerto Rico*, 4 October 1907, 1.

Natural disasters also posed economic challenges to the railroad companies. For example, heavy rains on May 17, 1909 paralyzed the traffic of the San Juan-Caguas railroad, because the floods wash-out the tracks.[313] On September 7, 1910 a hurricane struck the island with winds of 72 miles and "precipitation of five inches in one hour and a half, the heaviest ever recorded."[314] The companies and the people did not have time to prepare themselves because the Weather Bureau did not alert them promptly. The winds destroyed distribution lines, and as a result the electric tramways had no power to operate. In addition, fallen trees blocked the passage in some places. The railroad and vessels operating from San Juan to Bayamón were forced to halt operations because of the inclement weather. The ship known as "Pepita," departed to Cataño at 5:00 p.m., but got stranded in Cabra Island in San Juan Bay. At 11:30 p.m., in the middle of the storm, passengers were finally able to disembark. The following day the company resumed limited operations because trees and telephone posts had fallen on the tracks.[315] The day after the storm, the San Juan trolley resumed full operations at 11:45 a.m. but many passengers protested a high and abusive fare increase charge for the first trip.[316] The ARRC also suffered serious damages, particularly the tracks of Arecibo, but the corporation made the necessary and resumed operations the following day.[317]

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[313] "Floods in Porto Rico; Towns Partly Destroyed and Sugar Crop Seriously Damaged by Rains," *New York Times*, 18 May 1909, 4.
[314] "Hurricane in Puerto Rico," *New York Times*, 8 September 1910, 6.
[315] "El Temporal," *La Democracia*, 7 September 1910, 1.
[316] "Mas noticias de la tempestad del martes," *La Correspondencia*, 8 September 1910, 1.
[317] "El mal tiempo en la isla," *La Correspondencia*, 9 September 1910, 1.

Roads

The railroad boom was the result of a flood of private-foreign-investment endorsed by the colonial government. At the same time the government allocated funds to maintain and build roads that crossed the island. For U.S. administrators, the 284 kilometers of road constructed during the Spanish regime were inadequate to promote agriculture and "demonstrates the backwardness in development."[318] From the perspective of the U.S. administrators, the costs of road construction on the island were higher than in the United States, because of the weather. Often excessive rain, ruined the advances that had been made during a work day, and had to be repaired before the day's construction was to begin.

The need for technical personnel during the construction of the railroads justified the use of foreigners since there were so few skilled mechanics and other professions needed for railway construction. Historian Aurelio Tío mentioned that malaria and yellow fever attacked technicians unaccustomed to the tropics and those deaths partially explained the delays in the construction of the beltway railroad.[319] When Tío referred to "technicians," he did not specify their country of origin, but probably most were personnel from the United States with technical knowledge of the railroad business.

Studies on the railroad industry in Puerto Rico do not mention the use of foreign unskilled workers for the construction of the "iron roads". However, in a note published in the *Correspondencia de Puerto Rico*, the newspaper revealed the presence of immigrant workers in the

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[318] *Annual Report of the Governor of Porto Rico*, 1902, 38.
[319] Aurelio Tió, "Breve historia de los ferrocarriles de Puerto Rico," 107.

construction of the electric trolley at San Juan. The mayor of San Juan denounced the preference for Tortola British-Island workers over the nationals of the country:

> Una cláusula: «todo individuo *domiciliado* en San Juan, tiene derecho á trabajar en las obras del tren eléctrico».
>
> La idea fué que trabajaran los obreros de San Juan, que bien lo necesitan; pero… la redacción fué tan hábilmente hecha que solo trabajaban los «tortoleños» que se domicilian.[320]

This note shows the government's commitment to create jobs for the people in San Juan, although the tramway company favored the use of immigrant workers from the Lesser Antilles. Perhaps other railroad companies also hired unskilled immigrant workers living on the island.

Road construction was clearly the work of native labor. The state did not rely on cheap immigrant labor because it had the option of using convict labor for road maintenance and construction. The use of prisoners in the construction of roads under the Spanish regime was discussed in the first chapter and was an attractive strategy also used by the new U.S. controlled government. The governor of Puerto Rico, Regis H. Post, in a 1906-07 report stated: "the prisoners in the jails have been utilized very extensively during the past year on road work. They are sent out in gangs of from 10 to 20 under guards, and are used principally for breaking stone on the

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[320] Translation: "A clause: «everyone domiciled in San Juan has the right to work in the construction of the electric tramway». The idea was to employ the workers of San Juan, who well need it; but... the wording was so cleverly made that only domiciled «tortoleños» works."
"'To be or not to be' dijo hoy el alcalde," *La Correspondencia de Puerto Rico*, 29 July 1903, 2.

highways and on general repair and construction work."[321] For the next two fiscal years the prisoners assigned to road construction and maintenance decreased because the number of prisoners also decreased. The reports submitted to the governors expressed satisfaction with the economic benefits of this cheap labor force:

> The employment of convict labor upon the insular highways continues to be successful, both from the standpoint of economy in road maintenance and construction and the condition of the men employed.[322]

Fernando Picó study the prisons in Puerto Rico and he claimed that U.S. authorities conceived confinement the objective of the punishment in the period from October 1898 till the opening of a new penitentiary in 1933. However, the Bureau of Prisons pursued the humanization of the imprisonment by rewarding good behavior with sentence reduction.[323] Prisoners performed works inside and outside the penitentiary and those with good performance and conduct would be rewarded with a reduction in sentence up to five days per month.[324] In 1912 the cost of maintaining penal institutions was $184,998.93 but the Bureau of Prisons received $86,475.50 due to the services rendered by prisoners in the construction of roads.[325] That is to say, inmates could be outside the penitentiary confinement by working in road construction and potentially reduce their sentences; the state reduced payroll expenses in public works and partially financed the

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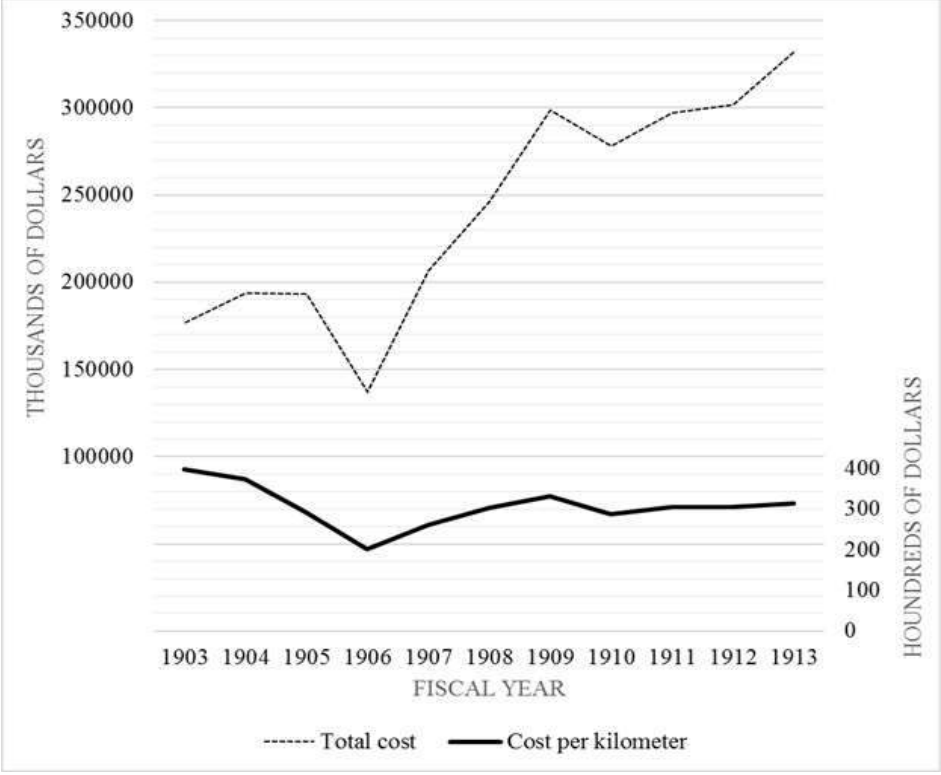
[321] *Annual Report of the Governor of Porto Rico*, 1907, 35.
[322] *Annual Report of the Governor of Porto Rico to the Secretary of War*, 1911, 42.
[323] Fernando Picó, *El día menos pensado: Historia de los presidiarios en Puerto Rico (1793-1993)* (Río Piedras, PR: Ediciones Huracán, 1998), 72.
[324] Picó, *El día menos pensado*, 111.
[325] *Annual Report of the Governor of Porto Rico to the Secretary of War*, 1912, 49.

maintenance of the prison system.

During the first year of military occupation road maintenance was expensive with a cost of $1,000 per kilometer. However, U.S. administrators always stressed the importance of road building and maintenance for the economic progress of the island. Early in 1901, Governor Charles H. Allen reported: "The crying need of the island is above all things roads." [326] This initial effort towards developing a web of good roads was justified in the promotion of freight transportation from the interior to the coast for the economic advancement of the island. Roads were essential for the export economy and the state had to improve and develop new ones at any cost.

Figure 3.3. The cost of road maintenance, 1903-1913.

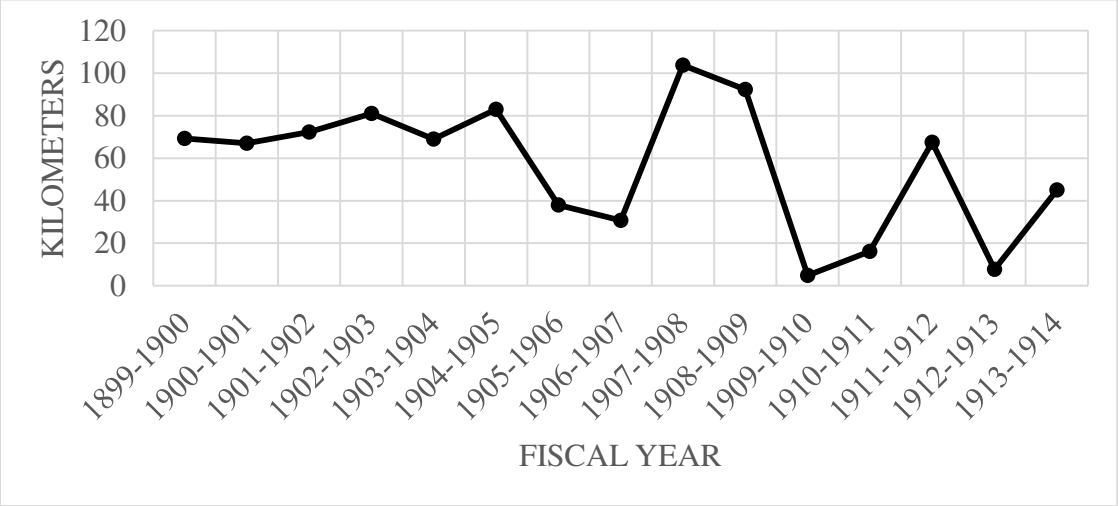


[326] *Annual Report of the Governor of Porto Rico to the Secretary of War*, 1901, 73.

SOURCE. - Annual Reports of the Governor of Puerto Rico, 1903-1913.

Roads also became important for the appearance of a new luxury good: the automobile. The incipient automobile industry in Puerto Rico had an ongoing need for new roads and efforts by the government to maintain existent roads in good condition. Early in the century, the legislature promoted the acquisition of automobiles by reducing the fees to acquire licenses for private automobile circulation. In 1907 Laurence H. Graham, Commissioner of the Interior, reported that there were 96 private motor vehicles on the streets, and that "Several automobile manufacturers have established agencies in San Juan. Owing to the magnificent roads in the island there is an increasing demand for automobiles, and the industry will most likely be a profitable one."[327] As previously noted, kilometers of new roads increased and the government allocated considerable sums for the maintenance of existing roads (Figure 3.4).

Figure 3.4. Construction of new roads, 1900-1914.



[327] *Report of the Governor Porto Rico to the Secretary of War*, 1912, 150.

SOURCE.- Annual Reports of the Governor of Puerto Rico, 1900-1914.

After just five years the Commissioner of the Interior, John A. Wilson, complained of the poor condition of the island's roads. He reported: "the influx and operation of a large number of heavy motor trucks in addition to the constantly increasing number of automobiles have in some cases resulted in the destruction within a few months of roads which were, until that time, in a fair condition to carry the ox-cart traffic for which they were designed."[328] Evidently the investment in infrastructure had a dual impact: an improvement in the transportation of goods on the island, as well as the promotion of the consumption of automobiles and trucks manufactured in the United States.

In the early years of the 20th century the purchase of automobiles was a luxury, but later could become an investment in itself. New commercial opportunities emerged, such as taxis for passengers' transportation or trucks for freight carriage. The railway system began to be considered a "necessary complement to the system of macadam roads".[329] Motor vehicles provided new economic possibilities and also produced new ideas of modernity. Automobiles and trucks became icons of liberty in contrast with the steady tracks of railroads and tramways which had fixed routes and schedules. Roads became the path to the future. In a commercial guide published in 1910, under the topic "road building" the ideas of progress and modernity were palpable: "From the finished roads, the broad-tread, high-wheel ox cart is slowly but surely disappearing and the lighter, cleaner, and more scientific vehicle, the American wagon, is coming to the front".[330] The

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[328] Ibid.
[329] *The Commercial Guide and Business Director of Porto Rico Illustrated*, 1910, 288.
[330] Ibid.

economic benefits of motor vehicles were tangible for the planters. For example, coffee growers in Utuado paid an estimate of one dollar per 100 pounds of coffee transported by mules to the port in Arecibo, but the costs decreased to only ten cents by using the "the American wagon." In the sugar industry, planters in Arecibo paid ten cents to the port but if they used the railroad the cost dropped to "3 or 4 cents per 100 pounds" of sugar.[331] Annually this savings translated into thousands of dollars in profits for farmers.

These changes were gradual did not occur overnight. In the landscape it was common to appreciate traditional ox-cart transportation coexisting with modern railroads. For example, in 1910 supplies to Isabela were "transported mostly from Aguadilla by bull carts, or from San Juan, Arecibo or Mayaguez by train."[332] Oxen-drawn carts (bull carts) and railroads together were necessary to supply Isabela with goods from diverse locations, but the proliferation of motor trucks eventually would replace oxen or horse driven carts. Furthermore, animal powered railways also had to move aside to open the path for the modern-mechanical-powered transportation. The *Sociedad Anónima Tranvía de Mayagüez*, a horse-driven tramway company, operated since the nineteenth century in the urban area of Mayagüez but shut down operations in 1912. On May 2 Pedro E. Ramírez informed the Secretary of Puerto Rico the final sale of the company's property.[333] The following year, the Executive Council approved a franchise for the Mayaguez Tramway Co. This company modernized the old horse traction system with an electric tramway for

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[331] Ibid.
[332] William H. Armstrong, *Progressive Map of Porto Rico, Book 5* (United States: War Department, 1910): 43.
[333] Letter of Pedro E. Ramírez to the honorable secretary of Puerto Rico. AGPR, Fondo Departamento de Estado, Serie corporaciones con fines de lucro, Caja 1, Expediente 13.

the city. The change to an electric tramway in Mayagüez closed the era of the "railroad boom". In the nineteenth century, with the establishment of a horse-driven tramway, Mayagüez opened the era of the first railways, and closed the era of the "railroad boom" with the establishment of the third urban-electric-tramway in the Island after San Juan and Ponce.

Railroad's workers

The census of 1910 reported six railway-related businesses, which employed 342 male workers. This figure represented 2.2 percent of wage earners classified as manufacture workers in Puerto Rico. Railroad laborers under the category of "Cars and general shop construction and repairs by steam-railroad companies" worked an average of 60 hours (ten hours per day) and in some cases 72 hours per week.[334] In March 1908 the legislature in Puerto Rico approved a law to regulate working hours for railway employees. Under this law, railroad workers could work for a maximum of 12 hours and could return to work for a new shift only after eight hours of rest. Any corporation in violation of the law was subject to a fine from $100 to $500.[335] This law attempted to assure the security of workers and passengers.

Then there was the problem of safety. The Puerto Rican Civil Code stated that family members of any worker who was injured or died as a result of negligence by the company could claim compensation:

> the employer who has charge of, or physically controls, any signal, switch,

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[334] "Manufacture- Porto Rico," *Thirteenth Census of the United States: 1910*, 1396.
[335] *Leyes y Resoluciones de la Segunda Sesión de la Cuarta Asamblea Legislativa de Puerto Rico* (San Juan, PR, 1908), 197-198.

> locomotive engine, car, or train in motion, whether attached to an engine or not, upon a railroad, the employee, or, in case the injury results in death, his widow or children, or both of them, and if there be no such widow and children, then his parents (provided that said parents were dependent upon such employee for support) may maintain an action for damages against the employer, pursuant to the provisions of this Act.[336]

However in 1908, a federal act applied to railway workers in Puerto Rico overrode the insular law. Because of this, the federal courts were the scenes of litigation between railway companies and workers' relatives. Two cases in particular went as far as the Federal Supreme Court. Both lawsuits were filed by relatives of workers who died on duty. In 1912 Ann Elizabeth Birch sued the ARRC for $10,000 after the death of her husband Francisco Abraham Birch. Ernest Victor Birch, the son of Francisco, also joined the lawsuit. The fatality occurred in Aguadilla when Birch was at his post as a brakeman. The railroad was running at high speed and one of the wheels of the wagon "left the tracks and was thrown to the ground, crushing the deceased beneath it, and thus causing instant death."[337] The widow and son alleged "that a proper inspection of the wheels would have disclosed the defect in it, and, further, that if the train had been running within the limits of the requirements of the law, the train might and would have been stopped before the accident occurred."[338] The defense indicated that Mr. Birch was 47 years old at the moment of the

[336] Puerto Rico Civil Code.
[337] Ibid.
[338] Ibid.

accident and earned $42 per month. He "was a skilled and efficient railroad employee, and was in vigorous health and strength. And it is alleged that his death was caused without negligence on his part, and while he was in the faithful discharge of his duty."[339] Their lawyers made reference to an act of Congress entitled, 'An Act Relating to the Liability of Common Carriers by Railroad to Their Employees in Certain Cases,' approved on April 22, 1908. This act expressed in Section 2:

> That every common carrier by railroad in the territories, the District of Columbia, the Panama canal zone, or other possessions of the United States, shall be liable in damages to any person suffering injury while he is employed by such carrier in any of said jurisdictions, or, in case of the death of such employee, to his or her personal representative, for the benefit of the surviving widow or husband and children of such employee, and if none, then of such employee's parents…[340]

ARRC's lawyers challenged the arguments of Birch's heirs. The corporation denied that the railroad was running at high speed and affirmed that no defect was visible when the company inspected the wheels, as required by law. In the Supreme Court the essence of the argument was not whether Francisco Abraham Birch was or was not responsible for the accident, but the right of the widow and the son to sue.

In 1913, the Supreme Court reviewed another lawsuit against the ARRC. The rational for the lawsuit was that Pedro Didricksen was "an employee of the American Railroad of Porto Rico,

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[339] American Railroad Company of Porto Rico, Plff. in Err., v. Ann Elizabeth Birch and Ernest Victor Birch, 224 U.S. 547 (32 S.Ct. 603, 56 L.Ed. 879)
[340] Ibid.

who died from an injury sustained while in its service,"[341] his parents demanded compensation. The motion did not offer more details of the accident, because the court was not concerned about the accident *per se,* but about the rights of the parents to sue the company. In both cases the ARRC struggled in the courts to avoid any compensation to the families of the deceased. This was no surprise but what is important to note is the centrality of the political relations between Puerto Rico and the United States for finding legal resolutions to conflicts.

An example was the extension of the Employers' Liability Act of 1908 to the island. Although Puerto Rico was not literally mentioned in the act the text includes "other possessions of the United States," and the judges decided that Puerto Rico was indeed a "possession." Another case in point was the extension of the Safety Appliance Act to the island, which impose sanctions to a railroad company if failed to maintain required appliances in good conditions. In Birch's decision, the issue was left unanswered. In Didricksen's case the Safety Appliance Act had to be resolved. The judge interpreted that it applied to the island, even when the Safety Act did not use the term, "possessions of the United States" as it was used in the Liability Act. The Safety Act only mentioned territories and the District of Columbia, however the judge interpreted that even when the term "possession" was not used "for all purposes, the Island of Porto Rico has not been fully incorporated into the United States, it obviously is not foreign territory, nor its citizens aliens."[342] The definition of the political relation between the U.S. and Puerto Rico was a political issue on the island, because the status of "possession" was uncertain and the politicians in Puerto Rico

[341] American Railroad Co. of Porto Rico v. Didricksen, 227 U.S. 145
[342] Ibid.

wondered what the political future of the island would be. Citizenship was another significant issue, because the people of Puerto Rico were not U.S. citizens although the island was a possession of the United States. Pedro Didricksen case about a railroad accident obliged the U.S. Supreme Court to determine if a Federal Law did apply in Puerto Rico even though the island was not a state but a possession.

Improvement in salaries became another struggle for railroad workers on the island. After the U.S. occupation of Puerto Rico in 1898 workers from various guilds created the *Federación Regional de Trabajadores* (Worker's Regional Federation). The initial claim of the labor movement was the extension of U.S. constitutional rights to Puerto Ricans (freedom of speech, of the press, and the right of the people to peaceably assemble). Internal discrepancies divided the Regional Federation and provoked its premature dissolution but one faction founded a new union in 1899 under the name *Federación Libre de los Trabajadores* (Free Worker's Federation, FLT). In 1904, the FLT leaders were under arrest and sentenced to jail for charges of "conspiracy to alter the price of work." Samuel Gompers, president of the U.S. union American Federation of Labor (AFL) requested President Theodore Roosevelt to intervene in favor of the FLT leadership. [343] The FLT affiliated with the AFL in 1901, and the result of that alliance was manifest after Governor Hunt recommended the revocation of the Spanish labor code under effect and the adoption of a new labor code to allow pacific assemblies and to legalize unions. The FLT leaders were released from jail and the unionization of workers became easier under the new legal order.

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[343] Antonio J. Gonzalez, "Apuntes para la historia del movimiento sindical de Puerto Rico: 1896-1941," *Revista de Ciencias Sociales*, vol. 1, no. 3 (1957): 455-456.

Tobacco workers were the most active sector of the insular labor movement with strikes and protests in the period of 1905-15. In 1915 workers in the sugar industry declared strikes and railroad workers followed with strikes demanding higher wages. The need for better salaries in the railroad industry was clear to its workers. Already in 1907 Treasurer Groomer declared that problems in the "trolley" of San Juan could be related to the workers' low salaries: "se les paga 11 centavos por hora de trabajo y hay hombres de esos que solo cobran $2 en una semana. Yo no veo que con esas condiciones se pueda esperar un buen servicio de esos hombres."[344] However, the strike did not started in the electric "trolley" of San Juan operated by the PRRC, but in the *Línea Férrea del Oeste.* From February to March 1915, the *Línea Férrea del Oeste* was confronted with a workers' strike demanding higher wages. The strike succeeded when the company increased workers' salaries by 25 cents.[345] Trolley employees declared their strike a year later but the triumph was less astounding with a 1.5 cent increase.[346] The PRRC dealt with another strike that same year. The company reported losses of $4,000 after a five day lock out in solidarity with laborers from other trades.[347] This activism of railroad workers was associated with the radicalization of agricultural workers. In 1916 agricultural workers declared a strike with an estimated participation of 40,000 laborers from a total agricultural labor force of 399,075 (ten percent of the labor force in sugar, coffee, tobacco, and fruit plantations). [348] The FLT organized

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[344] Translation: "They are paid 11 cents per hour of work and some of those men only earn $2 in a week. I do not see in these conditions how to expect good service from these men."
"En el Consejo Ejecutivo," *La Correspondencia de Puerto Rico*, 4 October 1907, 1.
[345] *Report of the Governor of Porto Rico*, 1916, 446.
[346] *Report of the Governor of Porto Rico*, 1917, 552.
[347] *Annual Report of the Porto Rico Railways Company, Limited*, 1916, 5.
[348] *Report of the Governor of Porto Rico*, 1916. 443.

several agricultural workers unions and also organized the workers of the ARRC in lodges. These lodges could paralyze the railways to pressure the railroad company for higher wages, and could halt operations in support to FLT colleagues on strike.

The power of the workers was in their capability to halt production but railroad workers did not produce any goods, they transported them, so in the railroad industry the power of the workers was their capability to halt the movement of goods. The effectiveness of a walkout of railroad workers increased if they had the collaboration of other guilds to prevent the shipping of goods. The FLT provided that network of workers. One weakness of railroad activism was the increasing availability of trucks, which offered reliable freight services. In the absence of railroad service many companies, such as sugar mills, could relied on trucks for the transportation of goods to different places of the island. During fiscal year 1915-16 the Commissioner of the Interior reported 109 trucks in circulation.[349] This figure may seems insignificant but trucks turned into the transportation alternative for areas without railroad access, such as the highlands towns of Adjuntas, Aguas Buenas, Aibonito, Barranquitas, Ciales, Cidra, Coamo, Comerio, Corozal, Jayuya, Lares, Las Marías, Maricao, and Utuado. These towns did not have access to railroad tracks and relied solely on traditional ox-carts for freight transportation. Railroad workers may not have considered truck drivers as strikebreakers at this moment but the increasing presence of trucks on the island landscape would eventually became a serious concern for union leaders during strikes.

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[349] *Report of the Governor of Porto Rico*, 1916, 322.

War anxieties

At the beginning of the First World War in Europe the American Railroad Company of Porto Rico was the largest corporation followed by the Porto Rico Railroad Company. The principal source of income for these companies was the transportation of raw cane to the mills and refined sugar to the ports. The expansion of sugar production with 41 *centrales* in operations (33 owned by Puerto Ricans, 5 owned by Americans, and 3 owned by Europeans) in 1910 and the integration of Puerto Rico to the U.S. markets with the protection of tarrifs were crucial for the growth of the railroad business. [350]

Freight railroads were inspected by the Bureau of Weight and Measures to assurance track and carts scales were correctly calibrated. The inspections of the bureau would benefit the *colonos* (cane growers) because errors in the scales apparently benefited the mills. In 1914 the loss "amounted to 12,314.3 quintals of sugar, which, valued at only $3 per quintal, amount to a total loss for the colonos of $36,942.90."[351] This loss equated to 6 percent of sugar production for 1914. The calibration of the scales was a problem with a clear solution, however, railroad companies confronted new problems without clear solutions when the prices of sugar fell in 1913 and the Congress in the United States started deliberations for the end of protective tariffs.

In 1914 the PRRC reported a decrease in freight transportation from 194,094 tons in 1913 to 106,510 tons, which was equivalent to $70,395 in lost income.[352] The company reported that a drop

[350] Humberto García Muñiz, "La plantación que no se repite: Las historias azucareras de la República Dominicana y Puerto Rico, 1870-1930," *Revista de Indias,* vol. 65, no. 233 (2005): 183-184.
[351] *Report of Governor of Porto Rico,* 1915, 134-35.
[352] *Annual Report of the Porto Rico Railways Company, Limited*. Toronto, Canada, 1916-1917.

in sugar prices was the reason for the reduction in freight transportation. The fall in prices was the consequence of the Underwood-Simmons Tariff Act of October 3, 1913, which reduced sugar duties on 25 percent effective in March 1914 in anticipation of May 1916 when sugar would be duty-free.[353] In Puerto Rico the average price per ton of sugar exported decrease from $85.92 in 1912 to $69.55 in 1913 to $63.12 in 1914, the lowest value in fifteen years. Furthermore, the enactment of the Act severely affected the insular government revenues.[354] Over the next two years the company reported increases in the net income by $3,835.88 in 1915 and $41,156.65 in 1916.[355] The reason for this recovery also had to be related to sugar prices. On April 27, 1916 the U.S. Congress repealed the duty-free clause and sugar values raised to an unprecedented $107.79 average price per ton in 1916, a significant increase from the $92.64 in 1915. Scholars Sara Fisher Ellison and Wallace P. Mullin claimed that "the action of 1916 was intended to 'postpone' free trade in sugar until after World War I was resolved and 'normal' conditions returned to the sugar market."[356] This relation between the prices of sugar and the income of the PRRC revealed the great dependency of this railroad company to the transportation of sugar. A crisis in the sugar business would translate to a crisis in the PRRC.

The Ponce Railway and Light Company was a smaller urban tramway with plans to strengthen its operations with the opening of a pier in Ponce in 1914 (located in cape Peñoncillo). The projections were to transport "a large percentage of the fruit, tobacco and coffee exports and

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[353] Sara Fisher Ellison and Wallace P. Mullin, "Economics and Politics: The Case of Sugar Tariff Reform," *The Journal of Law & Economics*, vol. 38, no. 2 (1995): 364.
[354] Diane Lourdes Dick, "U.S. tax imperialism in Puerto Rico," *American University Law Review*, vol. 65, no. 1 (2015): 45.
[355] *Annual Report of the Porto Rico Railways Company, Limited. Toronto, Canada*, 1915 and 1916.
[356] Ellison and Mullin, "Economics and Politics: The Case of Sugar Tariff Reform," 364.

lumber, coal and other imports" to this port. The *Stone & Webster Public Service Journal* celebrated that Ponce at last had "an opportunity to land and discharge cargo by modern methods."[357] Although, the journal's impression was that Puerto Rico's infrastructure was underdeveloped, the essay clearly stated how the railroad had a direct relationship to the development of this new pier. That is to say, railways continued to be considered essential elements in the construction of a modern economy and the progress of the country.

The idea that railroads promoted economic prosperity and the modernization of the island infrastructure was manifest in long-term projects like the new pier in Ponce with railroad access and through less significant developments like new sidewalks. Case in point, the pavement of the "trolley" line in Mayagüez stimulated property owners to asphalt their entrances. The press praised the importance of this initiative for the enhancement of the city:

> -La pavimentación de la vía del trolley está animando a los propietarios de las fincas urbanas de la calle Méndez Vigo a asfaltar el frente de sus casas. Si ello se realiza será un gran paso de progreso en la hermosa avenida orgullo de Mayagüez.[358]

This note in *La Democracia* credits the trolley as being the engine of progress in Mayagüez.

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[357] "The new terminal at Ponce, Porto Rico," *Stone & Webster Public Service Journal*, vol. 14 (1914): 296.
[358] Translation: "Paving the way of the trolley is encouraging owners of urban farms in Mendez Vigo Street to asphalt the front of their houses. If this is done it will be a major step of progress in this beautiful avenue, a Mayagüez pride."
"Notas de Mayagüez," *La Democracia*, 23 August 1916, 1.

In March, the U.S. Congress approved a new organic act for Puerto Rico: The Jones Act of 1917. Article 38 transferred the responsibilities related to franchises, concessions, and rights from the Executive Council to the Public Service Commission, and Article 18 created the Commissioner of Agriculture and Labor. The first action of the Public Service Commission was litigation against the ARRC. The Circuit Court of Appeals in Boston decided against the ARRC by forcing the company to repay sugar producers for an illegal "increase of 20 percent over the approved tariffs of the rates on sugar and its products without the consent of the Executive Council of Porto Rico."[359] Sugar producers received their compensation. The progressive plea for railroad regulations so prevalent in the United States perhaps had an impact in Puerto Rico.

Residents in Puerto Rico were granted U.S. citizenship by the Jones Act in March 1917 and on April 6 the Congress of the United States declared war on the German Empire. Puerto Rico as a U.S. territory and Puerto Ricans as U.S. citizens were also in war and suffered early in the conflict the uncertainty of food availability. A month after the U.S. declaration of war the legislature approved the creation of a Food Commission under the presidency of Antonio R. Barceló. The Commission appointed a Committee of Agriculture, a Committee of Transportation, and a Publicity Committee to promote the domestic production of food, to stimulate economic independence, and decrease imports. After a year, the acreage planted with rice, corn, beans, and vegetables increased from 102,575 acres to 334,725 acres.[360] In this scenario of increasing food production for local consumption and exports threatened due the war, railroads had to modify their

[359] *Report of* the *Governor of Porto Rico*, 1919, 46.
[360] *Report of the Governor of Porto Rico*, 1918, 46-47.

operations to provide the needed transportation of food crops to local markets. Railroads had concentrated their freight service in the transportation of export goods, in particular sugar, but in the war the attention had to be shifted. Already in 1908 the Department of Agriculture received pressure to study the "fruit transportation problem." The governor of Puerto Rico at the time, Regis H. Post, wanted solutions for the lack of transportation alternatives for these products, which he considered "far heavier" than they should had been.[361] The island exported pineapples, oranges, grapefruits, and coconuts but these and other food products also might be sold in the local markets. Although the transportation problem of food crops was not further discussed the issue resurfaced during the war. However, the main concern of railroad companies was not the transportation of food, but rather support the war effort.

The ARRC demonstrated their commitment to the defense of the United States through the investment of almost $40,000 for the construction of "a spur from the main road to Camp Las Casas." The director of the ARRC, Mr. George Villard, agreed to transport troops and other personnel without charge, and the company "enrolled every employee as a member of the Red Cross" and "every employee contributed one's day pay to this organization."[362]

The PRRC also demonstrated its commitment to the war effort. In a "personal and confidential" circular letter, O. M. Sewell, General Manager of the PRRC, invited "selected business

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[361] Regis H Post to Honorable James Wilson, Secretary of Agriculture, San Juan, Puerto Rico, 18 January 1909, 3. NARA, RG 126: Office of Territories Classified Files, 1907-1951, Box No. 788, File 9-8-26 Puerto Rico, Bonds; 9-8-48 Puerto Rico, Industrial & Political Conditions.
[362] Clarence Ferguson, "Over the American Railroad in Porto Rico," *Overland Monthly and Out West Magazine*, vol. 73, no. 4 (1919): 38-42.

and professional men of the highest type" to join the American Protective League.[363] The American Protective League, created in Chicago, recruited "volunteers" to help the government collecting evidence of "enemies" or Germans living in the United States.[364] Sewell wanted to organize a Puerto Rican chapter of the League to assist the federal government in the surveillance of foreigners and "unfriendly" citizens living on the island. The operation of the league was secret and under the approval of the United States Department of Justice and the Bureau of Investigations (BI). Sewer consulted a special agent of the BI in relation to prospective members for the League. By December 18, 1917, Sewell recruited 25 supporters, all of them in San Juan.[365] The selection of Sewer as the head of the American Protective League in San Juan was not surprising, because Albert M. Briggs, the founder of the League in Chicago, "wanted only 'big names' to run state inspectorates."[366] Briggs recruited only elite professionals and businessmen. For example, one of the members of Briggs' chapter of Chicago was the president of the Chicago and North Western Railway. Scholar Nick Fisher proposed that companies benefited from the League mostly by curtailing union activism. Fisher wrote: "Rank and file members, generally unquestioning, became the lackeys of big business, clearing their industries of troublesome employees free of charge."[367] The members of the League defined themselves as the "Minute Men" of the time, with no partisan intensions and "no concern

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[363] Porto Rico Railway Light & Power Co., San Juan, PR., 3 December 1917; Old German Files, 1909-21; Investigative Case Files of the Bureau of Investigation 1908-1922; Records of the Federal Bureau of Investigation, 1896 – 2008, Record Group 65; NARA, 382.
[364] Emerson Hough, *The Web* (Chicago, USA: The Reilly & Lee Co., 1919), 28.
[365] John L. Heas, In re: American Protective League, San Juan, PR., 18 December 1917; Old German Files, 1909-21; Investigative Case Files of the Bureau of Investigation 1908-1922; Records of the Federal Bureau of Investigation, 1896 – 2008, Record Group 65; NARA, 383.
[366] Nick Fisher, "The American Protective League and the Australian Protective League – Two Responses to the Threat of Communism, c. 1917-1920," *American Communist History*, vol. 10, no. 2 (2011): 140.
[367] Fischer, "The American Protective League and the Australian Protective," 141.

with labor questions".[368] However, Sewer, leader of the league and manager of the PRRC, had to deal with a significant labor conflict on September 26, 1917. The workers denounced low salaries, bad treatment from managers, and the refusal to acknowledge their right to unionize. Sewell's attitude was far from conciliatory and indicated when Carmelo Honoré, Chief of the Bureau of Labor, suggested a meeting between the two parties in order to settle the conflict. In Sewell's words: "we have gone ahead employing new men with the view of filling the places vacated by the striker, a large number of the vacancies have already been filled with good, reliable men and it would not be fair to throw these new men out now to make room for those who went on strike." Thus, in his view the meeting was unnecessary.[369] Without hesitation, O. M. Sewell decided to dismiss 155 conductors and motormen of the electric tramway. But the situation changed when the Governor invited Sewell for an interview in response to the traffic problem in the city. On October 2 the PRRC ordered its employees to return to their jobs with an increase wages (based on seniority), the right to appoint a committee to settle labor disputes, and the recognition of the right to form a union. Moreover, "the manager donated $100 to cover the expenses of establishing their local union."[370] Clearly, the workers were victorious, and surely, Sewell intended to use the American Protective League as a tool to avoid future labor upheavals.

It is very difficult to justify the creation of an American Protective League Chapter for the surveillance of Germans or Austro-Hungarians residing on the island. In the United States the large

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[368] Hough, *The Web*, 30.
[369] Government of Porto Rico, *Special Bulletin of the Bureau of Labor on strikes in Porto Rico during fiscal year 1917-1918* (San Juan, PR: Bureau of Supplies, Printing and Transportation, 1918), 26.
[370] Government of Porto Rico, *Special Bulletin of the Bureau of Labor*, 27.

German and Austro-Hungarian population was significant but this was not the case in Puerto Rico. In 1910, before the Great War, the German population was comprise of only 1.6 percent of the foreign-born population on the island, and Austrians just 0.1 percent.[371] After the war, in 1920, the German population decrease to 1.2 percent of the foreign-born population on the island, and Austrians did not appear as a category in the census.[372] In absolute numbers the German population dropped from 192 to 94 inhabitants in a decade. Although the American Protective League alleged they persecuted the German and Austro-Hungarian traitors, it is difficult to sustain they were the reason behind their decrease in numbers.

During the war the main concern of Sewell as manager of the PRRC should have been the quality of the electric tramway service since the conditions of the equipment and the service was deplorable. Jorge Romani, a member of the insular House of Representatives, requested a study of the electric tramway service provided in San Juan. He declared that the service was terrible and the facilities a disaster:

> Yo conozco, porque resido en Rio Piedras, el servicio tan irregular y deficiente que esta Compañía viene prestando en perjuicio del público…casi todos ellos tienen los asientos rotos; las ventanillas inútiles en casi su totalidad; en que en el interior de los tranvías reina mucha suciedad; en que continuamente los "swiches" acumuladores de corriente eléctrica se incendian, poniendo en peligro la vida de

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[371] "Table 20: Place of Birth and Year of Immigration," *Thirteenth Census of the United States: 1910*, 1198.
[372] "Table 5: Country of Birth of the Foreign-Born population: 1920," *Fourteenth Census of the United States: 1920*, 4.

los conductores y hasta del pasaje mismo…[373]

No doubt the PRRC had its problems but those problems had no relation to the German "enemies". Sewer needed to focus on the improvement of the PRRC service and not waste his efforts on the surveillance of his employees. The company had to invest in repairs and maintenance to retain its competitiveness.

Competition

The PRRC obtained significant profits from passenger transportation and the beginning of the war marked an increase in freight rates. However, in 1917 operational costs rose due to increasing coal prices. The PRRC used coal to fuel the steam railroad but the importation of coal from the United States decrease from 145,889 tons to 104,908 tons and this was accompanied by rising prices.[374] President Woodrow Wilson ordered the creation of the Federal Fuel Administration to normalize fuel supply and to halt increasing prices. In addition to the coal problem the PRRC also augmented the payroll after a wage increase granted to the workers. In this scenario of fiscal challenges the PRRC confronted its nemesis: the automobile. The board of the company recognized in its annual report its failure to maintain profits after the emergence of competition: "Jitney competition has continued unabated, involving inadequate returns from our

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[373] Translation: "I know, because I live in Rio Piedras, the irregular and inadequate service this Company has been providing to the detriment of the public... almost all of them have broken seats; useless windows almost entirely; that inside the trams reign a lot of filthiness; that the power switches are continually catching fire, risking the lives of drivers and even of the passenger itself..."
"Las franquicias de la Porto Rico Railway Light and Power Co.", *La Correspondencia de Puerto Rico*, 8 September 1917, 4.

[374] *Report*s *of the Governor of Porto Rico*, 1917, 8, and 1918, 13.

Trolley Division."[375] Buses and the *carros públicos* (collective taxis) were tough competitors because they provided fast and flexible service. Already in 1914 a publication about Puerto Rico printed in the U.S. coincided with the observation of the PRRC:

> To-day nearly all the passenger and a great proportion of the freight transportation is carried on in automobiles, auto trucks, and railway trains, but an enormous amount of freight is still hauled in wagons, carriages, and ox-carts. At the present time there are about one thousand automobiles on the island, and several companies operate passenger and freight lines of autos running on a regular schedule between various points. The railway facilities of the island are far less up-to-date and satisfactory than the auto lines, but the character of the country prevents the extensive use of steam roads, save in certain sections and near the coasts, and under the circumstances the railway accommodations are as good as could be expected.[376]

This was a time of transition. The railway service was as "good as could be expected" but it was "limited" due to the varying conditions of the terrain. The ARRC continued developing the beltway railroad route from San Juan to Ponce but since it was still under construction, passengers relied on automobiles as a means of transportation between the two main cities of the country. Towns without railway service benefited from the service provided by private automobiles or

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[375] *Annual Report of the Porto Rico Railways Company, Limited*. Toronto, Canada, 1916-1917, 5.
[376] Alpheus Hyatt Verrill, *Puerto Rico Past and Present, and Santo Domingo of Today* (New York, USA: Doss, Mead and Company, 1914), 164.

buses. The advent of domestic corporations to provide transportation, repairs, or towing services increased since 1910. The Secretary of Puerto Rico reported the registration of two transportation companies during the fiscal year 1910-1911, the Atlas Line in Ponce and the Aguadilla Transportation Co.[377] During fiscal year 1911-1912 two more companies registered, The Central Auto Co. in San Juan and the Ponce Auto Transportation Co,[378] and during fiscal year 1912-1913 two more companies registered, the Compañía de Transporte de Maricao and The Porto Rico Transportation Co. in San Juan.[379] In 1914 the main transportation company on the island was the Porto Rico Transportation Company with three diferent departures and many destinations (Table 3.2)

[377] *Report of the Governor of Porto Rico*, 1911, 79.
[378] *Report of the Governor of Porto Rico*, 1912, 106-107.
[379] *Report of the Governor of Porto Rico*, 1913, 172.

Table 3.2. Timetable of the Porto Rico Transportation Company, 1914

SAN JUAN-PONCE

South-Bound				*North-Bound*			
Run No.	1	3	5	Run No.	2	4	6
San Juan…….Lv.	8:00	4:30		Ponce……..….Lv.	8:00	4:30	
Río Piedras…….Arr.	8:40	5:10		Juana Díaz…….Arr.	8:30	5:15	
Caguas……..….”	9:45	6:30		Coamo……..….”	9:25	6:20	
Cayey…….”	11:05	8:15		Aibonito…….”	10:25	7:30	
Cayey……...Lv.	11:35		6:00	Cayey…….”	11:30	8:45	
Aibonito……..Arr.	12:35		7:00	Cayey……..Lv.	12:10		6:30
Coamo……..….”	1:30		8:00	Caguas…….…...Arr.	1:15		7:45
Juana Díaz…...….”	2:25		9:00	Río Piedras……..….”	2:20		10:00
Ponce……...….”	3:00		9:45	San Juan……..….”	3:00		11:00

CAYEY-GUAYAMA-PONCE

South and West		*East and North*	
Run No.	7	Run No.	8
Cayey……...Lv.	6:00	Ponce……..…….Lv.	4:30
Guayama…….Arr.	7:30	Santa Isabel…….Arr.	5:45
Salinas……...….”	8:45	Salinas……...….”	6:15
Santa Isabel……...”	9:15	Guayama……...….”	7:30
Ponce……...….”	10:30	Cayey…….”	9:00

HUMACAO-CAGUAS

West			*East*		
Run No.	9	11	Run No.	10	12
Humacao…….Lv.	6:15	12:00	Caguas…….Lv.	10:00	6:35
Las Piedras…….Arr.	6:35	12:20	Gurabo…....….Arr.	10:20	6:55
Juncos…..……..….”	7:05	12:50	Juncos……..….”	10:50	7:25
Gurabo……..….”	7:25	1:10	Las Piedras……”	11:10	7:55
Caguas……..….”	7:50	1:35	Humacao……...”	11:30	8:15

SOURCE.- Alpheus Hyatt Verrill, *Puerto Rico Past and Present, and Santo Domingo of To-day* (New York, USA: Doss, Mead and Company, 1914), 169.

This schedule indicates that there were routes from San Juan to Ponce, Cayey to Ponce, and Humacao to Caguas. This service was not necessarily faster than railways but it had fewer stops. For example, the trip from Guayama to Ponce could be made by train or bus, both leaving at 7:30 a.m.; the train would arrive at 10:24 a.m., and the bus at 10:30 a.m.[380] In addition, both only offered one round trip per day so neither offered a more extensive schedule.

The government reported that from June 1914 to June 1915 there were 548 automobiles imported into the island with a value of $433,408. This figure was a significant increase from the previous year which reported sales of 323 automobiles with a value of $406,440. These figures clearly demonstrate the reduction in the price per unit from one year to another. Access to automobiles had improved and so had its impact on public transportation. In October 1915 there was a commentary on the situation in the *New York Times*:

> The motor car is used as the chief means of passenger transportation, both private and public, about the island. There are regular motor lines running from San Juan to all sections of the island, and in many instances the fares charged are less than those charged by the railroads…
>
> Recently the jitney has made its appearance in competition with an interurban steam railroad running five miles between the towns of Catano and Bayamon. The railroad has carried 500,000 passengers a year, and the fare has been 10 cents until the arrival of the jitney. Then the railroad cut the fare to 5 cents, but the jitney

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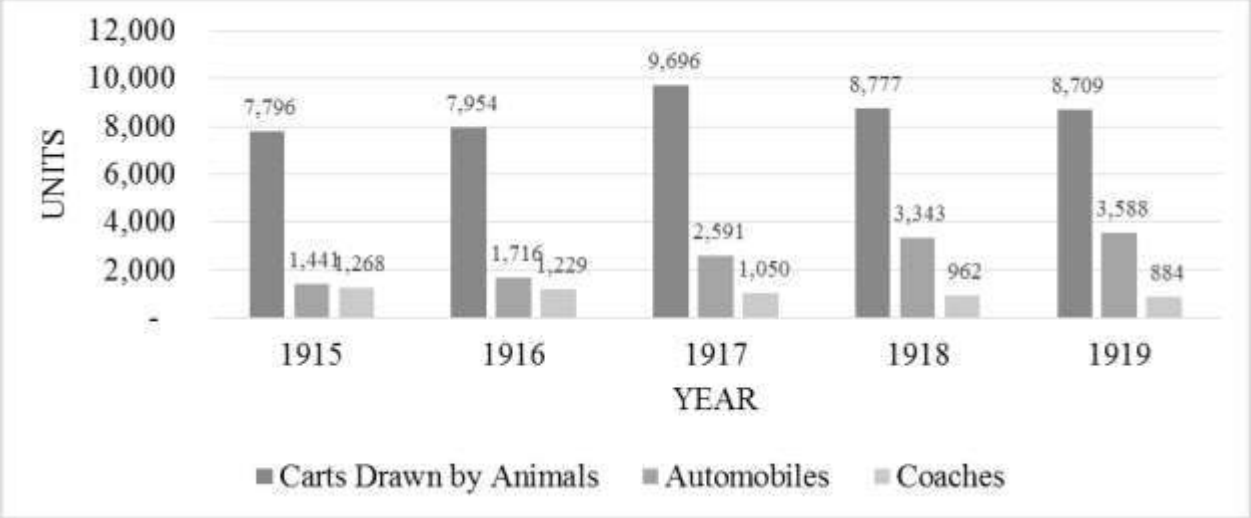
[380] "Itinerario para los trenes mixtos," *Boletín Mercantil*, 1 May 1915.

continues to get many passengers at the old fare of 10 cents.[381]

In 1918, the governor reported "a large increase in the number of motor vehicles" with 842 public automobiles and 125 public trucks.[382] Official data demonstrates sustain increase in motor vehicles through the war years (Figure 3.5):

Figure 3.5. Number of carts drawn by animals, automobiles, and coaches, 1914-1919.



SOURCE: *Report of the Governor of Porto Rico*, 1916-1920.

The *carros públicos* and buses were more economical than the railroad. In 1920 the ARRC and the PRRC charged 3¢ per kilometer. The Electric Car Service from San Juan to Río Piedras or Condado and the *Línea Férrea del Oeste* had a flat rate of 10 cents per trip. The distance from San Juan to Ponce was 270 kilometers, if the fare by train was 3 cents per kilometer the cost of the trip would be $8.10, but by motor vehicle the journey was less expensive. The Porto Rico

[381] "Porto Rico Buying many American Cars," *New York Times*, 17 October 1915, XX-9.
[382] *Report of the Governor of Porto Rico*, 1918, 40-41.

Transportation Co. and the Atlas Line offered transportation from San Juan to Ponce by automobile or bus. Atlas Line had two routes departing from San Juan with "stops at Rio Piedras, Caguas, Cayey, Aibonito, Coamo and Juana Díaz" or "stops at Rio Piedras, Caguas, Cayey, Guayama, Salinas and Santa Isabel."[383] The fare for using the automobile and bus for the same route was $6.50 and $4.50 respectively. The Porto Rico Transportation Co. also provided service from San Juan to Ponce via Guayama, and maintained "auto service between San Juan and Humacao".[384] Clearly, the bus was more economical than the railroads and was even more so than the old horse-cart fare of $10 to $20 for a journey from San Juan to Ponce in 1899.[385] There were 48 stops on the railroad but only seven stops in the *carro público* and the bus route.[386] Although the trip by vehicle was uncomfortable because the road through the mountains was extremely curvy and caused car sickness, it was well worth the saving in price and time.

Freight transportation was another concern for railway companies. In 1912 there were "two or three automobile truck companies" one of them was the Atlas Transfer Company with 6 to 8 trucks used in San Juan. This year the International Motor Company selected Saurer Trucks to be imported in Puerto Rico. For mountainous roads, the Saurer truck was superior to the Mack or Hewitt trucks because it had a light weight chassis and motor air brakes. Furthermore, the Saurer could transport five tons of freight and "the maximum limit guaranteed by the government for the

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[383] Ernst B. Filsinger, *Commercial Travelers' Guide to Latin America*, revised ed. (Washington: Government Printing Office, 1922), 270.
[384] Ibid.
[385] Frank G. Carpenter "Some Investments for American Capitalists in Porto Rico," *The Atlanta Constitution*, 24 September 1899, B5.
[386] "American Railroad Company of Porto Rico; San Juan-Ponce," *El Mundo*, 12 July 1920, 5.

bridges on the roads" was 8 tons for one vehicle.[387] With 45 trucks circulating in 1912, the goal was to substitute the bull carts and to corner freight transportation between the interior and the coast.

On April 3, 1918 railway corporations went to the Public Service Commission demanding regulation of the service provided by all motor vehicles.[388] From the perspective of the public agency this was a "natural" reaction to jitney competition. A year later the Public Service Commission prescribed the regulations for "all motor vehicles regularly operating as common carriers between fixed points and over determined routes." [389] The agency mandated to "all persons operating or desiring to operate such a service required to take out a certificate of necessity and convenience."[390] This decision was advantageous to railway companies because it would reduce competition by making the process of certification a burden for transportation companies.

The pressures of the railroad companies initially would reduce competition but eventually would be detrimental to their interest because if regulation was effective the service provided by automobiles, buses and trucks would improve. Railroads were regulated but they were not fulfilling the desired efficiency in transportation, as the buses were. Railroads had to provide great service to compete and to avoid the erosion of the idea that railroads were necessary in a modern economy and a country of progress.

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[387] "Bull Carts Yield to Trucks," *The Daily Missoulian*, 21 April 1912, 9.
[388] The companies were: Línea Ferrea del Oeste, Inc., the American Railroad Company, the Ponce Railway & Light Company, and the Porto Rico Railway, Light & Power Company.
[389] *Second Annual Report of the Public Service Commission of Porto Rico for the fiscal year ending June 30th, 1919*, 9, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 707.
[390] Ibid.

CHAPTER IV: TIME OF CHALLENGES

The interwar years were moments of great challenges for railway companies. The largest company, the ARRC confronted unexpected expenditures a month previous to the armistice when the island suffered a 7.3 magnitude earthquake in the Richter scale and a Tsunami hard hit mostly the northwestern part of the island. The earthquake occurred at 10:14 a.m. on October 11, 1918 followed by aftershocks for the next two days. Official reports established that 116 people died and material losses rose to $4 million.[391] In relation to the infrastructure the report noted that "Railroad tracks were bent and thrown out of alignment in some places by the slumping of alluvial soil."[392] The damages suffered in the rail infrastructure of the ARRC forced the company to halt operations until October 15, 1918 when the company resume its service.[393]

The PRRC also had unexpected expenditures in 1918. The PRRC operated electric tramways in San Juan and Caguas and provided electric power to several municipalities from hydroelectric plants but a drought forced the company to use a steam plant for several weeks during the summer of 1918. The next year, in 1919, the drought once again forced the company to use the steam plant in the months of March, April, and again in November. The drought augmented operation costs by $60,000 in 1918 and $30,000 in 1919.

Railroad companies would benefit from the rise in exports occurring after 1919 because of

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[391] Harry Fielding Reid and Stephen Taber, *The Porto Rico Earthquake of 1918 with descriptions of Earlier Earthquakes: Report of the Earthquake Investigation Commission*, House of Representatives, U.S. Congress; House, 66th Congress, 1st Session, doc. no. 269, 1919, 5.
[392] Ibid., 24.
[393] "El terremoto del viernes," *La Democracia*, 15 October 1918, 1.

price increases on international markets. Exports in 1919 increased dramatically in value compared with the previous year. Sugar exports were $98,923,750; coffee exports reached $9,034,028; tobacco leaf and scrap exports were valued at $12,416,388 and cigars $1,613,997. Other products including coconut, citrus fruits, pineapples, cotton, alcohol, and straw hats also increased its value over previous year.[394] For Governor Arthur Yager another indicator of economic prosperity was the increment in the banking offerings with 17 banks in operations, five more than in 1917 the year the U.S. enter the war. This increase in banking institutions demonstrated the "large growth in commerce and business."[395] Governor Arthur Yager finished his report stating that it was "a real pleasure" to inform that fiscal year 1919 "has been one of great progress and prosperity for Porto Rico."[396]

The prosperity of the nation should have benefitted railroad companies and their workers. The Department of Labor in a report about the major industries in Puerto Rico found a thriving atmosphere at the American Railroad Company:

> The American Railroad Co. employs about 1,200 workers of various classes. *The general manager of the road stated that he experiences no difficulty in securing labor and has no trouble with his employees.* Some of the records of the road examined at San Juan prove that about 50 per cent of the machinists, blacksmiths, and other operatives have been with the company 14 to 16 years. Most of the

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[394] *Report of Governor of Porto Rico to the Secretary of War*, 1920, 3-4.
[395] Ibid, 5.
[396] Ibid, 48.

> skilled workers were trained by the company, in view of the fact that there are no other large places where workmen could acquire the skill requisite on the road. Boys taken in as apprentices are paid 10 cents an hour to start with. Wages on the whole are better than in most of the other industries of the island, and the men appeared to be better fed, clad, and housed. [397] (Emphasis added)

Although this report clearly portrayed satisfied laborers, those workers affiliated with the *Federación Libre de Trabajadores* (FLT) surely had different sentiments, because the lodges of machinists and mechanics declared a strike on December 3, 1919. The reason for the shutdown was a request for a wage increase. The leaders of the strike were Enrique Albizu, Monserrate Gonzalez, Clemente Claudio, Domingo Estepa, Juan B. Torres, Pablo Cintrón, Felipo Robles and Rafael Blanchs.[398] In a press statement, the manager of the ARRC, Monsieur Villard, declared that he could not understand the root of workers' unrest because the company granted an 18 percent salary increase on December 1918.[399] The leaders of the strike designated Santiago Iglesias Pantín to be the mediator between the lodge and the railroad company. Iglesias Pantín was one of the founders of the FLT and the Socialist Party as the political arm of the union and had been elected to the Puerto Rican Senate.[400] Some workers questioned Iglesias Pantín's loyalties as a member of the Senate. Villard also rejected the intervention of Iglesias Pantín because he was a governmental

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[397] Joseph Marcus, *Labor conditions in Porto Rico* (Washington, USA: Government Printing Office, 1919), 43.
[398] "Huelga de los empleados de la American Railroad," *El Águila de Puerto Rico*, 3 December 1919, 1.
[399] "El servicio de trenes paralizado en toda la isla," *El Mundo*, 4 December 1919, 3.
[400] Gonzalo F. Córdova in *Resident Commissioner Santiago Iglesias and His Times* (Río Piedras, PR: Editorial Universitaria, 1993) offered a detailed biography of Santiago Iglesias Pantín and explain his role in the emergence and development of the labor movement in Puerto Rico.

official and the government should not intervene in the negotiations with a private company.[401]

During the bargaining talks, the trains halted operations and the owner of sugar mills were preoccupied because harvest time was close since the cane harvest began in January and ended in June. To pressure the workers, the District Attorney filed a restraining order against 42 laborers of the ARRC as well as Santiago Iglesias Pantín as the leader of the FLT. On December 12, Federal District Judge Hamilton issued an injunction to halt the strike, because it was in violation of the Food Control Act:

> to limit facilities for transporting, producing, harvesting, and manufacturing sugar in Porto Rico and to restrict distribution of sugar and other foodstuff and to prevent, limit, and lessen the manufacture of sugar, well knowing that the said conspiracy would enhance the price thereof and that sugar is a necessary product both in this island and in the United States.[402]

In the Federal Court, Henry G. Molina, Iglesias' lawyer alleged that the objective of the workers was not to disturb food transportation particularly the transportation of sugar. The goal of the strike was purely to pressure the railroad company to negotiate a wage increase. Mr. Molina expressed the desire of the union to negotiate in good faith with the administration of the company but representing the ARRC Mr. Villard denied any possible wage increase in view of the precarious economic situation of the company.[403] After days without railroad service the government achieved a settlement between the workers and the ARRC, in which the company

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[401] "Sobre la huelga de los empleados del ferrocarril," *El Águila de Puerto Rico*, 4 December 1919, 1.
[402] "Injunction to stop strike in Porto Rico," *The Constitution*, 13 December 1919, 14.
[403] "Los huelguistas ante la corte federal," *El Mundo*, 18 December 1919, 1.

granted a 25 percent wage increase and a reduction to eight hours of labor per day. On December 25th the strike was over and the railroad resumed operations.

Governor Yager claimed that "the widespread increase in wages enabled the laboring classes generally to share in the prosperity."[404] However, railroad workers had another perspective as demonstrated in their activism of demanding higher wages. Historian James Dietz claimed that from 1913 to 1932 "wages were nearly insensitive to changes in profits or prices."[405] Dietz provided three factors to explain this phenomenon: "a surplus of labor in rural areas; a near absence of effective labor organizing; and the insignificance of the local market." In 1920 the population increased 16.3 percent from 1910 in a decade reaching 1,299,809 inhabitants. The demographic density per square mile was 378.4 inhabitants, more than ten times as great as the average for the United States.[406] The "extraordinary prosperity and peaceful progress" celebrated by Governor Yager in his annual report would be enjoyed by some people in Puerto Rico but was not appreciated by railroad workers and many more.[407]

In the 1920 convention of the International Association of Machinists, Louis I. Obergh, translator and delegate from the lodges in Puerto Rico declared:

> How outrageous it is in the progressive days of 1920 to pay to the head of a family the miserable sum of $2.50 or $3.00 per day. They work 10 and 12 hours a day. With that scale of wages, can it be possible that one man can feed his wife and his

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[404] *Report of Governor of Porto Rico to the Secretary of War*, 1920, 1.
[405] Dietz, *Economic history of Puerto Rico*, 112.
[406] *Fourteenth Census of the United States: 1920*, 1.
[407] *Report of Governor of Porto Rico to the Secretary of War*, 1920, 1.

> children and give them a regular education? No. It is quite impossible… If we are helping Europe to stand on its feet, if we are helping financially the poor children of Armenia and saving them from starvation, why can we not help our own American citizens who are facing starvation in our very doors?
> We must inform the American Congress that machinists of Porto Rico and their children are in a very deplorable condition.[408]

In Obergh's words, railroad workers and their families lived in a hopeless situation on the island. Poverty, not prosperity, was a more accurate description of their reality. Obergh questioned why the United States provided economic support to Armenian Christian victims of a genocide in Turkey, and overlooked the victims of poverty residing in Puerto Rico. Workers on the island desperately needed economic support from the U.S. government. However, the U.S. Congress would not give economic relief to the island as long as the governor depicted Puerto Rico's economy as prosperous.

Statistically the government validated that the economic situation indeed had improved since 1919 because of increased prices for commercial crops on international markets. Humberto García Muñíz claimed that the 1919-20 sugar crop season showed a 80,000 tons increase over the previous years, even when the mosaic disease affected the output of several *centrales*, among them the Guanica Central.[409] The government collected more revenue but the economic situation did not

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[408] H. J. Lenon, In re: Sixteenth Convention of the International Association of Machinist, Pittsburgh, Pa., 29 September 1920; Old German Files, 1909-21; Investigative Case Files of the Bureau of Investigation 1908-1922; Records of the Federal Bureau of Investigation, 1896 – 2008, Record Group 65; NARA, 236-245.
[409] Humberto García Muñíz, *Sugar and Power in the Caribbean*, 385.

necessarily improve for the general population.

After the war the main economic problem, in the eyes of the government, continued to be an insufficient production of foodstuff in Puerto Rico. High prices promoted the harvest of export commercial crops and limited the desire for crop diversification. The insular Department of Agriculture and Labor started a program to organize farmers in leagues to receive education about scientific methods of farming and to start up cooperatives. Engineer Ramón Gandía Córdoba, Deputy Commissioner of the insular Department of Agriculture and Labor, considered the leagues a great step forward in the progress of the island and its economic independence.[410]

The first leagues organized farmers in rural areas like Adjuntas, Coamo, Jayuya, and Utuado, and after a few months 37 leagues reported more than 4,000 members.[411] Governor Arthur Yager reported in 1920 that "a large number of leagues have already been organized, and the Porto Rican farmers seem to get the idea very quickly."[412] The Department of Agriculture and Labor pursued the diversification of agricultural crops for the consumption of the Puerto Ricans to reduce food imports. The goal pursued by the Department of Agriculture was the empowerment of small farmers through Agricultural Leagues for the formation of strong internal markets. Food scarcity during the war verified the dependency of the island on food imports. After twenty years facilitating the production of four export products (cane, tobacco, coffee, and fruits like oranges and pineapples) the government changed its focus.

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[410] "Editorial," *Revista de Agricultura de Puerto Rico*, vol. 5, no. 3 (1920), 1.
[411] "Relación de las ligas agrícolas que han sido fundadas en la isla de Puerto Rico*," Revista de Agricultura de Puerto Rico*, vol. 8, no. 1 (1922), 69.
[412] *Report of the Governor of Porto Rico*, 1920, 37.

Ramon Gandía Córdoba identified some obstacles for the transformation of the farmer into producers for the markets. Gandía Córdoba identified as the main problem the access to land. Historians Cesar J. Ayala and Laird W. Bergad demonstrated that in the first decade of the twentieth century small farmers acquired land titles and participated from the sugar and tobacco business, which contradicts the traditional theory of land concentration. U.S. owned sugar and tobacco trusts established in Puerto Rico but the supply of sugar and tobacco came mostly from smallholdings owned by Puerto Rican farmers.[413] However, the Commissioner of Agriculture had a different assessment. Gandía Córdoba analyzed the 1920 census and claimed that 17,000 land owners lost their farms in a decade. Perhaps these farms were acquired by big corporations, even though in 1900 the Organic Act prohibited individuals or corporations to owned more than 500 acres. The enforcement of the 500 acres prohibition would be one way to ensure that land seizures ended up in the hands of small farmers. Other problems exposed by Gandía Córdoba were high property taxes and uneven land valuations. The appraisals for cane growing lands were in average $172 per acre; in contrast, the appraisals for coffee growing lands were $93 per acre. A clear difference between cane and coffee land values was their accessibility because cane growing was possible in lowlands near towns and roads they were valued more than coffee, which was planted in the highlands distant from towns and with scarce roads. With this in mind the next obvious obstacle to discuss was the transportation problem. Gandía Córdoba proposed the construction of more local roads to access farms and a reduction in railroad shipping costs. Railroads had different

[413] Cesar J. Ayala and Laird W. Bergad, "Rural Puerto Rico in the Early Twentieth Century Reconsidered: Land and Society, 1899-1915," *Latin American Research Review*, vol. 37, no. 2 (2002): 65-97.

shipping rates but if railroads charged for freight cars a flat rate the small farmer would benefit. The last obstacle was the lack of local markets to sell locally produced goods.[414]

An important step to overcome these impediments was the submission of a bill in the insular legislature to produce the legal platform to launch the diversification of agricultural production. On March 23, 1921 Senator Francisco M. Zeno from Cidra presented the bill. Ramón Gandía Córdoba as the Deputy Commissioner of the Department of Agriculture and Labor called for a meeting on May 5, 1922 with the Puerto Rico Chamber of Commerce to request their support for the bill. The meeting had representatives of the Federation of Agricultural Leagues, the Treasurer of Puerto Rico, and the Secretary of the Interior. Among the topics in the agenda were the scarce access to credit for the small farmer, lack of efficient road infrastructure, high railroad rates, a study about second-class railroads, the need for local roads, lack of organization in the town markets, and lack of data and statistics.[415] However, the meeting only addressed the inaccessibility of loans for farmers and the shortage of local markets.

The bill was not approved and ultimately the push for the formation of cooperatives was lost. Nevertheless, Ramón Gandía Córdoba's assessment showed the need for more railroads and roads in areas of food production and the need for lower freight rates in areas with access to railway stations. Indeed, after the war resurrected the plan to finish the beltway railroad and freight

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[414] "Discurso pronunciado por el comisionado de agricultura y trabajo en la asamblea de las Ligas Agrícolas de Puerto Rico verificada en la Biblioteca Carnegie el día 29 de enero de 1922," *Revista de Agricultura de Puerto Rico*, vol. 8, no. 2 (1922): 5-12.

[415] "Reunión conjunta de representantes de la Cámara de Comercio de la Federación de las Ligas Agrícolas con el Comisionado de Agricultura y Trabajo, Tesorero de Puerto Rico y Comisionado del Interior," *Revista de Agricultura de Puerto Rico,* vol. 8, no. 6 (1922), 5-22.

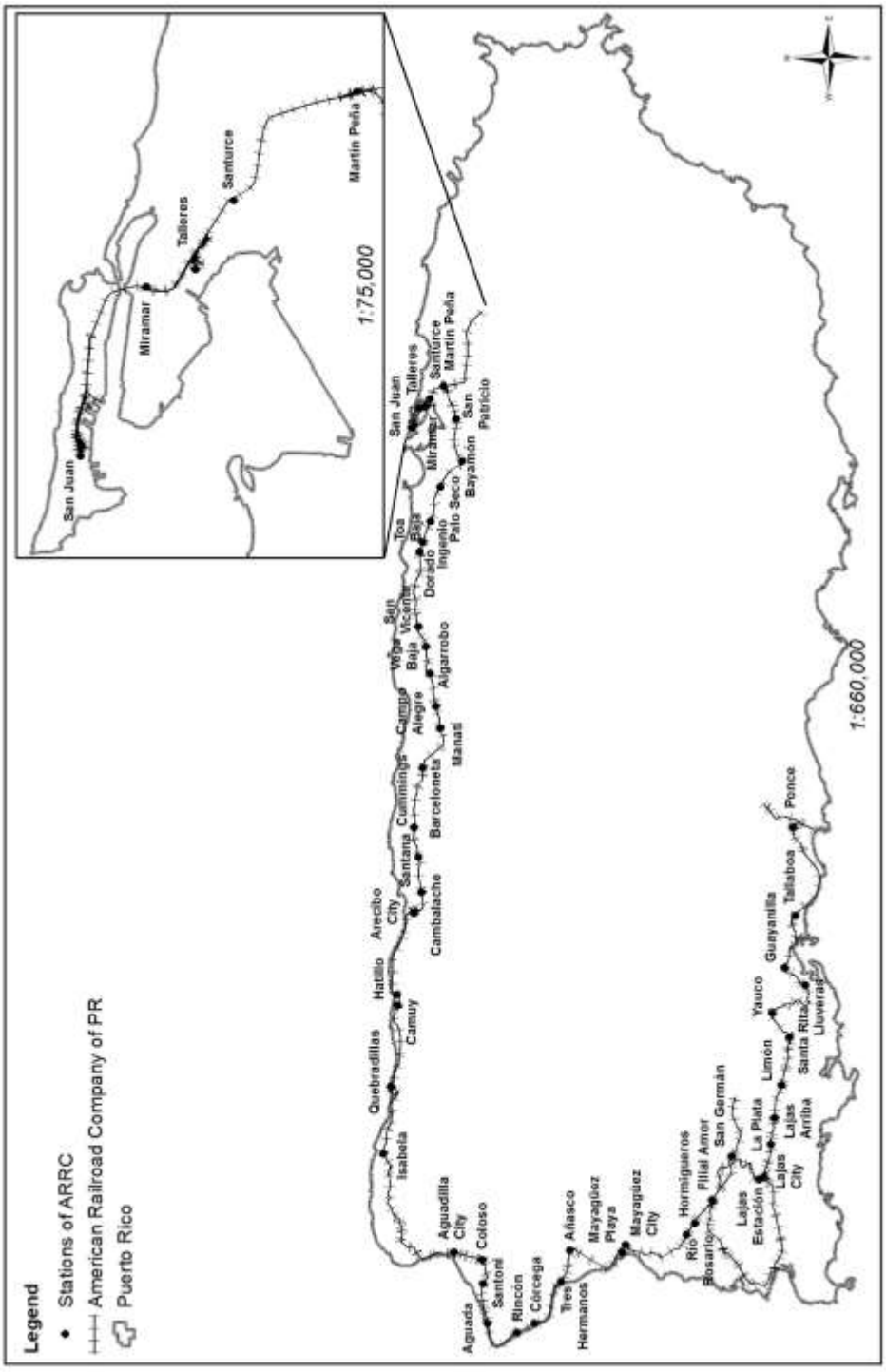
rates were under revision although these initiatives were encouraged by the production of sugar not food.

Revival of the beltway railroad

In 1918 the government received a petition from the ARRC for a permit to finish the beltway railroad. The island had 547.5 kilometers of railroad tracks for public service, and 34.3 kilometers of street-railways tracks.[416] The ARRC operated 276 kilometers with 50 stops from San Juan to Ponce. It was the biggest company on the island, but wanted an even larger presence with more stations (Map 4.1). The corporation sought to extend the route from Ponce to the east with a final stop in Carolina. To achieve this, the ARRC had to purchase the public service railways operated by sugar corporations in the east and invest in the connection of the three railroad routes. This idea was attractive to the ARRC which would monopolize the railroad offerings in the coastal area. This project would be beneficial to the government because it would only have to deal with one corporation. However, for sugar companies the monopoly of one railroad company could be problematic because the ARRC would control the prices for sugar freight. The ARRC in 1919 already almost had monopolistic control of the railroads with an operation of 359 kilometers, nearly twice the distance owned by the other seven public-service railroads together, which merely controlled 198.5 kilometers. Railroads in the eastern area did not want to surrender their franchises, because these companies also wanted to expand their businesses. For example, the Yabucoa Sugar Company submitted a petition for a franchise to develop rail lines from Yabucoa to the port in

[416] *Report of the Governor of Porto Rico*, 1919, 434-435.

Map 4.1. Western segment of the ARRC, 1919.



Guayanés.[417] The sugar *centrales* had their interests in the railway business and opposed monopolizing the industry. However, "the public-service commission with many public hearings and much public discussion" granted the franchise to the ARRC on April 20, 1920.[418]

In the railway industry the ARRC was colossal, but the company had some issues to resolve; one of them was the limited schedule of one train departing in the morning and one in the afternoon from each end of the line. This schedule could have been comprehensible at the beginning of the century, but not in the 1920s (Table 4.1).

Table 4.1. Timetable of the ARRC

SAN JUAN-PONCE					
Station	1	3	Station	2	4
San Juan	7:20 am	8:45 pm	Ponce	7:20 am	9:00 pm
Miramar	7:25 am	8:50 pm	Tallaboa	7:44 am	9:24 pm
Talleres	7:31 am	---	Guayanilla	7:58 am	9:38 pm
Santurce	7:34 am	9:02 pm	Lluveras	8:07 am	---
Martín Peña	7:41 am	9:10 pm	Yauco	8:21 am	10:02 pm
San Patricio	7:46 am	9:15 pm	Santa Rita	8:31 am	10:12 pm
Bayamón	8:01 am	9:31 pm	Limón	8:43 am	10:23 pm
Palo Seco	8:09 am	9:40 pm	La Plata	8:50 am	10:32 pm
Ingenio	8:17 am	9:49 pm	Lajas Arriba	8:57 am	10:39 pm
Toa Baja	8:24 am	9:55 pm	Lajas Estación	9:08 am	10:50 pm
Dorado	8:28 am	10:00 pm	Lajas City	9:13 am	10:56 pm
San Vicente	8:46 am	10:18 pm	San Germán	9:30 am	11:13 pm
Vega Baja	8:52 am	10:26 pm	Filial Amor	9:43 am	11:24 pm
Algarrobo	8:58 am	10:32 pm	Río Rosario	9:46 am	11:27 pm
Campo Alegre	9:07 am	10:42 pm	Hormigueros	9:54 am	11:35 pm
Manatí	9:15 am	10:50 pm	Mayagüez City	10:15 am	11:57 pm
Barceloneta	9:27 am	11:04 pm	Mayagüez Playa	10:28 am	12:17 am
Cummings	9:41 am	11:18 pm	Añasco	10:45 am	12:36 am
Santana	9:47 am	11:25 pm	Tres Hermanos	10:54 am	12:45 am
Cambalache	9:56 am	11:46 pm	Córcega	11:07 am	12:58 am
Arecibo City	10:17 am	12:01 pm	Rincón	11:13 am	1:04 am

[417] "Junta celebrada ayer por la Com. de Serv. Publico," *El Mundo*, 18 February 1920, 1.
[418] *Report of Governor of Porto Rico to the Secretary of War*, 1920, 46.

Hatillo	10:40 am	12:26 pm	Santoni	---	1:16 am
Camuy	10:44 am	12:31 pm	Aguada	11:34 am	1:26 am
Quebradillas	11:04 am	12:51 pm	Coloso	11:42 am	1:34 am
Isabela	11:29 am	1:18 am	Aguadilla City	12:18 pm	2:00 am
Aguadilla City	12:30 pm	2:06 am	Isabela	12:53 pm	2:34 am
Coloso	12:41 pm	2:17 am	Quebradillas	1:19 pm	3:01 am
Aguada	12:48 pm	2:24 am	Camuy	1:40 pm	3:22 am
Santoni	---	2:35 am	Hatillo	1:44 pm	3:27 am
Rincón	1:09 pm	2:45 am	Arecibo City	2:20 pm	4:06 am
Córcega	1:14 pm	2:50 am	Cambalache	2:29 pm	4:16 am
Tres Hermanos	1:25 pm	3:02 am	Santana	2:38 pm	4:25 am
Añasco	1:35 pm	3:12 am	Cummings	2:44 pm	4:32 am
Mayagüez Playa	2:00 pm	3:44 am	Barceloneta	2:59 pm	4:48 am
Mayagüez City	2:06 pm	3:53 am	Manatí	3:12 pm	5:03 am
Hormigueros	2:28 pm	4:10 am	Campo Alegre	3:18 pm	5:09 am
Río Rosario	2:30 pm	4:17 am	Algarrobo	3:26 pm	5:18 am
Filial Amor	2:35 pm	4:22 am	Vega Baja	3:35 pm	5:27 am
San Germán	2:45 pm	4:38 am	San Vicente	3:41 pm	5:33 am
Lajas City	3:00 pm	4:48 am	Dorado	3:59 pm	5:51 am
Lajas Estación	3:07 pm	4:55 am	Toa Baja	4:03 pm	5:56 am
Lajas Arriba	3:15 pm	5:04 am	Ingenio	4:08 pm	6:02 am
La Plata	3:22 pm	5:11 am	Palo Seco	4:16 pm	6:10 am
Limón	3:31 pm	5:20 am	Bayamón	4:27 pm	6:21 am
Santa Rita	3:44 pm	5:38 am	San Patricio	4:40 pm	6:35 am
Yauco	3:54 pm	5:54 am	Martín Peña	4:48 pm	6:43 am
Lluveras	4:06 pm	---	Santurce	4:54 pm	6:49 am
Guayanilla	4:15 pm	6:04 am	Talleres	4:58 pm	6:53 am
Tallaboa	4:29 pm	6:18 am	Miramar	5:03 pm	6:59 am
Ponce	4:50 pm	6:41 am	San Juan	5:08 pm	7:08 am

SOURCE. - "American Railroad Company of Porto Rico," *El Mundo*, 19 December 1919, 4.

In 1919 a claim that had been submitted by two railroad companies for a rate increase was resolved by the Public Service Commission. The ARRC demanded an increase of "20 percent in freight rates for sugar cane and its product."[419] It was approved for a period of six months,

[419] *Report of Governor of Porto Rico to the Secretary of War*, 1920, 47.

concurrent with the months of the sugar harvest. The PRRC demanded a 25 percent increase "over the existing rates on sugar cane and its products, coal, lumber, stone, sand and gravel including joint through rates" for the route from Río Piedras to Caguas[420] The Public Service Commission approved the petition but dismissed an application to reduce the train service for passengers from San Juan to Caguas, and a 100 percent increase in passenger rates for the "trolley" in the San Juan-Rio Piedras route. These petitions from the two main railroad companies indicated that after the war these companies encountered economic difficulties. The major challenge facing the railways was to maintain profitability.

Compañía Ferroviaria de Circunvalación

A new company, the *Compañía Ferroviaria de Circunvalación* (CFC) was incorporated on July 9, 1921. The amount of its capital stock was worth $10 million dollars and the members of the board of directors were Don Manuel González, president, Rafael Fabián, Luis Rubert, Dionisio Trigo, Antonio M. Somoza, and Francis H. Dexter.[421] All the members of the board lived in Puerto Rico and some of them related to the sugar industry, as was the case of Manuel González owner of sugar estates and dairy farms in Salinas, Rafael Fabián owner of an estate in Yabucoa, and Luis Rubert owner of a estate in San Patricio, Río Piedras.

The CFC included local investors as well as European investors from the *Companía de los Ferrocarriles de Puerto Rico*, and ARRC's investors from the United States. The CFC was a holding company, which planned to merge the *Companía de los Ferrocarriles de Puerto Rico*, and

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[420] *Second Annual Report of the Public Service Commission of Porto Rico for the fiscal year ending June 30th, 1919*, 71, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 707.
[421] "La compañía del ferrocarril", *El Mundo*, 10 July 1920, 1.

the ARRC. For this process, the CFC had to pay three mortgages owed in France and Belgium by the *Compañía de los Ferrocarriles de Puerto Rico*. For the people, the press, and even in official documents the railroad continued to be the "American Railroad Company," because until the CFC acquired all the shares, the ARRC would continue operating the railroad. From this point on, references to the CFC or ARRC would be one and the same.

The first serious issue faced by the CFC originated in the economic contraction of 1921. Governor Emmet Montgomery Reily informed Warren G. Harding, President of the United States, that in 1921 the total value of exports decreased by $29,441,705 because the prices for all agricultural products dropped. Governor Reily stated: "The general financial crisis which occurred last year in the United States, as well as in all parts of the world, was particular acute in Porto Rico. Its principal agricultural product –sugar– suddenly dropped in price from 23 cents to about 4 cents per pound and has fluctuated between 4 and 5 cents ever since."[422] Historian Humberto García Muñiz wrote about this crisis: "in January 1921, sugar producers in Puerto Rico were saying that a basis of 5 cents c.i.f. would severely injure the industry and that considerable acreage in cane would disappear, mainly those areas recently been brought to cane culture. Sugar prices reached the lowest point on 29 December 1921 when the cost in New York was 1.81 cents c.i.f."[423] In consequence, the Central Coloso in Aguada, the Central Puerto Real in Vieques, and the Central Juanita in Bayamón struggled to avoid bankruptcy.[424] The finances of those sugar factories

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[422] *Report of the Governor of Porto Rico*, 1921, 7.
[423] Humberto García Muñíz, *Sugar and Power in the Caribbean*, 384-385.
[424] "Ecos de la crisis económica," *El águila de Puerto Rico*, 11 July 1921, 1; "De la crisis económica," *El águila de Puerto Rico*, 19 July 1921, 1.

required court-appointed receivers to avoid seizure from creditors. The slow down of sugar production also resulted in workers layoff. In response the Bureau of Labor facilitated the migration of unemployed workers to plantations in Hawaii, Cuba, and New York.[425]

The decline in sugar prices directly affected the railroad revenues on the island. The CFC decided to reduce workers salaries almost 50 percent. On November of 1921, machinists from the lodges of Ponce, Arecibo, San Juan, and Mayagüez declared a strike "and the trains were running intermittently" in reaction to the pay cut.[426] The strike was unsuccessful, because employees could not deal with the economic consequences of not receiving salary and abandoned the strike. The International Association of Machinists with headquarters in Washington D.C., aided the lodges in Puerto Rico, even when they were against the "precipitated" decision of declaring a strike without exhausting alternatives at the bargaining table.[427]

The *Porto Rico Railways Company* also correlated their financial problems with the economic situation on the island: "As in other countries, the year 1921 in Porto Rico was a year of considerable financial depression. This was aggravated by the heavy fall in the price of sugar and the demoralization of the tobacco business." The report pointed to the importance of sugar as "the chief industry of the Island" while tobacco was "one of the other main industries."[428] In 1922 production grew but prices continued falling (Table 4.2). Sugar exports in 1921 were 409,407 short tons valued at $72,440,924 but in 1922 sugar exported increase its tons to 469,889 and its value

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[425] *Report of the Governor of Porto Rico*, 1921, 38.
[426] *Report of the Governor of Porto Rico*, 1922, 35.
[427] Centro de Documentación Obrera Santiago Iglesias Pantín, Universidad de Puerto Rico en Humacao. L30 SIP, C1, F1-53.
[428] *Annual Report of the Porto Rico Railways Company, Limited*, 1921, 5.

decreased to $40,820,333.[429] The export of tobacco leaf and scrap exhibited an analogous situation with 14,667,932 pounds exported at a value of $13,568,249 in 1921, but after a significant increase of 22,452,588 pounds in 1922 the value was merely $9,002,767.[430] On March 1922, the sugar crisis pushed the ARRC to file a petition with the Public Service Commission to increase rates for cane transportation. The petition "was attacked by the Sugar Growers Association."[431]

Table 4.2. Sugar exports, 1919-29.

FISCAL YEAR	SHORT TONS	VALUE	AVERAGE PRICE PER TON
1919	351,90	$48,132,419	$136.77
1920	419,388	98,923,750	235.88
1921	409,407	72,440,924	176.94
1922	469,889	40,820,333	86.86
1923	355,423	46,207,276	130.01
1924	372,041	47,838,687	128.58
1925	571,559	53,261,895	93.20
1926	578,811	48,223,258	83.30
1927	574,869	54,756,984	95.25
1928	605,620	54,579,020	90.12
1929	471,244	35,222,162	74.74

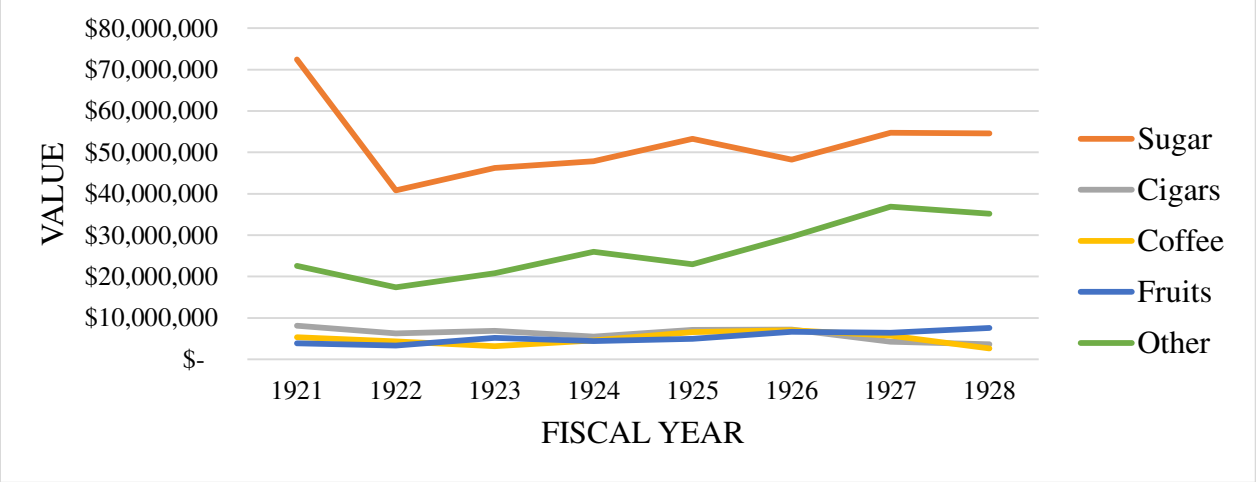
SOURCE. - *Annual Report of the Governor of Porto Rico*, 1929, 22.

In 1922 the prices started a recovery but never recuperate from the 1921 collapse. In 1925 once again the prices of sugar fell, this time to 4.6 cents per pound, a drop from 6.4 cents in 1924 and 6.5 in 1923, but not as low as it was in 1922 when prices fell to 4.3 cents per pound.[432]

[429] *Report of the Governor of Porto Rico*, 1923, 9.
[430] *Report of the Governor of Porto Rico*, 1923, 10.
[431] *Annual Report of the Porto Rico Railways Company, Limited*, 1922, 43.
[432] *Report of the Governor of Porto Rico*, 1925, 10.

Tobacco leaf and scrap prices also fell in 1925. Coffee exports were the exception with increasing values for three consecutive years (1923-25) but in 1926 the trend ended and prices started to drop.[433] The historiography of the economic situation after the Great War is almost non existent as historians focused on the political clashes between the political parties *Coalición* and *Alianza*. However, the official data showed that agricultural products had problems maintaining constant revenues. Tobacco, coffee and fruits values fluctuated in the 1920s and sugar values recover slowly. The low prices for sugar was the main concern of the government because more than half of the state total revenues (a median of 55 percent) came from this product.

Figure 4.1. Value of Exports, 1921-1928.



SOURCE. - *Annual Report of the Governor of Porto Rico*, 1929, 24, 27.

Railways also suffered from these fluctuations since sugar cane generated the main income for the public service railroads. In the 1923 annual report of the *Compañía Ferroviaria de*

[433] *Report of the Governor of Porto Rico*, 1925, 24.

Circunvalación the company reported higher incomes from freight than from passenger. Competition with trucks for freight transportation was less intense than competition with *públicos* (taxis) and buses. The company requested that the Public Service Commission establish parameters to reach fair competition, but for the *interim* the railroad company had a plan: "adquirir automotores de vapor…para competir con los automóviles públicos de carretera."[434] That is to say, the railroad company aquired two steam powered passenger cars for the San Juan-Arecibo route and planned to purchase three more for the southern route to increase the offerings for passenger service. Initially it appeared as a solution to taxi competition but only time would decide who the winner would be in the competition for passengers.

In 1924 the project to conclude the beltway railroad was resurrected. The railroad boom of the first fifteen years of civil government provided new lines but the companies were not required to follow the plan that had been developed in the nineteenth century. Interestingly enough, the U.S. government did not dismiss the Spanish plan, and recognized the value of a beltway railroad. However, no measure was adopted to drive railway companies towards resuming the conclusion of the unfinished beltway. After the war the CFC returned to the plans to build the beltway railroad. In 1921, the insular legislature approved Act no. 89 to sell three million dollars in bonds for the acquisition of the land needed to complete the eastern section of the route. Another bill authorized the Commissioner of the Interior to look into the construction of four railroad sections: (1) from Carolina to Mameyes in Río Grande, (2) from Naguabo to Humacao, (3) from Humacao to San

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[434] Translation: "to purchase steam powered passenger cars suitable for your line to compete with taxis." Compañía Ferrovaria de Circunvalación de Puerto Rico, *Informe del Presidente don Genaro Cautiño a la Junta General de Accionistas*, 15 July 1924, 6.

Lorenzo, and (4) from Humacao to Guayama via Yabucoa, Maunabo, and Patillas.[435] Railroad companies made inquiries about the acquisition of franchises, but the projects never materialized.

On November 1924 the White Star Bus Line Incorporated a new bus company and was registered with a capital stock of $500,000 distributed in 5,000 shares of $100 each. The members of the board of directors were Adolfo Valdés Ordoñez, Luis C. Cuyar, Salvador García, and Rafael Arcelay.[436] The White Star Bus Line Inc. became a new competitor for the street tramways since both companies provided transportation service in San Juan. In contrast, there was a decline in transportation options after the Mayaguez Tramway Company, a domestic railroad company, closed operations on January 1927.[437] In both cases, a new bus company in San Juan and the termination of a tramway service in Mayagüez, indicated that the economic viability of electric-urban-tramways was in danger. To maintain competitiveness, electric-urban-tramways had to invest in the modernization and maintenance of their facilities. In San Juan, the PRRC purchased "six modern type passenger cars," to improve the facilities and to attract passengers in view of the increasing competition from the *carros públicos* and the White Star Bus Line.[438] This capital investment was necessary if the company wanted to survive in a new competitive environment.

The signs of railroad displacement by trucks also appeared in the internal railroad systems used in the sugar industry. As previously described, the island had public service railroads (all

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[435] "En la Comisión de Servicio Público de Puerto Rico," *El Mundo*, 12 September 1924, 11.
[436] Cláusulas de incorporacion de White Star Bus Line Incorporated, 1924. AGPR, Fondo Departamento de Estado, Serie Corporaciones con fines de lucro, Caja 45, Expediente 646.
[437] Letter from Benet Souffront to the honorable Secretary of Puerto Rico, Mayagüez, Puerto Rico, 5 January 1927. AGPR, Fondo Departamento de Estado, Serie Corporaciones con fines de lucro, Caja 18, Expediente 201.
[438] *Annual Report of the Porto Rico Railways Company, Limited*, 1927, 4.

privately owned) subjected to state regulation, and sugar mills owned railroads for the exclusive transportation of cane from neighboring estates to the mill. These sugar plantation cargo railroads were taxed but not regulated by the state. Railroads were efficient for the transportation of cane but expensive due to taxes, repairs, fuel, and maintenance. Trucks would be less expensive, more versatile, and tax free. For example, Hacienda Monserrate in the town of Manatí used railroads and trucks to transport cane from estates to the mill. For the harvest of 1923 the cost of transporting cane in rails was $17,935.25; in addition to $16,373.53 for maintenance of the tracks. In contrast, the cane transported in trucks only cost $10,145.45.[439] Sugar corporations estimated transportation costs and would only continue relying on railroads if it was economically beneficial. In 1923 Hacienda Monserrate manufactured 6,597.5 tons of sugar 1,245.25 tons less than the previous year's harvest. The situation was similar on the entire island with a drop in the national sugar production in 1923 to 373,477 tons from 396,100 tons the previous year, a difference of 5.71 percent.[440] Within this framework the railroads had to demonstrate efficiency in transportation costs and if not the corporation could use trucks to replace the iron roads. The Hacienda Monserrate was an example of the issues confronted by most sugar mills and not an exception.

Risks

When choosing a mode of transportation, passengers had to consider value, time, and safety. Commuting by railroads or tramways was not always secure and accidents occurred. The

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[439] Ángel L. Vázquez Medina, *La Hacienda Monserrate de Manatí:* 131 años de historia del azúcar en la region norte central de Puerto Rico. (San Juan, PR: Ediciones Puerto, 2009), 284-285.
[440] "Table 21: comparative statistical report of sugar manufactured in Puerto Rico. 1923" in the *Annual Report of the Treasurer of Puerto Rico* (San Juan, PR: Department of Finance, 1923).

Public Service Commission was the agency that enforced safety procedures to reduce the risks of accidents. However, railroad companies did not demonstrate a serious commitment to the security of passengers, workers, or bystanders, nor did the Public Service Commission demonstrate a rigorous enforcement of the regulations. As a result, newspapers would often publish articles about railroad accidents, as was the case on September 5, 1921 when the press reported a derailment in the area of Guajataca in Quebradillas that caused the death of two workers and the injury of several passengers.[441] In his annual report, Governor E. Mont. Reily informed that "two of the most serious railroad accidents recorded since the organization of the [Public Service] Commission occurred, both upon the lines of the American Railroad Co."[442] In 1928 out of a total of 503,539 customers transported the railroad companies reported 153 accidents suffered by passengers. No passengers perished inside the wagons, although eighteen bystanders did "due to trespassing on the companies' right of way."[443] The individuals implicated in railway accidents were not statistically significant, although injuries could potentially be life-changing for any victim.

The courts became the place to litigate the degree of responsibility of railroad companies in accidents. Clearly, the legal representation of railroad companies fought vigorously to avoid any reparation or responsibilities. For example, when in 1928 a truck collided in Guayanilla with a passenger wagon operated by the ARRC. Angel Mattei, the owner of the truck, accused the company of "(1) Failure to blow the whistle or ring the bell upon approaching the crossing as

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[441] "Lamentable siniestro ferroviario," *El Imparcial*, 6 September 1921, 2.
[442] *Report of the Governor of Porto Rico*, 1922, 43.
[443] Miguel A. Muñoz, *Report of the Public Service Commission of Porto Rico*, 13 September 1929, 23, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 752.

required by statute; (2) excessive speed of the train; (3) failure to provide chains or gate at the crossing; and (4) failure to keep the crossing in a safe and proper condition for traffic."[444] Mattei sued the railroad company demanding compensation of $3,595. The verdict favored Mattei, although he did not receive the entire restitution he demanded.

Railroad companies had to improve safety or passengers would select another means of transportation. The *New York Times* published a report titled "Porto Rico from a Guagua," in which the columnist mentioned that bus accidents did occurr but none were "serious":

> The writer saw two of them in head-on collision one day. As usual, no one was hurt. Another *guagua* broke the rail of a small bridge and hung over the water, its rear wheels caught on the foundation, but the passengers climbed out safely.[445]

In this report the author evidently wanted to promote the use of buses and downplayed the risk associated with bus transportation. Railroad companies had to offer a reliable service and avoid accidents in order to preserve their passenger' service.

On May 1927 the insular legislature approved a joint resolution to exempt the *Compañía de los Ferrocarriles de Puerto Rico* from the payment of insular, municipal, and local taxes. For its part the *Compañía de los Ferrocarriles* had to transport free of charge any officer wearing a police or army uniform, prisoners and insane patients under the supervision of the state, and cattle or

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[444] American Railroad Co. of Porto Rico v. Mattei, No. 2452, Circuit Court of Appeals, First Circuit, 45 F.2d 307; 1930 U.S. App. Lexis 3621, 26 November 1930.
[445] "Porto Rico from a 'Guagua'," *New York Times*, 14 March 1926, SM14.

other goods related to the promotion of industry.[446] In other words, if the company needed support from the state it had to provide benefits for the public interest. The approval of the tax exemptions revealed that the government appreciated the impact railroads had on the economic infrastructure of the island. Hurricane San Felipe struck the island on September 13, 1928 at 150 miles per hour. The island suffered heavy rains for 48 hours with internse precipitation in the mountainous coffee districts, which recorded 29.6 inches. The staff of the insular experimental station estimated coffee losses in about 80 to 90 percent, which amounted to $9,465,225. The loss in sugar was estimated at 32.6 percent of the crop, which was a loss of $17,337,180. Tobacco farmers did not lose the leaves but did lose all the seed beds that amounted $11,979,114. Finally, in the citrus-fruit industry the loss of trees was estimated in 32.8 percent equivalent to $1,650,829. The final estimates of losses for all the agricultural crops cultivated in the island amounted to $54,462,945 and the damages to farm-related structures amounted to $7,969,131.[447] The immediate relief for farmers came from the American Red Cross, then from a Huricane Relief Commission, and the U.S. Congress approved an act to allow "the Federal Land Bank of Baltimore to extend the limit on farm loans to $25,000."[448]

The hurricane also caused significant damage to the railway infrastructure. The CFC closed operations for five days and then resumed partial operations until September 24 when the company reestablished complete service. For security reasons, the night train, which had sleeping carts, did

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[446] Leyes de Puerto Rico (R.C. No.1); *Resolución Conjunta*. Archivo de la Fundación Luis Muñoz Marín, Serie 9: Asuntos.

[447] "Report of the Commissioner of Agriculture and Labor," in the *Twenty-Ninth Annual Report of the Governor of Porto Rico*, 1929, 633-634.

[448] Ibid., 635.

not resume its operations from San Juan to Ponce until October 10. The CFC estimated that the damages amounted to $200,000. The "trolley" in San Juan, operated by the PRRC, resumed partial operations on September 22 but it took until November 9th to restore full service. The PRRC estimated their losses to be $40,000. Other public service companies also suffered damages: the Ponce and Guayama Railroad Company estimated its losses to be $38,000; the Northern Porto Rico Railroad Company $12,000; and the Fajardo Railroad Company $17,000.[449] Although the rail infrastructure suffered substantial damages it was important in the reconstruction of the island after the hurricane. The government acknowledged the contribution of Emilio S. Jiménez, manager of the American Railroad Company for providing a prompt response in the aftermath of the hurricane. The company "transported free of charge for the American Red Cross all the supplies and materials to be utilized for the relief of hurricane sufferers, and also their Pier No. 5 was placed at the disposal of this organization for the docking and discharging of steamers bringing materials and supplies."[450] These initiatives gave the ARRC an image of a private corporation with a serious commitment to the well-being of the country. Hurricane San Felipe not only impacted the railroad industry, the hurricane exacerbated the economic weakness of the 1920s.

During the autumn of 1928 the Brookings Institution conducted a study about the "problems" of Puerto Rico. In *Porto Rico and its problems* the economist Victor Clark concluded that rapid population growth in Puerto Rico lead to "low wages, unemployment, and inadequate

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[449] Miguel A. Muñoz, *Report of the Public Service Commission of Porto Rico*, 13 September 1929, 10, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 752.
[450] Ibid.

subsistence."[451] To solve the root of the "problem" it was necessary to efficiently use the island's resources for the diversification of the economy and especially the promotion of manufacture and industry. The report included a chapter on *Public Works*, which stated that the island could rely on its highways and roads for the improvement of the national economy because the country had "more good roads in proportion to its size than any states except Connecticut, Rhode Island and Vermont."[452] In view of the excellent road infrastructure there were no drastic recommendations other than suggesting the creation of a plan for road maintenance and the construction of more roads, not because this was necessary, "but in order to reduce unemployment."[453]

The chapter on *Public Works* included a subtopic about the railroad situation with a succint description of the area covered by railways. The report highlighted the competition between railways and automobiles to corner the passenger market. In relation to freight service it noted the importance of the sugar industry for freight revenues. The only recommendation was the integration of refrigerated cars "when fruit and vegetable growing have extended to sections of the island distant from capital."[454] The Brookings Report applauded the Department of the Interior for the development of highways and roads, but showed less enthusiasm with the progress of railways in the country.

In October 1929 Thedore Roosevelt Jr. arrived in Puerto Rico to occupy the seat of governor and held this office when the New York Stock Market crashed, and the world capitalist

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[451] Victor S. Clark, *Porto Rico and its problems* (Washington D.C., USA : The Brookings Institution, 1930), 515.
[452] Clark, *Porto Rico and its problems*, 344.
[453] Ibid.
[454] Ibid., 372.

system showed signs it would fall into a deep crisis. The economic crisis in the United States inevitably impacted the island's economy, however, Governor Roosevelt did not consider the economic problems of the island as related to the U.S. crisis. At his arrival, before the crash, Roosevel found the island in desperate fiscal and social conditions. The insular budget was unbalance because revenues were insufficient to meet the obligations. In December 1929 the government owed more than 6,500 vouchers and governmental employees received their salaries after a loan of $200,000. Social problems also were challenging. People in Puerto Rico died in alarming numbers from tuberculosis, malaria, and parasites, more than 60 percent of the population able to work were unemployed or only seasonally employed, and "the average yearly income of the working man or woman ranges between $150 and $200."[455] Agriculture was slowly recovering from the hurricane of 1928 but the programs to promote the economy were difficult to implement with the limited budget of the insular government. In his first annual report Governor Roosevelt required economic support from the federal government for different areas, among them for health improvement, agricultural incentives for the small farm holder, and increasing funding for infrastructure.[456]

In 1929 the U.S. Congress at the suggestion of President Herbert Hoover allocated one million dollars for road asphalt. These funds approved for asphalt roads directly benefited the island finances because this type of road was cheaper to maintain than macadam roads. One kilometer of macadam road had an approximately cost of $800 a year to maintain while a

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[455] *30th Annual report of the Governor of Porto Rico*, 1930, 2.
[456] Ibid.

kilometer of asphalted road costed $300.[457] Furthermore, the use of federal funding for road construction allowed the local government to allocate more funds for health programs, education, and agricultural and industrial development. The Brookings Report recommended that the government had to invest in road building to generate jobs and had to promote food crops over sugar to diversify the economy, and Governor Roosevelt followed the formula. The federal government allocated the funds for road building, created jobs and benefited families that "would therefore be starving."[458] The official policy for agriculture focused in the diversification of crops with special attention to vegetable farming and the formation of farmer cooperatives.[459] In his second annual report Governor Roosevelt recognized that the economic situation continued to be difficult but he offered an optimistic outlook by accentuating the favorable balance of trade with $98,400,927 exports and $76,437,410 imports. The report celebrated the reduction of imports as an unquestionable consequence of the policy to encourage foodstuff cultivation for local consumption and applauded the increase in the volume of exports although the value fell behind the previous year.[460]

On October 17, 1931 the largest local bank on the island, *Banco Comercial de Puerto Rico*, went into receivership. After that five more banks went into receivership: the Banco Industrial de Puerto Rico, the Banco de Yabucoa, the Rivas Commercial Bank, The Banco de Economías del Pueblo, and Crédito y Ahorro Popular. On September 28, 1932 the Banco Territorial y Agricola,

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[457] Ibid, 10.
[458] Ibid.
[459] *31th Annual report of the Governor of Porto Rico*, 1931, 3.
[460] Ibid., 15.

the largest local bank after the Banco Comercial de Puerto Rico closed its doors. The collapse of local banks represented a serious impediment in the efforts to support the small farmer, which suffered from a new setback in 1932 after Hurricane San Ciprián devastated the island. The government estimated in 35 million dollars the material losses. The Commisioner of Agriculture and Commerce estimated damages to crops in approximately 20 million dollars and banks lost liquidity after depositors withdraw their money to pay for the reconstruction after the hurricane. The banking situation forced the government "to make deposits in several local banks in order to strenghten their cash position."[461]

The governmental course of action in response to crop lossess by storms and lack of financing was the persistent encouragement of farmer cooperatives. However, maintaining production was a challenge when crop prices declined in the United States. Puerto Rican exports dependended on the U.S. markets and the prices and the demand for sugar, tobacco and coffee in the United States plunged. Governor James R. Beverly reported in 1932 that coffee prices dropped to $14 a hundredweight, tobacco crop from 1931 remained in the warehouses without being sold, and sugar prices went down to $2.58 per short ton, the lowest price ever paid since 1898.[462] From 1930 to 1933 total net income decrease from 189 millions to 140 millions of dollars and per capita income from $122 to $86, the lowest in a decade.[463]

The crisis impacted every sector of the economy including transportation. Railway

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[461] *33th Annual report of the Governor of Porto Rico*, 1933, 6.
[462] *32th Annual report of the Governor of Porto Rico*, 1932, 14.
[463] Francisco A. Catalá Oliveras, *Promesa rota:Una mirada institucionalista a partir de Tugwell* (San Juan, PR: Ediciones Callejón, 2013), 63.

companies made different adjustments to survive the crisis but it was difficult to maintain profitable operations. In the case of the electric tramway between Santurce and Río Piedras the company had to temporarily cease operations and the decision received the endorsement of the Public Service Commission.[464]

In response to the economic crisis the CFC decreed a dramatic reduction in passenger fares (Table 4.3):

Table 4.3. Passenger Rates of the CFC, 1933.

ARRIVAL STATION	FIRST CLASS	SECOND CLASS
Vega Baja	$0.35	$0.20
Manatí	0.40	0.25
Arecibo	0.50	0.30
Aguadilla	1.00	0.55
Mayagüez	1.25	0.75
San Germán	1.35	0.85
Yauco	1.75	0.85
Ponce	1.75	0.85
Guayama	2.15	1.10

NOTE. - Rates based on a departure from San Juan or Martín Peña Station
SOURCE. - *El Mundo*, 7 January 1933, 1.

Fare reductions had a positive impact due to the accessibility of the railroad to more people with limited economic resources. In 1932 the CFC reported transporting 203,000 passengers and by 1941 this figure increased to 689,000; "an increase of 239%."[465] However, more passengers did

[464] *Annual Report of the Porto Rico Railways Company, Limited*, 1933, 3.
[465] *The American Railroad and its place in the transportation system of Puerto Rico*, 1944, 37, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 825.

not equate more revenue for the company because of the extremely low fares. The CFC gambled on reducing the fare during increasing operational costs, to rise in the volume of commuters, and thus, obtain long-term gains. The company did not immediately produce significant revenues; nevertheless the people used the railroad because it was a cost-effective alternative. The company preserved a "railway culture" on the island thanks to its adaptability to the economic challenges of the time. The following table shows how the company maintained consistent sales after 1932, but the revenues were lower than in the nineteenth-twenties (Table 4.4).

Table 4.4. Passengers carried and average revenue for the CFC, 1921-1941.

	TOTAL		AVERAGE REVENUE		
Year	Passenger Revenue	Passengers Carried (in thousands)	Per Passenger	Per passenger kilometer	Percent of 1932
1921	$459,617.00	437	$1.0462	$0.0208	216.66
1922	418,874.00	384	1.0844	0.0210	218.75
1923	404,233.00	390	1.0302	0.0206	214.58
1924	402,293.00	367	1.0904	0.0207	215.62
1925	311,169.00	285	1.0849	0.0202	210.41
1926	243,935.00	220	1.0992	0.0192	200.00
1927	302,601.00	531	0.5674	0.0103	107.29
1928	276,297.00	503	0.5481	0.0102	106.25
1929	245,265.00	439	0.5566	0.0102	106.25
1930	193,655.00	767	0.5376	0.0101	105.20
1931	150,824.00	281	0.5362	0.0097	101.04
1932	110,759.00	203	0.5358	0.0096	100.00
1933	132,565.00	423	0.3110	0.0055	57.29
1934	144,904.00	486	0.2977	0.0053	55.21
1935	145,389.00	494	0.2944	0.0052	54.17
1936	147,580.00	482	0.3063	0.0051	53.12
1937	143,748.00	468	0.3073	0.0050	52.08
1938	158,744.00	574	0.2763	0.0050	52.08
1939	150,623.00	555	0.2713	0.0049	51.04
1940	158,912.00	575	0.2765	0.0049	51.04
1941	208,547.00	689	0.3026	0.0052	54.17

SOURCE. - *The American Railroad and its place in the transportation system of Puerto Rico*, 1944, 38.

The fluctuation in the number of passengers using the train previous to 1932 stabilized; although revenues fell because of the lower fares when operational costs did not. The CFC also made important changes in freight rates. The reduction was dramatic (Table 4.5):

Table 4.5. Comparison of Freight Rates for sugar cane, CFC 1923-1933.

KILOMETERS	1923	1933
10	$1.01	$0.60
30	1.895	1.20
50	2.305	1.44
80	2.88	1.8
100	3.31	1.92
150	4.32	2.00
200	4.81	2.20
260	5.33	2.50
300	5.76	2.60

NOTE. - Per ton of 2,000 lbs. Minimum carload 15 tons.
SOURCE. - *The American Railroad and its place in the transportation system of Puerto Rico*, 1944, 36.

The New Deal

Franklin D. Roosevelt in his campaign for the presidency stated: "I pledge you, I pledge myself, to a new deal for the American people," however, the people in Puerto Rico were unsure if President Roosevelt would extend his "deal" to the island.[466] Francisco Pons, Commissioner of the

[466] *The Public Papers and Addresses of Franklin D. Roosevelt*, vol. 1, 1928-32 (New York, USA: Random House, 1938), 647.

Interior, wrote to Santiago Iglesias Pantín, Resident Commissioner in Washington, to lobby in the U.S. Congress for the participation of Puerto Rico in the distribution of funds for new roads. In his letter, Pons remarked that only automobiles made in the United States ran on Puerto Rican roads: "que por nuestras carreteras sólo corren automóviles fabricados en los Estados Unidos."[467] Allocation of funds for new roads would help the insular economy with jobs and needed roads.

President Franklin Roosevelt extended the New Deal Program to the island providing federal funding from 1933 to 1939. The New Deal agency on the island was the Puerto Rico Emergency Relief Administration (P.R.E.R.A.). The PRERA allocated its road-building budget primarily for rural areas.[468] The plans for Puerto Rico consisted of "rural rehabilitation" through the establishment of cooperatives, subsistence farms, electrification, soil conservation programs, community centers, new roads, among other programs.[469] Tobacco and coffee farms received beneficial incentives; however, the sugar sector was not included for any recovery funds. Railways received nothing from the PRERA.

The 1930s was a decade for the small farmer not the large plantation and it was the time for small business initiatives. The government promoted internal trade through the establishment of market facilities in the principal urban centers: San Juan, Ponce, and Mayagüez. Prices were still unaffordable for the poor "due to monopolies, local combinations, and lack of transportation

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[467] Translation: "In our roads only ran automobiles manufactured in the United States"
"Sobre la extensión a Pto. Rico de la ayuda federal para carreteras," *El Mundo*, 9 June 1933, 1, 14.
[468] "La asignación de millón y medio de dólares para carreteras," *El Mundo*, 29 September 1933, 1.
[469] D. L. Kreeger, Acting General Counsel to Carlos Chardón, Acting Administrator PRRA, Memorandum, 22 January 1936, NARA, RG 323: Records of the Puerto Rico Reconstruction Administration, Box 3 Entry 38: Records relating to construction projects directed by the engineering division, 1935-1953, File: Construction Porjects – Road Construction (General).

facilities."[470] The federal government built new roads in rural areas, but at the end of the program in 1938 farmers in the highlands indicated the need for even more roads. An example is provided by the many small farmers in Barrio Cacao, Orocovis. These farmers needed 6 kilometers of road to connect with the nearest road. They claimed: "Por estos motivos de la falta de comunicación, nuestra situación económica es sumamente difícil, pues nos es muy costoso el conducir nuestros productos al mercado."[471] Roads in rural areas were the keys to access the island's markets to increase domestic food production.

The development of new roads and road maintenance had an immediate economic impact because it fueled the construction industry and generated jobs, and in the long term it provided the infrastructure to shorten the distance between producing areas and markets. The following table illustrates the quantity of kilometers constructed and maintained during the New Deal:

Table 4.6. Roads Construction and Maintenance (in Kilometers).

Fiscal Year	Insular Roads	Municipal Roads	Kms. Maintained
1933	14.60	48.12	1,880.46
1934	3.00	43.81	1,945.69
1935	32.25	69.81	2,072.00
1936	4.40	25.38	2,109.60
1937	3.50	82.98	2,154.10
1938	15.69	28.07	2,251.21
1939	18.01	35.15	2,316.90
Total	91.45	333.32	14,729.96

[470] Ibid, 17.
[471] Translation: "lack of communications caused our extremely difficult economic situation, because is very expensive to transport our products to the market."
Ángel Ortiz Rosario, President-Granjeros del Barrio Cacao, to Honorable Harold Ikes, Secretary of the United States, Orocovis, Puerto Rico, 21 February 1939. NARA, RG 126, Box No. 866, File 9-8-69: Puerto Rico, Highways, Federal Highway Act.

SOURCE.- *Annual Report of the Commissiones of the Interior for 1939-40.*[472]

The data show the privilege given to the local municipal roads over the insular roads. Historian Alan Brinkley argued that in the origin of the New Deal program there were "important voices advocating a decentralization of economic power, "anti-monopolists" who envisioned a frontal assault on "bigness" and concentration in the corporate world."[473] Since the arrival of U.S. owned sugar and tobacco corporations to Puerto Rico local entrepreneurs, workers, and politicians, blamed the government for facilitating absentee capitalists the exploitation of local resources, but the New Deal program in Puerto Rico provided direct relief for the local farmer and rural communities impacting the local economy and improving the popular perception of the government.

The Department of Agriculture and Commerce divided agro-industries into three groups: (1) Big industries (required a large amount of capital to produce export products); (2) Small industries (required moderate capital to produce products for local consumption to substitute some imports); and (3) Domestic industries (required the work of the family to produce food for their own consumption or to bring to the local market). The Department of Agriculture and Commerce decided to stimulate the second and third types of activities: "las del segundo y tercer grupo las que con más facilidad y provecho podrían impulsarse en los momentos actuales."[474] If the official

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[472] The data of the *Annual Report* was retrieved from Department of Agriculture and Commerce, Division of Agricultural and Industrial Economy. *Annual Book on Statistics, Fiscal Year 1939-40.* (Puerto Rico: Government of Puerto Rico, 1940), 198.
[473] Alan Brinkley, *The End of Reform: New Deal Liberalism in Recession and War* (New York, USA: Vintage Books, 1995), 5.
[474] Translation: "Those of the second and third group could be promoted more easily and profitably at the present time."

policy was the promotion of small and domestic agriculture the question was what type of transportation would be ideal to stimulate these businesses. The answer was without a doubt: the development of an internal road system.

In November 1935 the Department of the Interior sent a memorandum to Governor Blanton Winship to inform him about the possible extension of the Federal Highway Act (H.R. 1392) to the territories if the act was finally approved.[475] The act was approved in 1921 but it was only in 1935 that Puerto Rico could partake in its benefits. It took until 1937 for the insular legislature which "passed legislation enabling Puerto Rico to qualify for Federal Highway Aid for the first time in the history of the Island."[476] Before the bill was approved the insular legislature prepared the terrain with the approval on May 15, 1937 of the Gasoline Act no. 143, which created a special fund from a tax imposed on gasoline sales. The local government matched dollar for dollar the federal funds assigned to build new roads. More roads allowed the use of more automobiles and trucks, which in turn would use more gasoline, which translated into increasing the income to the special fund to be used in the construction of more new roads.

Within a few months of its approval, mayors and municipal legislatures sent letters to Governor Blanton Winship requesting that the road construction projects move more rapidly. In reality what was behind this campaign for building new roads was the need to create new jobs to

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F. A. López Domínguez to the Comissioner of Agriculture and Commerce, San Juan, Puerto Rico, 13 march 1933, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 259.

[475] Department of the Interior, Office of the Commissioner, "Memorandum to the Hon. Blanton Winship, Governor of Puerto Rico, in reference to the extension to Puerto Rico of the Federal Highway Act as provided by H.R. 1392." 27 November 1935. NARA, RG 126, Box 866.

[476] L.G. Graesle, Chief of the Division of Bookkeeping and Warrants to Mr. Dawes E. Brisbine, Research Counsel of the National Highway Users Conference, Washington, D.C., 5 September 1939. NARA, RG 126, Box No. 866, File 9-8-69: Puerto Rico, Highways, Federal Highway Act.

help alleviate unemployment.[477] The Puerto Rican Reconstruction Administration (PRRA), which was established in 1935 by presidential executive order, employed 25 percent of the labors on the island, but to really reduce unemployment many more jobs were needed.[478] After two years the Economy Commission of the Legislature of Puerto Rico submitted a proposal to develop 53.9 kilometers of new roads at a cost of $716,750 from a surplus in the gasoline tax fund.[479] Once again, the municipalities demanded to be integrated into the plan for new roads to provide jobs to the unemployed.[480] In conclusion, the desire for new roads was not only a solution to the lack of shipping alternatives, or a need to develop new internal markets, but also a palliative to the problem of unemployment.

In a message to the legislature, Governor Blanton Winship proposed an increase to the budget for road maintenance to compensate for a reduction in the federal budget assigned to road construction. The reduction came after President Rossevelt decided in 1937 to reduce spending in view of improving economic indices. However, the country was not ready for this federal retrenchment. In response, Governor Winship recommended "to authorize the Commissioner of the Interior to spend the $1,250,000 annually in the maintenance of roads and bridges."[481] In fact, by 1939 the federal government had invested substantial sums of money for road construction, as

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[477] Julio Aldrich, Major of Caguas to the Governor of Puerto Rico, 29 November 1937, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 255.
[478] *Resolución de la honorable asamblea municipal del municipio de Hormigueros*, 9 December 1937, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 255.
[479] *Plan para caminos municipales, Sometido por la Hon. Comisión Económica*, 16 February 1939, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 255.
[480] Telegram from Francisco A. Pietri, President of the Municipal Assembly of Cayey to the Governor of Puerto Rico, 9 November 1942, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 255.
[481] Blanton Winship, Message delivered in person on February 14, 1939 to the Fourtenth Legislature at its Third Regular Session, 18, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 599.

reported to Mr. Miles H. Fairbank, administrator of the PRRA. Fairbank reported that road construction and maintenance was possible with the funds from three sources: the Federal Emergency Relief Administration (FERA)-Work relief built 170 miles, Rural Rehabilitation (RRRA) built 90 miles, and the PRRA 30 miles for a total 290 miles built by federal agencies.[482]

The New Deal program also allocated funds to build and acquire hydroelectric plants to generate electricity. In the United States there was a program for electrification and this priority was extended to Puerto Rico. The electrification program decisively impacted the second largest railroad company in the island, the Porto Rico Railway, Light and Power Company because this company operated a steam railroad, an electric tramway, and also provided power in the metropolitan area and other towns.[483] Ernest Gruening, administrator of the PRRA from 1935 to 1937, pursued the acquisition of all privately owned hydroelectric plants. Scholars César J. Ayala and Rafael Bernabe described Ernest Gruening as a critic of U.S. interventionism in the Caribbean, a campaigner against private power interests in New England, and a defender of public utilities.[484] Gruening used the Utilization of the Water Resources (an agency created in 1927 with the purpose of building hydroelectric plants to generate energy) to launch his project for the state acquisition of power plants. In March 1935 the legislature of Puerto Rico approved a joint resolution to extend

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[482] Map to Mr. Fairbank, 28 November 1939. NARA, , RG 323: Records of the Puerto Rico Reconstruction Administration, Box No. 3 Entry 38: Records relating to construction projects directed by the engineering division, 1935-1953, File: Construction Porjects – Road Construction (General).
[483] The Porto Rico Railway, Light and Power Company provided electricity to 35 towns: Aibonito, Barceloneta, Barraquitas, Bayamón, Cataño, Caguas, Canóvanas, Carolina, Ceiba, Ciales, Comerío, Corozal, Dorado, Fajardo, Guaynabo, Gurabo, Humacao, Juncos, Las Piedras, Luquillo, Manatí, Morovis, Naguabo, Naranjito, Orocovis, Río Grande, Río Piedras, San Juan, San Lorenzo, Toa Alta, Toa Baja, Trujillo Alto, Vega Alta, Vega Baja, and Yabucoa.
[484] César J. Ayala and Rafael Bernabe, *Puerto Rico in the American Century: A History since 1898* (North Carolina, USA: The University of North Carolina Press, 2007), 102.

transmission and distribution lines to the area of San Juan which was exclusively supplied by the Porto Rico Railway, Light and Power Company. The legislature claimed that power bills from governmental buildings and street lighting in the metropolitan area was too costly and it was necessary to install distribution lines for the capital city to reduce costs. The PRRC went to the courts claiming that since 1909 the government granted them "the right to maintain and operate an electric power plant for the furnishing of electric power light and heat to the public for profit, and to extend poles, wires, and transmission lines for that purpose."[485] The PRRC considered this initiative a governmental attack to their economic interests. To stop Gruening the PRRC went to the courts alleging that the PRRC already had the franchise to provide electricity in San Juan. The U.S. Court of Appeals for the First Circuit ratified the decision of the District Court dismissing the claim of the railroad company. The PRRC had the franchise to operate in San Juan, but those rights were not exclusive. Ernest Gruening with the funds from the Public Works Administration moved towards the acquisition of all privately owned electric companies: the Ponce Electric Company, the Mayagüez Light and Ice Company Incorporated, and lastly the Puerto Rico Railway, Light and Power Company. The PRRC sued the government to paralyze the seizure of their hydroelectric plants in Comerio and Naguabo. The steam railway between Río Piedras and Caguas, and the electric "trolley" in San Juan were not a central part of this effort probably because at the time they were a burden to the company. In the 1936 annual report the directors informed:

> For some years past the Steam Railroad of your subsidiary has been operating at a

[485] Muñoz et al. v. Porto Rico Ry. Light & Power Co., No. 3084, Circuit Court of Appeals, First Circuit, 83 F.2d 262; 1936 U.S. App. LEXIS 2507, 2 April 1936.

> loss. In common with other short haul railway operations the business had diminished to a point where it was considered advisable to write off the property. The Electric Tramway, which also has been unprofitable in recent years, was materially written down. As a result of the foregoing and other property retirements, there was written of Property Account the sum of $2,625,242.82.[486]

Ernest Gruening moved forward with his plans to create a state monopoly over electric power production and consequently a future appropriation of railway operations became a real possibility. Without doubt, his accomplishments on the island provided Gruening with the credentials to become a member of the Alaska International Highway Commission in 1938 and a year later to be appointed governor of Alaska by President Roosevelt. Before leaving, Gruening achieved the approval of a bill in the insular legislature authorizing a one million-bond issue to purchase the Río Blanco Hydroelectric Plant from the Porto Rico Railway, Light and Power Company.[487] In 1938 the company suffered an important setback with the loss of the hydroelectric plant, and the company also discontinued the steam railroad service between between Caguas and Río Piedras "because of continued losses for a long a period."[488] Previously, in 1936, the PRRC tried to close its Río Piedras–Caguas railroad but the Public Service Commission denied the petition.

Under the auspices of the federal program for reconstruction Carlos E. Chardón, chancellor

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[486] *Annual Report of the Porto Rico Railways Company, Limited*, 1936, 3.
[487] *Thirty-eighth Annual Report of the Governor of Puerto Rico*, 1938, 11.
[488] Ibid., 32.

of the University of Puerto Rico, made an assessment of the Puerto Rican economy. The Report of the Puerto Rico Policy Commission, known commonly as the "Chardón Report", provided concrete recommendations for possible industrial development in Puerto Rico. César Ayala and Rafael Bernabe claimed that the Chardón Report was "one of the key documents of the decade."[489] This report became Puerto Rico's economic blueprint in the 1940s under the governorship of Luis Muñoz Marín, who was the first Puerto Rican elected governor in 1948. In his report Carlos Chardón proposed the acquisition of hydroelectric plants to achieve lower power costs for the general population as well as corporations. The report had a section titled *Transportation*, but it only discussed the problem of maritime shipping rates between the island and ports in the United States. Chardón did not mention railways or roads in his report. In the discussion of tourism, he pointed out that "fine motor-roads" were attractive to Americans, but he also identified three obstacles for the development of the tourist industry: "inadequate and expensive transportation, lack of publicity, and inferior hotel accommodations."[490] Once again, the "problem" was maritime transportation. Of significance in the Chardón Report is the silence in reference to the role of railroads in the industrialization of Puerto Rico. Chardón did not envision railroads in the Puerto Rico of the future.

A central aspect of the Chardón Report laid in the suggestions related to the sugar industry. During the depression, a quota system in the United States impacted the production of sugar in Puerto Rico. The Jones-Costigan Sugar Act was approved on May 9, 1934 by the U.S. Congress

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[489] Ayala and Bernabe, *Puerto Rico in the American Century*, 102.
[490] Carlos E. Chardón, *Report of the Puerto Rico Policy Commission*, San Juan, Puerto Rico, 14 June 1934, 75.

for the stabilization of sugar prices with quotas for sugar imports. The Congress calculated the quota for sugar produced in Puerto Rico with the average of the sugar imported to the United States from 1925 to 1933.[491] The Sugar Act imposed limits in sugar production and as a result impacted railroad profits from sugar freight. For example, in 1933 (before the act) the CFC transported 1,651,239 tons of sugar cane, the next year it increased to 1,941,125 tons, but in 1935 (after the act) the number of tons dropped to 1,458,663, and dropped again in 1936 to 1,438,803. Freight income in 1936 decreased by $32,000 in comparison to the previous year.[492] Although this quantity may not be impressive it shows the relationship between sugar production and railroad revenues. The sugar quotas established a limit to sugar corporations to avoid overproduction but indirectly limited railroad companies because they had less sugar in way to the ports.

An important concern was whether the railroad would remain profitable if the passenger service thrived in light of declining freight revenues. The company's financial statistics demonstrated that operating costs were too high and the income from passenger transportation was insufficient to maintain profitability. Looking at the numbers, it is evident that freight transportation was crucial for sustainability (Figure 4.2). Income from passenger service was only a fraction of the total revenues. This importance of freight income may explain the emergence of the idea that the survival of the railroads depended on sugar.

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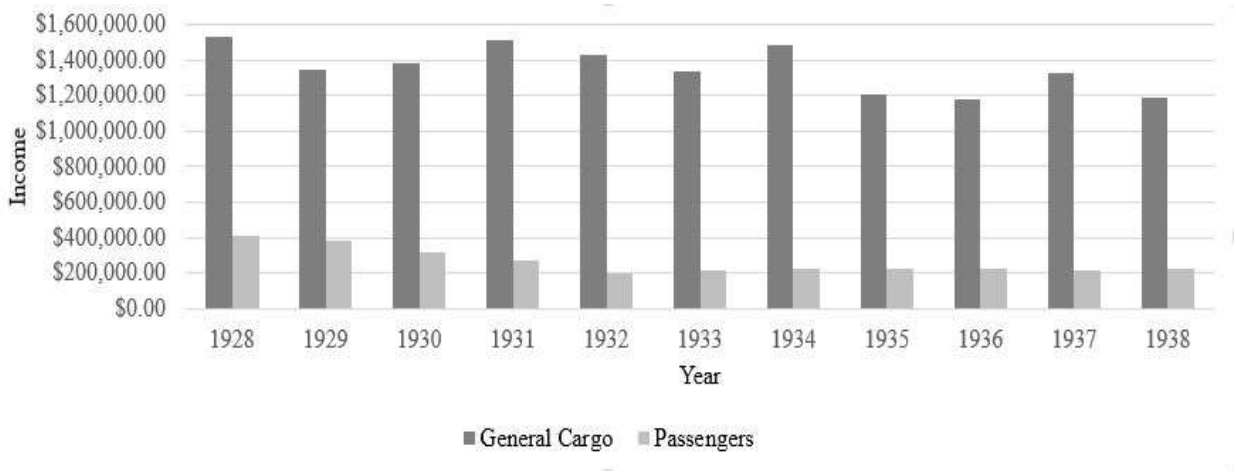
[491] James L. Dietz, *Economic history of Puerto Rico*.

[492] Compañía Ferroviaria de Circunvalación de Puerto Rico, *Informe Annual; Incluyendo los negocios de las afiliadas American Railroad Company of Porto Rico y Compañía de los Ferrocarriles de Puerto Rico*, 12 August 1937, 12.

Figure 4.2. Revenues from freight and passenger transportation (CFC), 1928-1938.



Source. - Record Group 126: Records of the Office of Territories, 1881 – 1976, Box 1027, File: 9-8-93: Puerto Rico-Transportation-Railroad- Wage and Hours - 1939 – 1949, National Archives at College Park, College Park, MD.

In a report about the sugar industry, Esteban A. Bird, Chief Economic Research Section of the PRRA, portrayed the common view of his time about the railroads and the role it had on the Puerto Rican economy. Bird linked the development of railroads with the success of the sugar business:

> Out of an estimated total mileage of 1,485 kilometers for all the railway systems of Puerto Rico, 924 kilometers, or 62 percent of the total, is mileage controlled by sugar enterprises. Not less than 90 percent of the total tonnage handled through these systems is sugar tonnage. Of the mileage not directly controlled by sugar interests, 361 kilometers belong to the American Railroad Company of Puerto Rico. Although this is the only independent system of any importance, 85 per cent

of their freight revenue is derived from sugar tonnage. *There is no question that the transportation of sugar is the life and soul of the railway system of Puerto Rico*." [493] (Emphasis added)

Bird's analysis was not a great revelation. He critiqued the monoculture economy as follows: "The Island depends on the sugar industry to an alarming degree."[494] With this panorama, if the country moved away from the sugar monoculture model, then the country would have no need for railroads. Although sugar was not the sole product transported by the CFC, Bird did not project the potential of the railways with respect to other industries. Appendices 2 and 3 have copies of the statement of cargo carried by the ARRC and the revenues it obtained from transporting those other products. The income from sugar and molasses surpassed by far the income from all other products. If the idea was to promote new industries, the railroad should have been a cheap transportation alternative for those industries but for Bird and other policy makers, railroads were inoperative economically outside the sugar business.

Gruening and other "New Dealers" demonstrated the state's commitment to improve the island's economic situation through the creation of new jobs in new industries. Historian Manuel Rodríguez argued that "Most of the leadership of the PRERA was constituted by Americans that perceived the New Deal as a golden opportunity to revive their old progressive ideals and put them into practice in a colonial possession ravished by poverty and neglect."[495] The government did not

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[493] Esteban Bird, *Report on the Sugar Industry in Relation to the Social and Economic System of Puerto Rico* (San Juan, PR: Government office of Supplies, Printing and Transportation, 1941), 23.
[494] Bird, *Report on the Sugar Industry*, 27.
[495] Manuel R. Rodríguez, *A New Deal for the Tropics: Puerto Rico during the Depression Era, 1932-1935* (New Jersey, USA: Markus Wiener Publishers, 2011), 137.

give incentives to the sugar business, because more than half of the jobs on the island already came from this sector. The goal was to promote jobs in the production of other crops besides sugar that could empower native farmers to build wealth by themselves. However, to make this shift was not easy as an observer published: "particularly foods grown for local consumption, suffer badly from an almost complete lack of credit and distribution facilities. Farmers generally have no financial reserve, nor access to storage or processing facilities. It is no uncommon sight in the island where malnutrition is the rule, to see piles of fresh vegetables rotting only a few miles from markets, for lack of distribution facilities. Cooperative action, as in all branches of Puerto Rican economy, is in its infancy, largely unsuccessful, and beset by almost overwhelming difficulties."[496] This author mentioned two challenges: credit and distribution. The federal government directed thousands of dollars administered by the P.R.R.A. to the acquisition of land for the establishment of cooperatives, and the distribution of food crops to the markets would be resolved by constructing new roads. In the 1930s railroad companies were not included as a solution to the distribution of food crops to markets; furthermore, railroad business started to experience a new relation with governmental politics. The government was no longer the facilitator of the past but a rigorous regulator.

For the CFC, the Federal Labor Standards Act of 1938 (FLSA) spawned a crisis that in the long run was impossible to overcome. The FLSA granted a five cents hourly wage increase for workers in the railroad industry and 15 cents for workers on express railroads. That is to say, effective on August 1938 the minimum salary for railroad workers increased from 20 to 25 cents

[496] Earl P. Hanson, "The Dilemma of Puerto Rico," *Science & Society*, vol. 1, no. 4 (1937): 507.

an hour, and in express railroads from 20 to 35 cents an hour. The CFC claimed that if the act was applied it "would cause an immediate collapse of its service and the bankruptcy and dissolution of the company."[497] Although the CFC protested the federal decision, the wages were far less burdensome than the 40 cents per hour approved for the railroad industry in the continental United States. The CFC still ignored the mandates of the FLSA.

From 1935 to 1938 the CFC and the PRRC struggled to maintain profitable operations. The PRRC reduced operating costs but the CFC was less successful in this endeavor. The companies were open to any governmental assistance because they were confronting serious economic problems during the depression as their reports demonstrated (see Table 4.7):

Table 4.7. Incomes and Expenses of the PRRC and the ARRC (1935-1938).

	1935	1936	1937	1938
PRRC Incomes	$81,114.64	$80,229.88	$84,971.43	$82,242.29
PRRC Expenses	$83,660.47	$81,611.88	$78,351.66	$79,711.76
Total	-$2,545.83	-$1,382.00	$6,619.77	$2,530.53
ARRC Incomes	$1,680,119.02	$1,650,438.14	$1,775,647.36	$1,688,611.95
ARRC Expenses	$1,817,028.06	$1,847,226.86	$1,915,840.12	$1,767,799.24
Total	-$136,909.04	-$196,788.72	-$140,192.76	-$79,187.29

SOURCE.- National Archives of the United States (NARA), RG 126: Records of the Office of Territories, 1881 – 1976, Box 1027, File: 9-8-93: Puerto Rico-Transportation-Railroad- Wage and Hours – 1939, and Box 1036, File: 9-8-97: Puerto Rico-Public Utilities, Puerto Rico Railway.

[497] Memorandum of the American Railroad Company of Porto Rico supporting its demand that the Fair Labor Sandard Acts of 1938 cannot legally or practically be applied to it. NARA, RG 126: Office of Territories Classified Files, 1907-1952, Box No. 1027, File 9-8-93: Puerto Rico-Transportation-Railroad- Wage and Hours - 1939 – 1949.

Public service railroad companies provided passenger service but the volume was insignificant in contrast to the CFC. From 1936-37 the CFC transported 481,883 passengers, the Ponce & Guayama Railroad transported 12,621 passengers, the Fajardo Development Company transported 495 passengers, and the *Ferrocarriles del Este* transported 163 passengers. To summarize, 97 percent of passengers used the CFC.[498] Railroad companies competed with *carros públicos* and buses for passengers. People relied on the *públicos* and buses, not only because they were cheaper, but because they could travel between towns to which there was no railroad service. However, c*arros públicos* and buses had their own issues. The drivers of the *carros públicos* complained about the unfairness of competition with the buses because the bus tariff was lower and they could transport more passengers. The operators of *carros públicos* demanded an increase in the bus fare in order to have fair competition.[499] However, the bus owners had their own issues of unfair competition to contend with because due to the economic crisis many people with cars were jobless and decided to use their private automobiles as an immediate source of income. The bus owners complained that private automobiles without permits from the Public Service Commission were tough competitors. The main problem of these illegal taxis was that they charged lower fares, took more passengers than allowed by law, and worked only during peak hours.[500] Without a doubt, the Public Service Commission was not enforcing the regulations. Bus owners demanded more surveillance to prevent competition of illegal taxis and rejected an increase

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[498] Report of the Public Service Commission to Governor Blanton Winship, 4 August 1937, 10, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 752.
[499] Transportation Questionnaires. September – November 1934. NARA, RG 9: National Recovery Administration, Territorial Office for Puerto Rico, Box 1, File: Autos Públicos.
[500] Ibid., File: Guaguas

in fares as *carros públicos* had desired alleging they operated at a loss.

Sugar producers provided their particular concerns on the development of new highways and railways. In a study entrusted to Mr. Dudley Smith, Assistant Director of the Association of Sugar Producers of Puerto Rico, the economic progress of Puerto Rico was palpable since the occupation of the island by the United States. However, if there was a comparison of the economic progress of Puerto Rico with that of continental United States the island appeared "in most respects, to be a backward, poverty-stricken area, though one of rapidly improving conditions."[501] If Puerto Rico was compared with other countries in the Caribbean and Latin America the economic situation clearly demonstrated improvement. However, when Smith compared the island with some states of the Union he found that the number of railroads and highway miles in Arkansas, Mississippi, Ohio, and Iowa were at least triple the number of those in Puerto Rico. The contrast with Caribbean and Latin American countries provided a perspective on the increased presence of automobiles, buses, and trucks in the Latin American landscape. From the data provided, Puerto Rico had more railroad miles than the Dominican Republic, Haiti, Nicaragua, and Venezuela; but, less than Colombia and Cuba. In highway miles, the relation was similar with the exception of Venezuela with twice the miles of Puerto Rico. The increasing construction of roads in Puerto Rico was not unique as the data of the report showed a world trend towards investing in highways and leaving behind the construction of new expensive railroad tracks.

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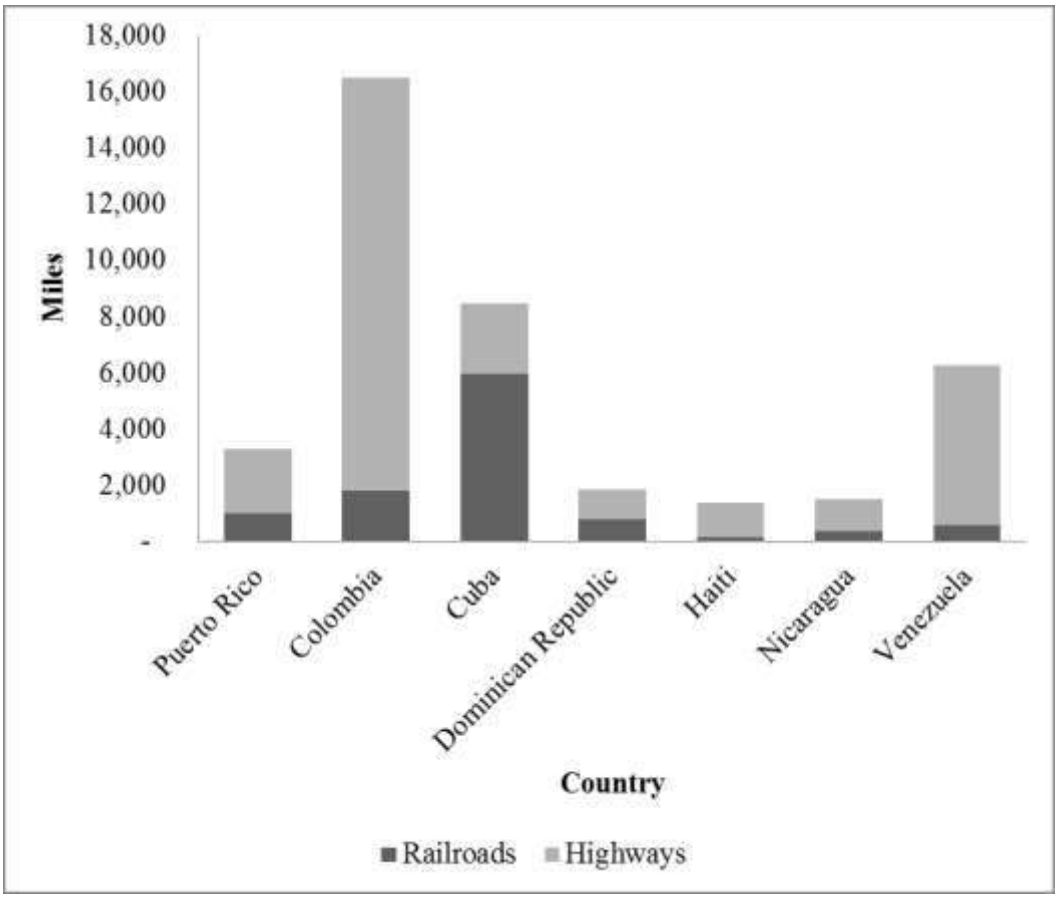
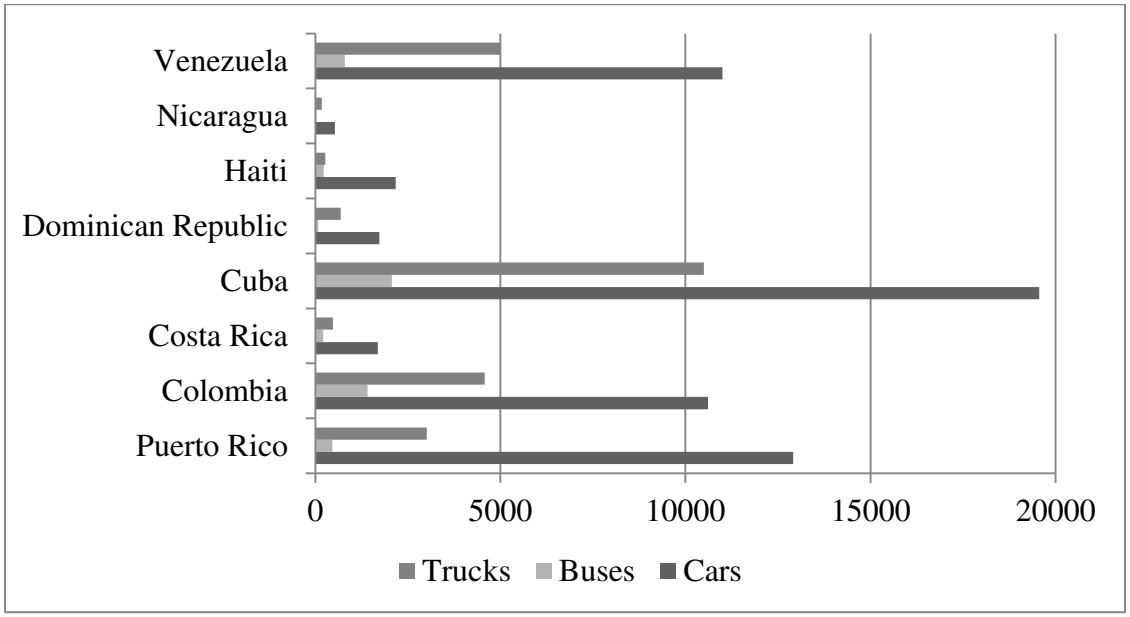
[501] Dudley Smith, *Some standards for measuring Puerto Rico's economic and social progress* (Washington, USA: Association of Sugar Producers of Puerto Rico, 1937), 34.

Figure 4.3. Railway and highway miles in selected Caribbean countries, 1936



SOURCE. - Dudley Smith, *Some standards for measuring Puerto Rico's economic and social progress* (Washington: Association of Sugar Producers of Puerto Rico, 1937), 38.

Figure 4.4. Registered trucks, buses and cars in selected Caribbean countries, 1934.



SOURCE. - Dudley Smith, *Some standards for measuring Puerto Rico's economic and social progress* (Washington: Association of Sugar Producers of Puerto Rico, 1937), 39.

Smith concluded that the transportation infrastructure on the island was appropriate for the geographic extension of Puerto Rico. Countries with greater infrastructure such as Colombia, Venezuela, and to a lesser extent Cuba also surpassed Puerto Rico in land extension. Cuba had ten ports and the distances to those export hubs were accessible via highways and railroads. In Puerto Rico access to the ports was also essential for the economic progress, particularly in view of the mineral resources and an extremely dense population that drove the island to focus on production for external markets. Puerto Ricans and their Caribbean neighbors were different in relation to how they traded, because Puerto Rico consumed products mainly from the United States, “whereas the

manufactures of other Caribbean areas" were "primarily for home consumption."[502] This rational was important. The federal government in Puerto Rico was promoting an increase in food production for internal consumption instead of supporting export crops like sugar with incentives or higher quotas.[503] Mr. Smith concluded that sugar exports allowed Puerto Ricans to achieve a higher purchase power of food crops from the United States. Conversely, more sugar production equaled greater profits for the U.S. economy. Mr. Smith did not criticize the federal policy in his writing, even though, his conclusions deviated from the policy of the New Deal.

In a survey on the benefits of the New Deal in Puerto Rico between 1933 and 1938 Eugene G. Ashe, Project Auditor of the Public Works Administration (PWA), concluded that 85 percent of the insular economy depended on sugar. The profits from the sugar industry translated into dividends to foreign stockholders, and the capital that remained on the island would eventually find its way to the United States since consumer-goods were imported. The promotion of local production was necessary to improve the island's economy but domestic capital was insufficient. Ashe's report did not assess the program in Puerto Rico as a failure, but his words suggested that the New Deal could not help the country to move away from the monocultural economy, which was one of the desired outcomes of the program. This shortcoming demanded an immediate change in the economy which was only possible after the construction of a plan to diversify the economy. With the emergence of native businesses, in Ashe's words:

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[502] Smith, *Some standards for measuring Puerto Rico's economic and social progress*, 6.
[503] Dudley Smith was former Senior Economist in Charge of Economic Section, Division of Tobacco, Sugar, Rice and Peanuts of the Agricultural Adjustment Administration.

> The mental, moral, physical and patriotic attitude of Puerto Ricans will undergo a complete change, and the United States will have paid its debt to civilization and incidentally cemented the bonds of its good-neighbor policy with the Latin American Republics, all of whom now point to Puerto Rico as a horrible example of Yankee Imperialism.[504]

This sentence closed Ashe's report by stating that Puerto Rican economic backwardness was more than a domestic problem; it was a problem of foreign policy. The Good-Neighbor Policy of President Roosevelt wanted to improve economic exchange with Latin America, and Puerto Rico could be the showcase of the great improvement achieved with the close economic relation with the United States.

In tune with the efforts to portray Puerto Rico as a modern and civilized country, in 1939 Governor General Blanton Winship published a collage of photographs commissioned as "intellectual propaganda." Photographs with landscape views taken of several roads and highways filled fifteen pages of the album. One page titled *American Railroad Company* illustrated the headquarters in San Juan, the terminal station, the yard, and a map with the route of the public service railways. The description of the *American Railroad Company* included the acknowledgement of the "efficient cooperation to trade, agriculture and industry."[505] This

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[504] Eugene G. Ashe to Miles H. Fairbank, Memorandum, 23 december 1938, NARA, RG 323: Records of the Puerto Rico Reconstruction Administration, Box No. 3, Entry 13, File: Survey of benefit to Puerto Rico from emergency funds allocated to and disbursed in P.R. -1933 to 1939.

[505] Antonio M. Monteagudo and Antonio Escamez, editors, *Album de oro de Puerto Rico. Golden album of Puerto Rico. Obra de divulgación cultural en pro de la fraternidad americana. A work of intellectual propaganda for American fraternity* (La Habana, Cuba: Artes gráficas, s. a., 1939.)

government publication was one of the last portraits found of railways. In the editor's words, this was a project born from the "ideal of American brotherhood" in times of "new trials of ancient and modern doctrines which" shook "the foundations of a legendary civilization."[506] The Golden Album of Puerto Rico followed a previous publication titled *The Golden Album of the Dominican Republic*, which served as "vehicle […] of American cordiality."[507] In reality, this was propaganda for the Good-Neighbor Policy, which used the island as an example of economic stability and success. The images in the album depicted railroads as a valid icon of modernity to a foreign audience, for which the album was published. This portarayal of the railways was the end of an epoch of government support for railroads.

[506] Monteagudo and Escamez, eds. *Golden album of Puerto Rico*, 6.
[507] Ibid.

CHAPTER V: RAILWAYS UNDER ATTACK

The railroad industry had a new opportunity to reorganize during the slow recovery of the economy that justified dismantling the Puerto Rico Reconstruction Administration (PRRA). In 1939 the census reported 2,952 workers in the railway business, an increase of 14 percent in comparison with the report published a decade earlier.[508] Railroads were in demand by passengers, businesses, and in the 1940s a new customer appeared on the scene: the military. The rise of fascism in Europe indirectly helped the railway industry on the island because railways were considered to be an integral part of defense infrastructure. Since the "railroad boom" during the first decades of the twentieth century, in which railways had an important role in the modernization of the country, this moment was a new experience for the importance of railways but for a different reason: national security.

The intensive use of railroads by the U.S. military during war was not new. During the First World War the ARRC transported troops free of charge, "spent close to $40,000.00 in building a spur from the main road to Camp Las Casas;" and the company took "active part in the war activities in Porto Rico."[509] Now again, particularly in 1942, the ARRC transported approximately 9,000 troops free of charge.[510] The War Department developed different plans for the protection of

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[508] Bureau of the Census, *Bulletin No.3: Occupations and Other Characteristics by Age, Prepared under the supervision of Dr. Leon E. Truesdell, Chief Statistician for Population* (Washington: United States Government Printing Office, 1943).
[509] Clarence Ferguson, "Over the American Railroad in Porto Rico," 38.
[510] National War Labor Board. *In the matter of American Railroad Company of Porto Rico and Union de Obreros de Ferrovías de Puerto Rico*, 27 July 1943, 4, NARA, RG 126, Box No. 1027, File 9-8-93: Puerto Rico-Transportation-Railroad- Wage and Hours - 1939 – 1949.

Puerto Rico and relied on the tracks of the ARRC to use two 8-inch railroad cannons and three 155 mm GPF canons in the event of a coastal attack.[511] In addition, the geo-strategic position of the island justified the establishment of multiple military bases to defend the Atlantic. The U.S. government put together a defense grid of 25 military bases linked by roads and rail tracks. Only four bases lacked direct access to railroad lines: a small military base in Aguadilla, another in Cayey, two in the area of Cangrejos in Carolina, and the naval base in eastern Vieques (Map 5.1).

In 1941, President Roosevelt appointed Rexford Guy Tugwell as Governor of Puerto Rico. Tugwell was deeply familiar with the economic challenges of a territory reliant on agricultural production because he was Secretary of Agriculture in the 1930s. Tugwell was part of the so called "Brain Trusts" of the Roosevelt administration, a selected group of academics that adviced the president. His trajectory in agriculture and his planning approach would mark his plans for Puerto Rico in the particular context of a World War.

In December 1941 Tugwell informed the Secretary of the Interior of his plans for the economic reorganization of the island. In the plan the monocultural economy controlled by absentee corporations was an impediment to economic progress. The solution would be to diversify the economy through the promotion of cooperatives for independent farmers. The enforcement of the 500-acre restriction of land ownership approved under the Foraker Act was the solution to end monopolistic practices and the source of land to be redistributed to small farmers.

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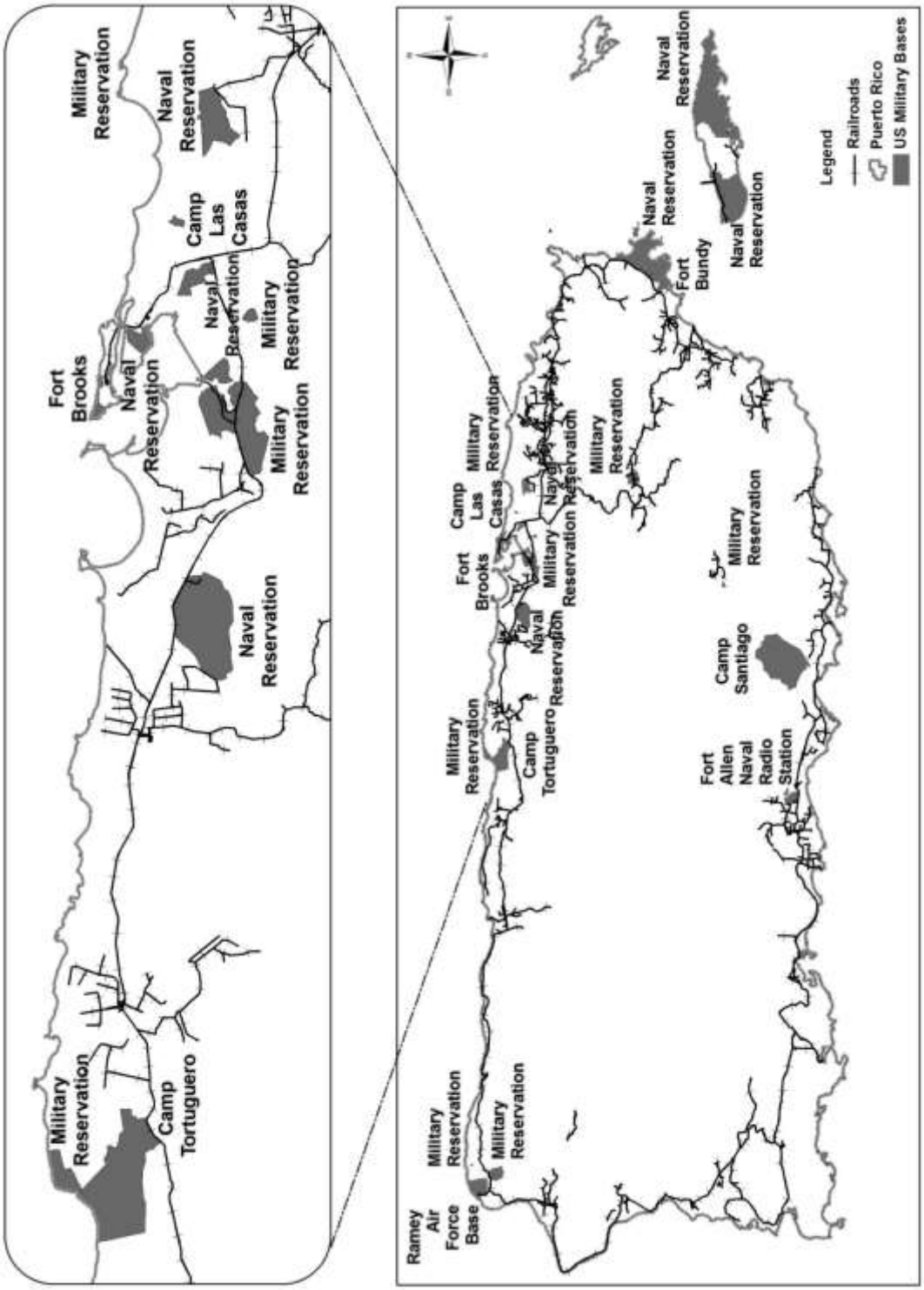
[511] Héctor R. Marín Román, *¡A la vuelta de la esquina! El Caribe camino a la Segunda Guerra Mundial, 1938 a 1941* (San Juan, PR: Publicaciones Gaviota, 2014), 111-112.

Map 5.1. Military Bases and Railroads.



The Land Authority was the governmental agency responsible for establishing new farms and promoting "new hill crops."[512] If the land reform was successful, the role played by the railroads would have to be reassessed in light of a decrease in the demand for sugar cane transportation, which was the main source of income for the railroad industry.

In 1941 the American Railroad Company reported the transportation of 121,959 tons of sugar, 1,222,668 tons of sugar cane, and 244,545 tons of other merchandize. The Fajardo Development Company reported the transportation of 23,246 tons of sugar, 529,878 tons of sugar cane, and 17,853 tons of other merchandize followed by the Ponce & Guayama Railroad Company with 1,446 tons of sugar, 677,093 tons of sugar cane, and 1,715 tons of other merchandize.[513] Although the American Railroad Company transported more freight than the other two companies together returns were insufficient. The ARRC increased freight rates by 10 percent starting on March 1942 and scheduled another 15 percent increase on March 1943. This increase in freight rates would help the company to recuperate from the depression years. In the following table there is a breakdown of freight costs by years (Table 5.1):

[512] Rexford Guy Tugwell, *Changing the Colonial Climate* (New York: Arno Press and the New York Times, 1970), 63.

[513] *Forty-first Annual Report of the Governor of Puerto Rico*, 1941, 34-35.

Table 5.1. Comparison of Freight Rates for sugar cane, ARRC.

KILOMETERS	1907	1917	1923	1933	1942	1943
10	$0.88	$0.84	$1.01	$0.60	$0.66	$0.76
30	1.68	1.58	1.895	1.20	1.32	1.52
50	2.40	1.92	2.305	1.44	1.58	1.82
80	3.10	2.40	2.88	1.8	2.02	2.32
100	3.60	2.76	3.31	1.92	2.11	2.43
150	4.65	3.60	4.32	2.00	2.20	2.53
200	5.40	4.01	4.81	2.20	2.42	2.78
260	5.70	4.44	5.33	2.50	2.75	3.16
300	5.90	4.80	5.76	2.60	2.86	3.29

NOTE.- Per ton of 2,000 lbs. Minimum carload 15 tons.
SOURCE.- *The American Railroad and its place in the transportation system of Puerto Rico*, 1944, 36.

This table shows that even after two rate increases in the 1940s, the ARRC did not reach the rates it had before 1933. Consequently, the company had to assure great freight volume in order to maintain profitable operations. However, local production was under threat after the German submarine warfare became more effective interfering with the Caribbean maritime trade. The German blockade affected food and general merchandize imports and produced a considerable increase in the prices of commodities. In 1942 sugar producer were unsure if the sugar they produced would find its way out of the island and this concern was shared by railroad companies.[514] Ironically, the German blockade would benefit railroad companies. The imports of motor vehicles, the tires, and gasoline were very limited. Rairoads would be the best transportation

[514] Norberto Barreto Velázquez, *Rexford G. Tugwell: El último de los tutores* (San Juan, PR: Ediciones Huracán, 2004), 59-64.

alternative for freight and also for passengers. In 1941 The ARRC reported the transportation of 574,640 passengers and the PRRC reported 1,570,970 passengers. The lack of motor vehicles had to be the reason for a significan increase in passengers transported by the ARRC, which in the last half of 1939 transported 261,000 passengers, "whereas for the similar period in 1942, 854,000 passengers were transported."[515]

Governor Tugwell discouraged the use of railroads or tramways by people in need of transportation. In his words: the situation in San Juan was "complicated by the existence of an old fashion trolley line which belongs to the Puerto Rico Railway and Power Company."[516] The alternative to the "old fashion trolley" were the buses. The White Star Bus Line was the only bus company in the metropolitan area providing service on four routes: the Río Piedras route (7.5 miles), the Villa Palmeras route (5.5 miles), the Loiza route (5 miles), and the Fernández Juncos route (5 miles).[517] This company opened its bus service in 1927 with efficiency until the buses started to encounter mechanical problems. Tires and replacement parts were difficult to obtain and maintenance was inadequate. Bankruptcy was inevitable when the company failed to invest enough capital to maintain its competitiveness.

The PRRC also operated in San Juan and Río Piedras but the route did not converge with the route of the White Star Bus Line. The "trolley" had serious challenges to maintain profitable

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[515] National War Labor Board. In the matter of American Railroad Company of Porto Rico and Union de Obreros de Ferrovías de Puerto Rico. NARA, RG 126, Box No. 1027, File 9-8-93: Puerto Rico-Transportation-Railroad- Wage and Hours - 1939 – 1949.
[516] Tugwell, *Changing the Colonial Climate*, 141.
[517] Roberto A. Sánchez Vilella, *Annual Report of the Puerto Rico Transportation Authority, Fiscal Year 1942-43*,15, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 759.

operations to the point that in 1941 the company halted service between Río Piedras and Condado for two weeks due to power shortages. Under these circumstances, the White Star Bus Line received a permit from the state to provide "special services in the Condado residential section."[518] In sum, the business of passenger transportation in San Juan was not profitable in the early 1940s and would need support from the state to continue operations.

Rexford Tugwell as head of the insular government had the opportunity to improve the transportation system through the institutionalization of the bus company. Economist Francisco A. Catalá identified Tugwell as a follower of the "institutional" economic model learned during his years of student at the University of Pennsylvania.[519] In Tugwell's doctoral dissertation *The Economic Basis of Public Interest* he defended the regulation of business for the protection of the public interest. Following this perspective Tugwell augmented the public sector pursuing the rationalization and planning of the local economy. In 1941 the insular legislature approved the creation of various executive agencies and among them was the Puerto Rico Transportation Agency (PRTA). The first significant action of the PRTA occurred in 1942 when the White Star Bus Line filed for bankruptcy in the federal court. Governor Tugwell with the approval of the Attorney General petitioned in the federal court the transfer of the White Star Bus Line property (worth in $559,501.32) to the PRTA. After negotiations the government acquired 229 buses but only 34 were in operational conditions. The PRTA received the cooperation of the Office of

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[518] J. Ramón Quiñonez, Enrique Cornier, and Joaquín Velilla, *Anual Report of the Public Service Commission of Puerto Rico, for the fisvcal year 1940-41*, October 16, 1941, 13, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 752.
[519] Catalá Oliveras, *Promesa rota:Una mirada institucionalista a partir de Tugwell*, 42.

Defense Transportation (ODT), an agency established by executive order of President Roosevelt to assure "the maximum utilization of the domestic transport facilities of the nation for the successful prosecution of the war."[520] The Puerto Rican Transport Division of the ODT bought 496 new tires in an effort to increase the number of buses to 65. Moreover, the ODT commissioned a survey to offer solutions to the problem of transportation.[521] The members of the commission were Manuel García de Quevedo, a Puerto Rican attorney and former member of the Interstate Commerce Commission; M. E. Nuttila, Conservation Engineer of the New York City Service Oil Company; William Addams, Atlanta District Director of motor carriers in the Interstate Commerce Commission; and Ralph A. I. Bogan V.P. of Greyhound Lines. Although the commission had to study traffic problems to provide solutions for buses and railways, all members were only associated with the bus industry.[522] In response to gasoline shortages the Public Service Commission relied on the ARRC to provide emergency service for the metropolitan area. "Emergency trains" scheduled 5 trips departing from San Juan or Río Piedras with stops in Parada 36½, Parada 31, Martín Peña, Parada 20, Parada 15, and Parada 10.[523] In the final report submitted to ODT by the transportation committee the transit problem was not properly discussed and in its place the transportation committee incorporated a survey of maritime transportation.[524]

The next step was the seizure of the Porto Rico Railway Light and Power Company a

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[520] Joseph B. Eastman, "The Office of Defense Transportation," *The Annals of the American Academy of Political and Social Science*, vol. 230, (1943): 4.
[521] Roberto A. Sánchez Vilella, *Annual Report of the Puerto Rico Transportation Authority, Fiscal Year 1942-43*,9, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 759.
[522] "Comisión expertos transporte está ya en la isla," *El Mundo*, 17 August 1942, 5, 9.
[523] "Servicio del ferrocarril a partir de hoy," *El Mundo*, 10 September 1942, 11.
[524] "Buscan alivio a transportación en P. R.," *El Mundo*, 12 September 1942, 1, 11.

corporation with three hydroelectric power plants and one steam plant with transmition and distribution lines in thirty-five municipalities. The justification to seize the PRRC and other power companies was on the grounds of the war emergency, because there was scarcity of fuel oil and the government considered the unification of all power sources to be necessary. Under the War Powers Act the government planned to acquire Mayaguez Light Power and Ice Company and the Porto Rico Railway Light and Power Company, which also operated the trolley in San Juan. The Court ordered the Federal Works Administration to acquire on and after July 20,1942 all the property owned by the PRRC after a compensation of $6,250,000 and then the Water Resources Authority would operate the facilities. The Puerto Rico Water Resources Authority was created by the legislature in 1941 for the control of water and power resources.

The PRRC went to the Federal Court in Puerto Rico to stop the confiscation "alleging that the taking of the property was not for war purposes, but 'a conspiracy between the Governor of Puerto Rico, R.G. Tugwell, his agent, Antonio Luchetti' and an unnamed person in the Federal Department of the Interior."[525] After some months the judge "validated the seizure of all the company's properties by the United States under the Lanham Act."[526] The Lanham Act of October 14, 1940 declared that ""public works" may be acquired, maintained, and operated in areas or localities found by the President to be suffering an acute shortage of public works or equipment for public works necessary to the health, safety or welfare of persons engaged in national-defense activities," and the President of the United States declared on June 8, 1942 that an

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[525] *Forty-Third Annual Report of the Governor of Puerto Rico*, 1943, 41.
[526] Arthur Krock, "In the Nation: A court restraint on condemning private property," *New York Times*, 8 December 1942, 24.

acute shortage of public works did existed or impeded national defense activities in the locality of Puerto Rico.[527] The Porto Rico Railway Light & Power Company went to the Circuit Court of Appeals alleging that the declaration of the president did not specifically mentioned the condemnation of all the property of the PRRC, for example the trolley had no relation with the power needs however "all of the road bed and rolling stock, including tramway cars, rails and ties, wires and equipment, of the tramway system operated in and between San Juan and Santurce; and all easements, rights-of-way and other rights and interests owned or enjoyed by the Porto Rico Railway Light and Power Company" would be seized. Judge Calvert Magruder decided on November 27, 1942 in favor of the PRRC because it was not sufficiently evident "that the President approved the taking" and it was not obvious that the appropriation of all the property owned by the PRRC "would contribute to the relief of a shortage in electrical transmission and distribution facilities."[528] For these two reasons the government had to restore full possession of all the property held from the PRRC.

The efforts of Ernest Gruening in the 1930s to control all sources of power became a reality on January 1944. Mr. Benjamin W. Thoron, Director of Territories in the Department of the Interior, approved the purchase of the PRRC by the Federal Works Administration. The "old fashion trolley" with all the hydroelectric plants controlled by the PRRC would be transferred to the Water Resources Authority. The Federal Works Administration paid $11,218,416.66 to acquire the only privately-owned power company in operation "to assist in the movement to industrialize

[527] Puerto Rico Ry. Light & Power Co. v. United States, 131 F.2d 491, Circuit Court of Appeals, First Circuit, November 27, 1942.
[528] Ibid.

the island."[529] In the transaction, the PRRC's trolley was not crucial and eventually the government would dismantle it. At first sight, the actions of the government may have appeared as a movement towards the nationalization of vital infrastructure for the public well-being. This was not the case, as Emilio Pantojas García suggested in his study *Puerto Rican Populism Revisited*: "These expropriations were in no way 'nationalizations'; rather they were 'state takeovers' of public services for strategic reasons."[530] The government made these 'takeovers' in the exceptional context of the war to pave the path for economic development during peacetime.

After oil scarcity, food supply was another government concern because Puerto Rico did not produce enough food crops to supply internal demand, and many food products in the United States were under ration. In this context, the Agricultural Adjustment Agency (AAA) conditioned the economic assistance offered to farmers with a new requirement to have them plant a minimum of 7 percent food crops out of the total land planted with sugar cane. The justification was simple: in war time everyone had to do their part even if it was not economically reasonable. For J. Adalberto Roig, V.P. of Roig Refinery and *Ferrocarriles del Este* this experience provided empirical evidence that demonstrated the error of promoting food-crop production on soil ideal for cane planting. His data came from experience in Humacao and Yabucoa, places in which most of the crops did not produce profits. For example, 374.21 acres of cowpeas produced a $6,439.23 loss; 137.32 acres of beans produced a loss of $2,877.33; 56.15 acres of corn lost $1,246.77; and

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[529] Office of Information of Puerto Rico, *Press Release*, 14 January 1944. NARA, RG 126, Box No. 1037, File 9-8-93: Puerto Rico-Transportation-Railroad- Wage and Hours - 1939 – 1949.
[530] Emilio Pantojas-Garcia, "Puerto Rican Populism Revisited: the PPD during the 1940s," *Journal of Latin American Studies*, vol.21, no.3 (1989): 540.

only sweet potatoes produced $722.27 profits on 40.27 acres of land.[531] In words of Mr. Roig: "we recognize the fact that food crops should be grown to meet as best as possible shortages of food which may arise due to lack of shipping space, but it also seems impractical that these low yield crops be produced at high losses."[532] J. Adalberto Roig proposed the maintenance of sugar production as the "economic backbone of the island."[533] From his perspective the sugar industry benefited the country as a whole, as well as related industries such as the railroads. There were two discourses that clashed. For sugar *centrales* the answer to the economic problems lied in increasing exports; but, for the local and federal government the answer was in the decrease of imports. Local production of food had important detractors and the government had problems shipping foodstuffs to the Caribbean even before the attack on Pearl Harbor. The Caribbean Emergency Program Division reported:

> the disruption of ocean shipping and congested continental railroad facilities, coupled with advancing costs and the growing difficulties in obtaining from the mainland, supplies which were in great demand for the armed forces and for the Lend-Lease operation, proved beyond the ability of the insular private trades to properly plan, finance and perform the tremendous task of providing, within a reasonable time, the essentials of life for the people of Puerto Rico and the Virgin

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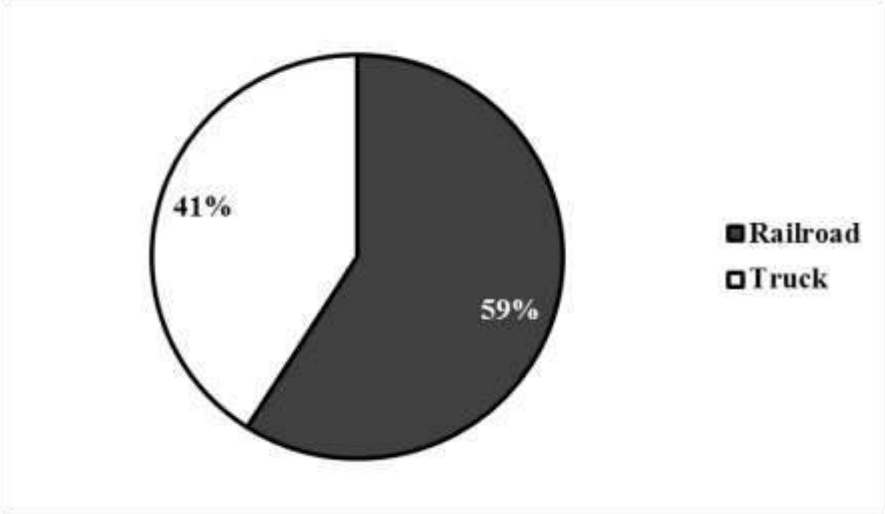
[531] J. Adalberto Roig, "Experience in Planting Food Crops at the East End of Puerto Rico," *Gilmore's Puerto Rico Sugar Manual* (New Orleans, USA: A.B. Gilmore, 1942-43), 10-11.
[532] Roig, "Experience in Planting Food Crops," 12.
[533] Ibid.

Islands.[534]

At this juncture, the Food Distribution Administration (FDA), a federal-funded agency, allocated warehousing and distribution services for foodstuff to needy civilians when the shipments arrived on the island. Most of the merchandise was unloaded in the San Juan Area (81 percent) with a fraction arriving in Ponce (15 percent), and Mayagüez (4 percent). The FDA used trucks to transport the merchandise from the ports to the warehouses; "by truck and railroad to other distribution centers", and they included the use of a "small sailing craft to the Islands of Vieques, Culebra, Saint Thomas and Saint Croix."[535] For the intra-island transportation of foodstuffs the FDA relied more on railroads than on trucks (Figure 5.1).

[534] Caribbean Emergency Program Division, Program Liason (FDA), *Report of operations of the Caribbean Emergency Program*, 20 January 1944, 2, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 377.
[535] Caribbean Emergency Program Division, Program Liason (FDA), *Report of operations of the Caribbean Emergency Program*, 20 January 1944, 10, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 377.

Figure 5.1. Intra-island freight transportation, 1942-1943.

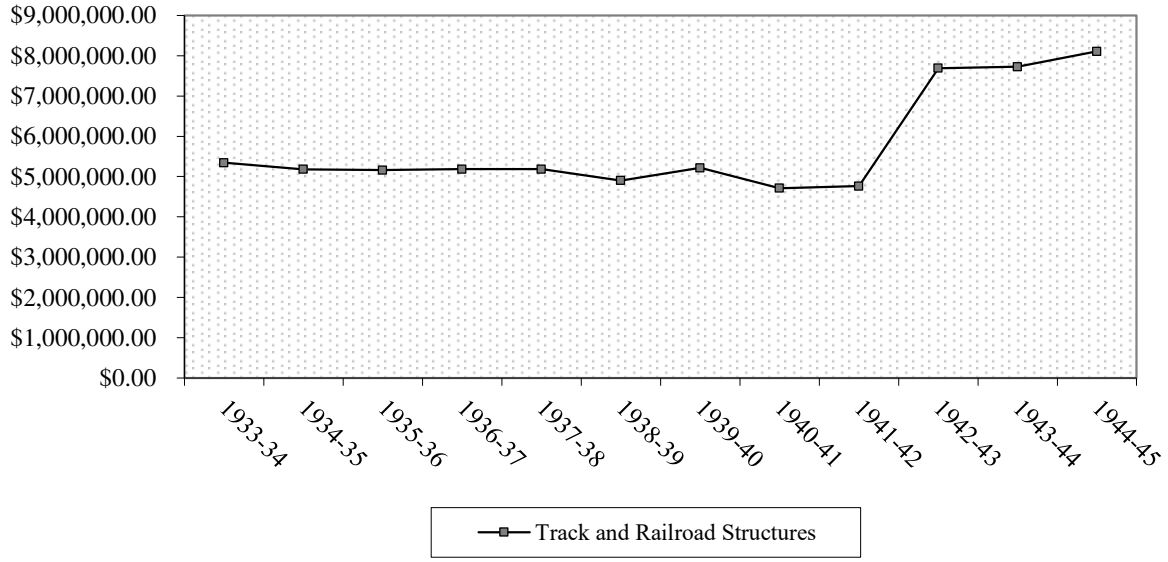


SOURCE.- Caribbean Emergency Program Division, Program Liason (FDA), *Report of operations of the Caribbean Emergency Program*, 20 January 1944, 10.

The Caribbean Emergency Program validated the effectiveness of railroads in the distribution of foodstuff. However, the local government did not appear to value the benefits of the railroads due to the fact that it imposed an increase in taxes on land with rails and buildings by 62 percent (Figure 5.2).[536] This tax impacted the finances of railroad companies and sugar centrales alike. In response, railroad companies lobbied to persuade policy makers to revoke the new tax. Sugar centrales had an easier way to evade the taxes: dismantle the internal railroad infrastructure and purchase trucks to transfer raw cane to the mill and sugar to ports and markets.

[536] "Tabulation of Assessed Value of Real Property by Municipalities and Classes," *Annual Report of the Treasurer of Puerto Rico*, 1933-1945.

Figure 5.2. Assessed Value Property.



SOURCE.- "Tabulation of Assessed Value of Real Property by Municipalities and Classes," *Annual Report of the Treasurer of Puerto Rico*, 1933-1945.

The rise in property taxes coincided with the expiration of the tax exemption enjoyed by the ARRC because of the war. A panel from the National War Labor Board also made several recommendations in order to maintain the ARRC in operations including the continuation of the tax exemption "in view of the large role the railroads" played during "the war effort."[537] The sugar *centrales* also needed a strategy to avoid taxes, but for these companies the only solution was to adopt an alternative system of transportation. Most sugar mills had important investments in rail infrastructure and were not pleased with the idea of abandoning their railroads just to avoid the

[537] Obreros Unidos de las Ferrovías de Puerto Rico, Memorandum to Rexford G. Tugwell, governor of Puerto Rico, San Juan, Puerto Rico, 5 September 1945. AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 408.

payment of land taxes (Table 5.2).

Table 5.2. Railroads operated by *centrales*, 1942-1943.

CENTRAL	TOWN	MILES/ GAUGE
Cambalache	Arecibo	61 km/ 30-inch & 13 km/ 1 meter
Canóvanas	Canóvanas	50 km/ 30-inch
Carmen	Vega Alta	19.5 km/ 19-inch & 34.5 km/ 1 meter
Cayey	Cayey	24 km/ 30-inch
Coloso	Aguada	24 km/ 20-inch & 417 m/ 1 meter
Constancia	Toa Baja	53.3 km/ 30-inch
Constancia	Ponce	4.5 km/ 24-inch
Cortada	Santa Isabel	22.5 km/ 24-inch
Eureka	Mayagüez	40 km/ 24-inch
Fajardo	Fajardo	132 km/ 1 meter
Guánica	Ensenada	60 km/ 1 meter
Juanita	Bayamón	22 km/ 24-inch & 2 km/ 1 meter
Juncos	Juncos	200 km/ 30-inch & 1 meter
Lafayette	Arroyo	10.5 km/ 24-inch & 25 km/ 30-inch
Los Caños	Arecibo	17 km/ 26-inch & 25 km/ 1 meter
Machete	Guayama	22.5 km/ 1 meter
Mercedita	Ponce	62 km/ 26-inch & 4 km/ 1 meter
Monserrate	Manatí	10 km/ 24-inch & 3.5 km/ 1 meter
Plazuela	Barceloneta	22.9 km/ 26-inch & 63.8 km/ 1 meter
Rochelaise	Mayagüez	7 km/ 24-inch
Roig	Yabucoa	47.8 km/ 1 meter
Rufina	Guayanilla	700 m/ 1 meter
San Francisco	Yauco	1.6 km/ 1 meter
San José	Río Piedras	28 km/ 1 meter
San Vicente	Vega Baja	43 km/ 30-inch
Santa Juana	Caguas	200 km/ 30-inch & 1 meter
Victoria	Carolina	30 km/ 30-inch & & 1 meter

SOURCE. - *The Gilmore Puerto Rico Sugar Manual*, 1942-43.

As Table 5.2 illustrates, the majority of sugar corporations owned railroads, but these corporations also relied on other means of transportation such as trucks and even ox-carts. The

trend was to introduce more and more trucks for the transportation of cane. The *Gilmore's Puerto Rico Sugar Manual* exemplified this shift by citing the case of the South Porto Rico Sugar Company, commonly known as Central Guánica. The Fortuna Railroad, owned by Central Guánica, had hundreds of wagons for the transportation of cane "however starting with the 1941 crop the mill began to receive cane in trucks; establishing special handling arrangement for the feeding of truck-delivered cane to one of the mill tandems which" was "handling truck cane to the extent of twelve hours per day."[538] Central Guánica was not a common *central*, as it was the largest sugar manufacturer on the island with a production of 79,877.47 tons in 1941.[539] The growing use of trucks for freight transportation in lieu of railroads, and a higher property tax for railroad-related property were not the only two challenges faced by railroad companies in the 1940s. The reorganization and activism of railroad workers further added economic stress to the administration of railroad corporations.

A new worker's organization

On February 22, 1942 the *Obreros Unidos de la Ferrovías de Puerto Rico* (*Obreros Unidos*), a new union organized in 1941, held their first congress in Ponce. At the congress José A. Lanauze Rolón, leader of the insular communist movement made a call to railroad workers in the syndicate to help the nation in the struggle against "the enemies of democracy and social

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[538] Abner Blanks Gilmore, *Gilmore's Puerto Rico Sugar Manual: Including data on Santo Domingo, Haiti, and Virgin Island Mills, 1942-1943* (New Orleans, USA: Gilmore Pub. Co., 1943), 72.
[539] Table 8 (Property Taxes): Comparative Statistical Report of Sugar Manufactured in Puerto Rico. *Annual Report of the Treasurer of Puerto Rico*, 1942.

justice."[540] He understood that he enemy of democracy was Fascism not the railroad companies. The 'state' was leading the struggle to destroy fascism abroad and for this reason the workers made a truce with the government. Furthermore, in the program distributed in their congress *Obreros Unidos* demonstrated their allegiance to governor Tugwell by printing fragments of his speeches to the legislature. Raúl Guadalupe de Jesús explained in *Sindicalismo y lucha política* that in 1941 the Communist Party in Puerto Rico decided to establish alliances in a Popular Front as this was the case of the Moscow-based Comintern for parties throughout the world including Latin America. Communist workers offered governor Tugwell their help in the struggle against fascism and his "Plan de Siembra," which was the name of the program for the promotion of fruit and vegetable crop production over sugar.[541] In this situation, the *Obreros Unidos* developed their syndicalist agenda to achieve a "better quality of life and higher salaries."[542]

Miguel Torres, president of *Obreros Unidos*, informed the governor of Puerto Rico that workers in the ARRC received less that the minimum wage salary of 20 cents per hour.[543] In 1938 the Fair Labor Standards Act (FLSA) had increased the minimum wage but the ARRC had ignored this. The *Obreros Unidos* also went to the legislature for support from Luis Muñoz Marín, President of the Senate. Torres tried to persuade Muñoz Marín to act in favor of the workers by reminding him that railroad workers voted for the *Partido Popular Democrático* (PPD), and

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[540] José A. Lanauze Rolón, "La Unión hace la fuerza," in *Obreros Unidos de la Ferrovías de Puerto Rico: Primer Congreso* (San Juan, PR: Casa Baldrich, 1942), 7.
[541] Raúl Guadalupe de Jesús, *Sindicalismo y lucha política: Apuntes históricos sobre el Movimiento Obrero Puertorriqueño* (San Juan, PR: Editorial Tiempo Nuevo, 2009), 70-71.
[542] Ramón Barreto Pérez, "Palabras de orientación," in *Obreros Unidos de la Ferrovías de Puerto Rico: Primer Congreso* (San Juan, PR: Casa Baldrich, 1942), 11.
[543] Obreros Unidos de la Ferrovías de Puerto Rico, "Memorandum." Archivo de la Fundación Luis Muñoz Marín, Cartapacio IV-L.M.M., Presidente del Senado 1941-1948, 242. Ferrovías, Unión de Obreros.

powerful corporations like the ARRC only desired the electoral defeat of the PPD.[544] Sociologist César J. Ayala stated that "the Great Depression led to the formation of the Popular Democratic Party in 1938 on a program based on the redistribution of the sugar latifundia and to the search for alternatives to sugar monoculture."[545] Railroad workers assumed the PPD would be commited to the claims of low paid railroad worker as the party also supported did with the *jíbaro* (subsistence farmer). Luis Muñoz Marín, the founder of the PPD, avoided playing a leading role in the conflict by choosing Ernesto Ramos Antonini, PPD legislator in the House of Representatives, to propose the creation of a commission to study salaries in the railroad industry.[546]

The last move of *Obreros Unidos* was to request the support of the military. From the worker's perspective the ARRC had the best financial condition in years, because the war had increased the demand for railroad services:

> Las bases militares, representan un buen negocio para la empresa a tal extremo que su material rodante no da abasto para cubrir la demanda del servicio, tanto de pasajeros como del comercio y carga en general de toda la isla.[547]

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[544] Miguel Torres, president, and Mariano Ducrett, Secretary of the Unión de Obreros Unidos de las Ferrovías de Puerto Rico to Luis Muñoz Marín, President of the Senate in Puerto Rico, 13 April 1942. Archivo de la Fundación Luis Muñoz Marín, Cartapacio IV-L.M.M., Presidente del Senado 1941-1948, 242. Ferrovías, Unión de Obreros.
[545] Ayala, *American Sugar Kingdom*, 241.
[546] Julio A. Pérez, Secretary of the President of the Senate to Miguel Torres, president, and Mariano Ducrett, Secretary of the Unión de Obreros Unidos de las Ferrovías de Puerto Rico, 15 April 1942. Archivo de la Fundación Luis Muñoz Marín, Cartapacio IV-L.M.M., Presidente del Senado 1941-1948, 242. Ferrovías, Unión de Obreros.
[547] Translation: "Military bases represent a good deal for the company to such an extent that its rolling stock is not meeting the demand both for passenger and for freight throughout the island."
Miguel Torres, president, and Mariano Ducrett, Secretary of the Unión de Obreros Unidos de las Ferrovías de Puerto Rico to James L. Collins, Commanding General of the US Army in Puerto Rico, 15 May 1942. Archivo de la Fundación Luis Muñoz Marín, Cartapacio IV-L.M.M., Presidente del Senado 1941-1948, 242. Ferrovías, Unión de Obreros.

In view of this situation, the workers threated the corporation with a strike and requested the support of the local government and the U.S. military. *Obreros Unidos* claimed that a prompt resolution of the conflict was in the nation's best interest to uphold the "lucha heroica contra las fuerzas del mal representadas por las naciones agresoras nacifascistas."[548]

The administrators of the ARRC claimed that the serious financial difficulties the company was confronting impeded them from granting higher wages to the workers. Profits declined since the volume of business had considerably decreased "as the result of unfair competition by the different trucking companies and individual truck and automobile owners," who were not being subjected "to any rate regulation, control, or inspection by the Public Service Commission."[549] From the workers perspective, the company was justifying their evasion of compliance with the federal law. The local government had not enforced the law since 1938, and as a result the workers undertook the task of pushing the company to yield to their claims through a strike. In the conflict, the government of Puerto Rico served as mediator between the railroad union and the ARRC administration. *Obreros Unidos* demanded a 12.5 percent increase in wages but the company only accepted a 5 percent increase.[550] Initially, the arbitration was unsuccessful and the ARRC proceed to lay off workers who had been affiliated with the union during the negotiations. After four months of talks with Charles A. Goldsmith as arbitrator the union and the ARRC signed a collective agreement for one year. For the company, this concession increased the payroll by

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[548] Translation: "Heroic struggle against evil forces represented by belligerent Nazi-fascist nations." Ibid.
[549] Arther F. Raper, Martín Travieso, V. Geigel Polanco, et al., "Resolution," 5 June 1942, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 401.
[550] "Tugwell Immobilizes Island Rail Traffic," *New York Times*, 13 May 1943, 11.

$96,000 per year. *Obreros Unidos* achieved a 10 percent increase in conventional wages for approximately 1,500 permanent workers and 400 temporary labors. Another achievement for the workers was the double payment for overtime and holidays.[551]

The takeover by the federal government

Since the collective agreement was for only one year, tensions soon resurfaced and negotiations resumed. The workers paralyzed the railroad system with a strike on May 12, 1943. The day before the leadership of the union sent a telegram to governor Tugwell to notify him of the imminent cessation of the railroad service, although the workers made a commitment to offer special service if the Armed Forces required it for the war effort.[552] On the first day the insular police reported: "at Ponce the number of strikers estimated at six-hundred. At San Juan and Río Piedras districts the number [was] greater."[553] That same day Governor Tugwell decreed a mobilization of the National Guard and Insular Police to "preserve order, to protect workers and other citizens in their legitimate discussions and to provide against injury to property during the period of the immobilization."[554] During 48 hours the government forced the suspension of the rail service to avoid confrontation between those in conflict.[555] In essence, the impact of this decision only negatively affected the railroad company since there was no service and the company could not blame the workers. The workers would continue their protest without the fear of being

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[551] "Resuelto asuntos de salarios del ferrocarril", *El Mundo*, 4 August 1942, 5.
[552] Miguel Torres to Rexford G. Tugwell, *Telegram*, 11 May 1943, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 408.
[553] Louis Ramirez Brau, Chief of the Insular Police to the Governor of Puerto Rico, San Juan, Puerto Rico, 12 may 1943, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 408.
[554] Administrative Bulletin No. 844. San Juan, Puerto Rico, 12 May 1943, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 408.
[555] "Labor News," *Wall Street Journal*, 13 May 1943, 2.

dispersed by security forces.

The union won the battle or that was the appearance after President Franklin D. Roosevelt issued an Executive Order to "take immediate possession" of the ARRC to secure "the movement of supplies and food for the armed forces and the civilian population."[556] President Roosevelt also pointed out that railroads were "essential to the effective prosecution of the war."[557] On May 15, the Office of Defense Transportation (ODT) started to operate the ARRC, and appointed Mr. O. Arthur Kirkman as operations manager. The federal government required the return of the workers to resume railroad operations and the union responded affirmatively. For the union, the Executive Order was beneficial because it directed the National War Labor Board (NWLB) to study the disagreements between the workers and the ARRC, and thus settled the major disputes. The NWLB created a committee with three members: Cecil Snyder, Supreme Court Judge; Frank Dorathy, Manager of Bacardí representing "the employer"; and Jaime Benítez, Chancellor of the University of Puerto Rico representing "the employees." The committee report recommended the distribution of $100,000 among the workers. Finally, on November 16, 1943 the *Obreros Unidos* signed the collective-bargaining agreement.

Under the ODT there was an effort to modernize the railroads though the purchase of twelve diesel locomotives to reduce operating expenses. The machinery arrived on February 1944 at a cost of $635,000 with tax exemptions.[558] At the time, railroad wagons and machinery seemed

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[556] Franklyn D. Roosevelt, *Executive order*, 13 may 1943, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 408.
[557] Ibid.
[558] International General Electric Co. Letter to Mr. Paul H. Quinn, Director of Division of Territories and Island possessions, 26 January 1944. NARA, RG 126, Box No. 1027, File: 9-8-93: Transportation-Railroad- General.

obsolete but it was necessary to maintain the railroads in operation for the sake of national defense.

Unaware of it the strike by the workers opened the door for the advance of Tugwell's plans for the railroads. In the context of the war a strike was an act of disloyalty or even sedition, but Governor Tugwell and Conger Pratt, Commanding General of the Puerto Rican and Antilles Department of the U.S. Air Force, preferred to avoid violent repression and to make the conflict strictly between the workers and the company. For Tugwell this was the opportunity to take over railroad corporations:

> We had been suspecting for some time that the railroad's owners were trying to unload it on the Government. They said it was unprofitable in spite of the fact that it paid no taxes (under an old exemption just running out), that its wages were about one tenth of railway workers' wages in the States, and that for years maintenance and replacements had been at so low a level as to all but cause a One-Hoss Shay collapse. To arrive at the conclusion of unprofitability allowance had to be made for the fact that there were three separate companies each with high-salaried officials and expensive counsel. It had obviously been a bonanza in the good old *Coalición* days when taxes need not be paid, when bad services were condoned by a tame Public Service Commission and when demands for higher wages were considered subversive; but anyone could see that things were going to be different now. And since a vast increase in temporary military haulage had raised operating revenues above those of any past period, it was a good time to

capitalize them, establish a whacking value, and sell out to the Government.[559]

Tugwell's desire was supported by General Pratt because he considered the railroads dispensable for military infrastructure: ""That railroad," he said solemnly, "has no military importance. We don't need it. There is nothing we can't move by truck.""[560] Indeed, since the beginning of the Second World War the War Department made significant investments in military infrastructure. In a letter from James L. Collins, Commanding General of the U.S. Army in Puerto Rico, to governor Tugwell, road construction had to be a priority:

> The construction of the Insular Government Highway from San Juan, Puerto Rico to Punta Borinquen, Puerto Rico is a project vitally necessary to the proper defense of the Island. This project should be given all possible priority ratings in order to accelerate its completion. Also the construction of the highway between San Juan and Cayey is of great importance to national defense and should be entitled to a priority rating.[561]

The insular government had plans for the economic development of Puerto Rico during the war as well as for its aftermath. In 1944 the Puerto Rico Planning, Urbanizing, and Zoning Board published a technical paper explaining the economic benefits of the war. Military construction of naval bases, air fields, hospital facilities, water and power plants, and highways translated in an

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[559] Rexford Guy Tugwell, *The Stricken Land: The Story of Puerto Rico* (New York, USA: Greenwood Press Publishers, 1977), 500-501.
[560] Tugwell, *The Stricken Land*, 503.
[561] James L. Collins, Commanding General of the US Army in Puerto Rico, to governor Tugwell, 16 October 1941, NARA, RG 126, Box No. 866, File 9-8-69: Puerto Rico, Highways, Federal Highway Act.

important monetary income for the island's economy. At the end of the war the government had to modify the economic structure to make up for the reduction in military investments. Highways were built for military ends but they brought civilian benefits because it would be the infrastructure for the transportation of commercial goods and facilitated the mobility of workers. Not everything was positive because the report identified an undesirable effect of military expansion: "military requirements have taken about 25,000 acres of agricultural land out of production in Puerto Rico for military bases, airfields and road construction. This is a serious problem in a land-hungry country, for alternative employment cannot easily be found for the families thus dispossessed."[562] This illustrates the main concern of the Planning Board baptized as the "Problem of Puerto Rico." The "Problem" consisted of three elements: high population density, poverty, and low productivity. The island needed a study of basic needs among them an assessment of the transportation infrastructure. New highways built with federal funds provided the backbone for the peace-time transportation infrastructure. The study could enlighten the need for new roads to connect food-producing areas to local markets. In this report, the authors conceived the railroads as a "supplement" to the highways. There were no suggestions to improve the railway system or to extend the railways to new areas such as the eastern section between Guayama and Humacao were this was needed. The authors of the report only gave importance to the transportation of raw cane and sugar. Although sugar production was not under attack *per se*, the group advocated a change in the priorities and the promotion of food crops. Only the encouragement of food crops did not

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[562] Frederic P. Barlett and others, *A development plan for Puerto Rico* (Santurce, PR: Office of information for Puerto Rico, 1944), 6.

included railroads as a means of transportation for products to the local markets. After the war the future of railways was certainly opaque in view of new priorities:

> After the war there will be an expansion of intra-island air transportation in Puerto Rico as well as of highway travel by buses and other common and private carriers, so that the use of the island's railroad system for passenger transportation will probably be greatly reduced. Indeed, the proposed circumferential modern highway will almost parallel the railroad around the Island. Nevertheless, with the contemplated expansion of Puerto Rico's industries, the railways will remain important for heavy freight and should in any case be maintained for emergencies.[563]

An important factor constributing toward the disappearance of railways occurred after the state acquisition of the PRRC on July 1942. The *Autoridad de Fuentes Fluviales* (Power and Water Resources Authority), a public corporation created by Act No. 83, on May 2, 1941 to generate and distribute power, acquired the PRRC. The popular presumption was that the street electric tramway in San Juan, known as the "trolley," was going to be enhanced. However, the Water Resources Authority used the shortage of supplies to justify a delay in improvements to the tramway. Two years later, Antonio Luchetti, Director of the Water Resources Authority, dismissed temporary trolley workers, and granted paid vacation to permanent workers, prior to permanently shuting down operations on March 30, 1944.

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[563] Barlett, *A development plan for Puerto Rico*, 51.

No more trolleys

On April 3, 1944 the insular House of Representatives approved a resolution to create a committee to study the reasons behind the shutdown of trolley service. The committee had 10 days to submit their final report.[564] An editorial in *El Mundo* criticized the decision of the Water Resources Authority to discontinue the trolley service in San Juan and Santurce. The gasoline crisis and tire scarcity were the reasons given by the newspaper which argued for the continuation of the trolley service as an effective means of transportation. On the other hand, *El Mundo* depicted the trolley as obsolete: "el tranvía anticuado de San Juan era prácticamente un estorbo público y no había razón alguna para mantenerlo operando con perjuicio del tránsito expedito y de la propia comodidad de los pasajeros que bien podían y debían viajar con mayor confort en vehículos modernos y rápidos."[565] However, the editorial claimed that it was a mistake to reduce trolley service during war time, since it was crucial: "el tranvía por obra de emergencia, se convirtió en un medio utilísimo de servicio público."[566] In a second editorial the newspaper questioned the rights of the Water Resources Authority to make decisions over the trolley without the Public Service Commission. By law, the Water Resources Authority was not subject to any regulatory agency. After the acquisition of the PRRC by the Water Resources Authority, the Public Service Commission had no legal power to hold back the decision to close the trolley. The editorial

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[564] "Cámara investigará la suspension del tranvía," *El Mundo*, 4 April 1944, 12.
[565] Translation: "the San Juan old-fashioned tramway was practically a public eyesore and there was no reason to maintain its operations affecting the transit and the comfort of the passengers which could and had to travel more comfortably in modern and rapid vehicles."
"El servicio del tranvía," *El Mundo*, 4 April 1944, 6.
[566] Translation: "the trolley for emergency work became a useful mean for public service."
Ibid.

questioned this authority because without any regulatory agency the Water Resources Authority could make arbitrary decisions.

To substitute the trolley, Roberto Sánchez Vilella, director of the *Autoridad de Transporte*, announced the use of six buses in the Condado area. *El Mundo* argued that Sánchez Vilella's solution was inadequate, because thousands of passengers confronted serious problems reaching their destinations.[567] The *Liga de Proprietarios de Fincas Urbanas* (Urban Property-Owners League) also criticized Luchetti's decision to cease trolley service and were skeptical about the capability of the *Autoridad de Transporte* to substitute the trolley:

> El servicio de carros eléctricos es absolutamente necesario, y aún más en los actuales momentos, para resolver nuestro complicado problema de tránsito. El servicio que presta la Autoridad de Transporte es inadecuado, y tardará mucho tiempo en ponerse en condiciones de servir al público como es debido.[568]

Rexford Tugwell, as president of the Water Resources Authority board and not as governor indicated that a drought was the reason behind the "temporary" shut down of the trolley. Tugwell demonstrated his political skills in the manner he addressed the transportation problem in the press. The lack of electric power forced the Water Resources Authority to make the decision to end trolley service until enough rain allowed hydroelectric plants to generate sufficient power.

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[567] "La cuestión del tranvía," *El Mundo*, 5 April 1944, 6.
[568] Translation: "The trolley is absolutely necessary and even more so at the present time to solve our complicated traffic problem. The service provided by the Transportation Authority is inadequate, and will take a long time to be able to properly serve the public."
"Favorecen que tranvías sigan operando en SJ" *El Mundo*, 12 April 1944, 9.

Consequently, the shutdown of the trolley was a pragmatic decision in reaction to the forces of nature. The necessity to rely on bus service was "temporary," he explained. Tugwell and Luchetti should have announced the problem caused by the drought prior to closing the trolley, not two weeks after the crisis. Tugwell commissioned Mr. Cyrus G. Hill to conduct a study to determine if the tramway was in acceptable conditions to resume operations in view of the deterioration of the infrastructure. In reality Governor Tugwell had no plans to resume operations because the tramway had been under the control of the Water Resources Authority for two years without making any major investments to improve it. The *Federación Libre de Trabajadores* raised the question of the need to stop the trolley since the corporation had healthy finances and the juncture of the war demanded transportation alternatives for the people.[569]

Tugwell had two subordinates with the mission to deal with the crisis while his public image was safely guarded. One of his subordinates was Antonio Luchetti, who declared in the press that he did not consider the situation critical but was committed to resume the trolley service if the situation was merited. The other figure was Roberto Sánchez Vilella who was responsible for the improvement of bus service in order to make the electric tramway unnecesary. Sánchez Vilella refuted the idea that thousands were left without any transportation alternative arguing that only 5 percent of the passengers who could actually use the electric tramway did.[570] In an editorial, *El Mundo* determined that the destruction of the trolley was related to Tugwell's political motivations. *El Mundo* further added that the study commissioned to Hill was merely a means to validate the

[569] "Espera se revoque orden suspendiendo el tranvía," *El Mundo*, 10 April 1944, 9, 13.
[570] "AFF tiene el propósito de eliminar el tranvía," *El Mundo*, 15 April 1944, 5, 15.

decision of the Water Resources Authority in response to the popular rejection of the discontinuation of trolley service. In this scenario, the only possibility of resurrecting the trolley service lied with two federal agencies: The Office of Price Administration (OPA) and the Office of Defense Transportation (ODT).[571] Neither of these agencies received notification from the Water Resources Authority regarding the decision to halt the tramway service.[572]

Political adversaries of the PPD in the House capitalized on the trolley crisis by approving a resolution passed by 19 votes in favor out of 37 demanding an immediate restarting of the trolley service.[573] Senator Luis Muñoz Marín supported the role of the Public Service Commission to oversee the decision of the Water Resources Authority. With this, Muñoz Marín moved away from the spotlight and left the controversy in the hands of the regulatory agency. Benjamín Ortiz, President of the Public Service Commission, had publicized days before a new interpretation of the law by the agency's attorneys in which the trolley continued under the legal control of the PRRC, although the shares and the operation of the company were in effect under the control of the Water Resources Authority. In this scenario, the Public Service Commission could oversee decisions related to the trolley. The Public Service Commission postponed a public hearing until the submission of Cyrus Hill's report. In the meantime the *Autoridad de Transporte* committed itself to provide 10 buses to alleviate transportation demand.

The issue of the trolley service divided federal and insular agencies. The Water Resources

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[571] "¿Qué dice OTD y OAP?," *El Mundo*, 15 April 1944, 6.
[572] "Empresas de servicio público del gobierno deben estar bajo jurisdicción CSP, dice Muñoz," *El Mundo*, 18 April 1944, 1, 12.
[573] "Protesta de la cámara por la suspension de tranvía en SJ," *El Mundo*, 17 April 1944, 4.

Authority and the *Autoridad de Transporte* promoted the use of buses in place of the trolley, but the Office of Price Administration and the Office of Defense Transportation considered the trolley a vital element in defense infrastructure, even if the buses were operating efficiently.[574] All of the agencies were resolved to wait for Cyrus Hill, an independent consultant commissioned to make an informed decision about the suitability of the trolley service. On April 28 Hill's report became public, and concluded that tracks and wagons needed repairs; however, the electric tramway was functional:

> No obstante gran parte del material rodante, las vías y el sistema eléctrico es viejo, y que reparaciones substanciales son deseables, un mantenimiento adecuado y un funcionamiento cuidadoso a una velocidad moderada *podría habilitar el sistema para funcionar con un riesgo no mayor del promedio, por muchos años*."
> (Emphasis added)[575]

Cyrus Hill's assessment was most certainly a bombshell for the local government. Now Governor Tugwell needed to find a new tactic to discreetly get rid of the trolley. Paul H. Quinn, insular director of the ODT, received orders from Washington to request in the public hearings a speedy reopening of the trolley operations to ameliorate the transportation crisis.[576] Tugwell, as

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[574] "Celebrarán una audiencia en la Comisión de Servicio Público sobre los tranvías," *El Mundo*, 20 April 1944, 1, 14.
[575] Translation: "much of the rolling stock, tracks, and electrical system is old, and substantial repairs are desirable, however, proper maintenance and careful operation at a moderate speed could enable the system to operate with a moderate risk for many years."
"Experto afirma que el tranvía puede operar," *El Mundo*, 29 April 1944, 1, 18.
[576] "OTD interesada en reanudar tranvías," *El Mundo*, 29 April 1944, 18.

president of the Water Resources Authority board, agreed to any proposal made by the ODT and recommended the acquisition of the trolley by the *Autoridad de Transporte*.[577] With this move Tugwell distanced himself from the conflict. This is illustrated in an editorial in *El Mundo*:

> El gobernador Tugwell, que indudablemente no quería suspender por mero capricho un servicio público que la ODT y la OAP consideran indispensable durante la emergencia, ha resuelto recomendar que la AF se guíe por las indicaciones de la OTD, lo cual equivale a decir que los tranvías comiencen a funcionar a la mayor brevedad posible.[578]

It appears that Tugwell was the mastermind behind the eradication of the railways, but the press blamed Luchetti. The editorial stated that Luchetti, not Tugwell, was responsible for the decision to get rid of the trolley because it operated unprofitably.[579] After the hearings called for by the Public Service Commission, the agency endorsed the decision of the Water Resources Authority to halt trolley service in view of the decline in power production. Once the drought ended there was no reason to not resume the trolley service.[580] On the morning of May 4, 1944, after 35 days without running the trolley service resumed on the streets of San Juan. The press chronicled the reopening of the trolley service saying:

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[577] "Experto afirma que el tranvía puede operar," *El Mundo*, 29 April 1944, 1, 18.
[578] Translation: "Governor Tugwell, who certainly did not want to discontinue by a mere whim a public service considered essential by the ODT and OAP during the emergency, has resolved to recommend that the AF be guided by the directions of the ODT, which is to say the trams must resume service as soon as possible." "Contra la pared," *El Mundo*, 1 May 1944, 6.
[579] "Contra la pared," *El Mundo*, 1 May 1944, 6.
[580] "Es muy probable que servicio de tranvías sea reanudado mañana," *El Mundo*, 2 May 1944, 4.

> Cuando el tranvía llegó a la parada 23 ya se encontraba prácticamente lleno por viejos clientes que montaban en el mismo, con caras risueñas. Al pasar frente a la Escuela Superior Central un crecido número de estudiantes que había en las afueras del plantel, comenzó aplaudir. De muchas casas junto a la avenida sus residentes salían a los balcones y ventanas a ver pasar el carro eléctrico como si fuera cosa completamente nueva en la ciudad.[581]

El Mundo portrayed a popular joy on behalf of the trolley. However, the trolley was not a new answer to the problem of transportation but a need related to the scarcity caused by the war against fascism. The question was whether the trolley would be justified when the war ended and scarcity vanished.

[581] Translation: "When the trolley arrived at stop 23 it was already almost full with old customers who rode in it with smiling faces. As they passed the Central High School a growing number of students who were outside the institution began clapping. Residents of many houses along the avenue went out their balconies and windows to watch the electric trolley as if it was something completely new in town."
"Ayer se reanudó el servicio de carros electricos en San Juan," *El Mundo*, 4 May 1944, 5.

CHAPTER VI: THE COLLAPSE

The aspiration of policy makers in the 1940s revolved around the desirability for a new economic model to improve the lives of the Puerto Ricans. Possible strategies arose from ideas developed during the experiences of the Great Depression. Insular economic challenges continued during the war. The main difference lay on in the shift of the role played by the federal government from funding relief and economic rehabilitation during the 1930s. In 1943 *Life* magazine reported:

> Since the start of the war, Puerto Rico's perpetual crisis has deepened. Its economy has been based on exporting sugar, rum, coffee, tobacco, and needlework; importing food, clothing, machinery and many raw materials. The need for cargo ships elsewhere, plus, Nazi U-boat campaign, have cut Puerto Rico's imports 75 percent. The people are starving. Inflation is having a field day. The price of rice has risen from 4¢ to 11¢ a pound, codfish from 9¢ to 40¢ a pound.[582]

With this scenario the railways faced major financial challenges. They gambled on an economic recovery but local policy makers had the promotion of new industries, highways, and airports in mind. Politicians did not include the railroads in the future blueprints for the industrialization of Puerto Rico and blamed the railroads' disappearance on their inability to sustain profitable operations.

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[582] "Puerto Rico: Senate Investigating Committee finds it an unsolvable problem," *Life*, 8 March 1943, 23.

State owned railroad?

In the fourth congress of the *Obreros Unidos* railroad workers approved a resolution to promote the acquisition of the franchise and properties of the *Compañía Ferroviaria de Circunvalación* (CFC) by the *Autoridad de Transporte*. The workers believed that under public ownership the employees would receive better treatment because service was a priority over profit. This proposal should not have been problematic because in 1942 the government took land from the sugar *centrales* at the discretion of the *Autoridad de Tierras* (Land Authority).[583] If the government had no issues with the expropriation of big sugar industries then it was plausible that the same could be done to the railroads. The workers had little understanding concerning the federal and insular governments' plans. Railways would have a different role in the country after the war as exemplified by the seizure of the PRRC by the state in order to acquire the hydroelectric plants, not the electric tramways.

The insular government had no interest in the confiscation of the CFC. Harold Ickes, Secretary of the Interior, sent a memorandum to the president of the United States on June 1944 to inform him that Governor Tugwell agreed "that possession and operation by the government of the properties of the American Railroad Company of Porto Rico" were "no longer required for the successful prosecution of the war and that they may now be turned back to the owners."[584] At the end of the fiscal year (June 30, 1944), the federal government returned the railroads to their

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[583] Mariano Ducret, General Secretary of the Obreros de las Ferrovías de Puerto Rico, Resolución, 14 January 1945, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 408.
[584] Sgd. Harold L. Ickes, Memorandum, 20 June 1944, NARA, RG 126, Box No. 1027, File 9-8-93: Transportation-Railroad-General.

owners, the CFC.[585] The return of the ARRC to civilian control could have signified a rebirth for the CFC but this was not the case. A year later, the administration of the CFC sent governor Tugwell a letter requesting his cooperation to maintain the railroad company in operation. Fragile finances pushed the company to ask for tax exemptions, rate adjustments, and enforcement of the regulations for fair competition. The Public Service Commission responded to the call of the CFC by assigning James E. Curry to audit the company in order to provide solutions.[586]

Ironically, as an omen of the railroads' collapse, some months after the return of the railroad to CFC the first president of the company, Don Manuel González, died of heart problems. At the time of his death González was the richest man in Puerto Rico, with major investments in railroads and sugar businesses.[587] A month later more people related to the CFC died. On Monday night the CFC's 9:00 p.m. train departed from San Juan to Ponce. The train derailed near Aguadilla casuing 11 deaths and 41 injured passengers because it was traveling at excesive speed. This was the worst railroad accident in the island's history.[588]

Union workers did not consider accidents to be a superficial issue. In an assembly of the FLT, railroad workers from the *Union de Ferrovías* demanded that the Public Service Commission force the CFC to use two drivers for all diesel locomotives.[589] For the union, the only way to assure the safety of the workers and passengers was through the adoption of these measures. For the CFC, more safety meant onerous economic requirements.

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[585] "El ferrocarril vuelve a manos de la compañía," *El Mundo*, 30 June 1944, 14.
[586] "La CSP ordena hacer studio del ferrocarril," *El Mundo*, 15 March 1945, 7.
[587] "Manuel Gonzalez Dies; Richest Puerto Rican," *Reading Eagle*, 16 October 1944, 13.
[588] "Once murieron; Tren quedó destrozado en un desnivel," *El Mundo*, 8 November 1944, 1, 5, 16.
[589] "Obreros de ferrovías amenazan con declarar un paro parcial," *El Mundo*, 23 January 1945, 1, 16.

The collective agreement with the *Obreros Unidos de la Ferrovías de Puerto Rico* expired on August 1945. The workers demanded an increase in wages but they recognized the company's financial problems. If economic projections were similar to those of 1939 (prior to the war) the income would be approximately 1.8 million dollars. From the company's income 1.3 million dollars would go for salaries that would leave only $500,000 for operational costs. From the figure budgeted for operational costs one would have to deduct $205,000 for taxes, and the reminder for fuel, lubricants, maintenance, and repairs of tracks and buildings. In this alarming scenario, Miguel Torres, the president of *Obreros Unidos*, requested state aid from Governor Tugwell for the workers, because the company was not only unable to grant higher wages but in all probability would reduce their salaries. If the government did not act, the company would file for bankruptcy.[590] The workers also went to the President of the Senate, Luis Muñoz Marín, with a document detailing the needs of the workers and the CFC.[591] The approval of tax exemptions and other economic measures to maintain the railroad in operation was in the hands of the legislature. The company failed to pay their taxes for three years which amounted to a debt of $450,000.[592] With the company's records in hand the union appealed to the governor and the legislature for a debt amnesty and tax exemption for future years. The company would only then agree to sit down and negotiate workers' wages.

The conflict went to arbitration and the federal government once again appointed Charles

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[590] Miguel Torres and Mariano Ducret to Rexford G. Tugwell, *Memorandum*, 5 September 1941, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 408.
[591] "Los ferroviarios vieron a Muñoz," *El Mundo*, 8 September 1945, 14.
[592] "Empresa del ferrocarril insiste en una exención," *El Mundo*, 20 September 1945, 8.

A. Goldsmith as mediator.[593] The union and the company signed the collective bargaining agreement on November 16, 1945, but the issue of salaries was put on hold until the committee completed the study. The Committee of Arbitration required financial reports from the company to confirm their alleged inability to increase salaries. The company would grant higher salaries if their finances allowed, but a dramatic increase in payroll would leave the company with insufficient funds for operating expenses. In only a decade the company had substantially raised the salaries by 187 percent, from $783,711.59 in 1935 to $1,470,751.48 in 1944.[594] The impasse between the company and the union continued until the Committee of Arbitration submitted a final report. On October 10, the *Obreros Unidos de la Ferrovías* publicly requested governmental seizure of the railroad because the committee submitted recommendations that were unacceptable to the workers.[595] The call made by *Obreros Unidos* would not be heard because the federal government did acquire the railroad company in 1943 because it was times of war, but on September 2, 1945 the war was over and there was no justification for a seizure.

Post-war transformations

The economy of Puerto Rico underwent a dramatic transformation in the post-war years. Agriculture would be planned by the Agricultural Company, an agency created by the legislature in 1945, to organize production and markets. This agency had to encourage the commercial development of agricultural resources after the Land Act of 1941 enforced the 500-Acre law. The Foraker Act of 1900 included a clause prohibiting the ownership of more than 500 acres of land by

[593] "Controversia de obreros del tren irá a arbitraje," *El Mundo*, 8 November 1945, 5.
[594] "Citan pérdidas de la compañía ferrocarril," *El Mundo*, 18 January 1946, 4.
[595] "Unión pide gobierno se incaute el ferrocarril," *El Mundo*, 11 October 1946, 3.

an individual or corporation, but the law was never enforced until the Land Authority, created in 1941, received the power to expropiate the land in excess. This initiative of the government affected the sugar industry after a decade of harsh governmental control of the production through the imposition of quotas. The land obtained by the government after the seizure of the excess in the 500 acres would be transferred to farmers or cooperatives for the promotion of different crops including foodcrops for local consumption.

The aim of Tugwell was the transformation of the economy by diversifying agriculture and promoting industrialization. The point of depature was the creation various agencies by the legislature. In 1942 the majority in the legislature were members of the *Partido Popular Democrático* including Luis Muñoz Marín president of the party and the Senate. With the votes of the PPD the legislature approved the creation of the Planning Board, to make studies about land use, to establish zoning codes for urban development, and to create a six-year economic plan. The planning of the insular economy was a new approach after decades of pure laissez-faire. The legislature also created the Puerto Rico Development Company with the purpose of promoting the creation of new industries, commercial enterprises, mining projects, and cooperatives. The Development Company also had the responsibility of conducting "research and experimentation in the marketing, distributing, advertising and exporting of all products of Puerto Rico."[596] The final task was the establishment of new enterprises on account of the Puerto Rico Development Company for the exploitation of local raw materials. To finance these projects the legislature

[596] *Forty-Third Annual Report of the Governor of Puerto Rico*, 1943, 46.

created the Development Bank of Puerto Rico. Rafael Buscaglia, Treasurer of Puerto Rico and president of the bank, was responsible for the approval of loans for new or existing enterprises being previously rejected by commercial banks. However, the annual budget assigned to the Bank, the Development Company, and the Planning Board was insufficient to achieve the goals.

In 1942 the government of Puerto Rico had the platform to lauch an industrial project in times of shortages resulting from the diminution in commercial shippings. The decline in trade justified the need of produce what the island needed domestically. The shortages of raw materials and rising prices discouraged private investors from establishing companies in times of war and trade uncertainty. The Puerto Rico Development Company undertook the creation of factories in the absence of private initiatives. The agency acquired a cement plant from the PRRA and named it the Puerto Rico Cement Corporation, in 1943 it created the Puerto Rico Glass Corporation to produce bottles for the rum industry, and the Puerto Rico Pulp and Paper Corporation for the production of paperboard to export rum and other products. The next subsidiaries of the Puerto Rico Development Company would be the Puerto Rico Shoe & Leather Corporation, and the Puerto Rico Clay Products Corporation.

The subsidiaries of the Puerto Rico Development Company were the pillars of this first stage of industrialization (1942-1950). Historian James L. Dietz characterized this stage as an intermediate Import Substitution Industrialization based on the production of intermediate imputs for the rum and the construction industry (bottles, cardboard, cement, tiles) and consumer goods for local consumption (shoes, textile merchandises). In this stage of industrial development the government-owned factories stimulated local production showing local investors the economic

posibilites of these businesses.

During the war an important flow of capital entered to the island channeled by the military due to the construction of bases and other infrastructure. An example was the "military road" built to shorten the distance between Fort Buchanan and Punta Borinquen Air Base at a cost of 5 million dollars. This project injected money into the local economy, gave continuity to the road building started by the Department of the Interior since the U.S. occupation (Appendix 4), and in the long term provided road infrastructure needed for the success of the industrialization plan. José Bolivar Fresneda recommended that a closer look be given to the military's role in the policies of infrastructure, and claimed that the military build-up paved the path for the 1940s economic development in Puerto Rico.[597]

In the first annual report after the end of the war Governor Rexford Tugwell presented the status of his plan for economic development:

> The year 1945-46 saw a marked advance in the industrialization program which was initiated in 1942 with the establishment of the Puerto Rico Industrial Development Company, in the hope of rectifying the discrepancy between population and resources. Among other accomplishments, The Company began operation of a paper board and a glass container factory, started the construction of a heavy ceramics plant and a shoe factory, and completed plans for the

[597] José L. Bolívar Fresneda, "Las inversiones y los programas militares: Construyendo la infraestructura y los recursos humanos de la posguerra," in *Puerto Rico en la Segunda Guerra Mundial: Baluarte del Caribe*, edited by Jorge Rodríguez Beruff, and José Bolívar Fresneda (San Juan, Puerto Rico: Ediciones Callejón, 2012), 136-171.

establishment of a cotton textile mill. All this was an integral and essential part of the Island's post-war development program.[598]

After World War II the United States had an unprecedented economic expansion and Puerto Rico would be impacted in various ways. Harvey S. Perloff, director of the Economic Division of the Puerto Rico Planning Board considered this moment beneficial for the island economy because the "continental market for the major Puerto Rican products" sustained "the relatively high postwar farm income."[599] Agriculture benefited with the reopening of the U.S. market and the expansion of U.S. production would alleviate the island's "population problem." Policy makers considered the population density in Puerto Rico problematic, but out-migration to the United States would alleviate the problem of unemployment. However, Perloff recognized that migration also affected the productive capacity of the island. Historian James Dietz offered a diferent argument, less optimistic. Dietz considered the post-war expansion of the U.S. economy a problem for the state-owned factories in Puerto Rico because imports from the United States resumed and the companies were not able to compete. After two years, in 1947, the efforts to promote industries to substitute imports came to an end without acquiring the benefits of this initial stage of industrialization, which included the "development of a larger entrepreneurial class, technological learning, improving industrial efficiency, [and] a more skilled work force."[600] The aborted import substitution process altered the industrial development stategy. State-owned

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[598] Forty-Sixth Annual Report of the Governor of Puerto Rico, 1946, 1.
[599] Harvey S. Perloff, "Transforming the Economy," *The Annals of the American Academy of Political and Social Science*, vol. 285 (1953): 52.
[600] James Dietz, *Puerto Rico, Negotiating Development and Change* (Colorado, U.S.A.: Lynne Rienner Publishers, 2003), 45.

companies had to be sold and the government would attract industries from the United States. The new strategy consisted in attracting investors from the United States though tax abatements and exemptions.[601] The legislature approved a "Tax Holiday Act" exempting new industries from municipal, property and income taxes and from excise taxes on machinery and raw materials after July 1, 1947. In addition, companies in Puerto Rico did not pay federal taxes since the approval of the Foraker Act in 1900. The "holiday" would expire on June 30, 1959 but followed with three years of graduated low rates.[602]

One of the tasks of the Planning Board was the preparation of a Master Plan of Rural Transportation Facilities. The Mapping Division of the Planning Board had to prepare an inventory of the roads suited for motor vehicle traffic. The work of the Planning Board would be useful for the Transportation Authority, another agency created in 1942. People would rely once again on their automobiles or acquire new ones and commerce would again count on trucks as a means of transportation. The railroad companies experienced the reappearance of motor vehicles with distress because the end of the war resulted in a renewed competition and the end of the tax exemptions. During the war, railroad companies benefited from these exemptions because they were part of the defense apparatus. But during peace time they returned to providing a civil service; and consequently, their tax exemption status also changed. However, the absence of an effort to extend tax exemptions to railroad companies occurred in times of governmental policies for economic development grounded in tax cuts.

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[601] *Forty-Seventh Annual Report of the Governor of Puerto Rico*, 1947, 94.
[602] Ibid., 95.

In 1946 President Harry S. Truman appointed Jesús T. Piñero as the first Puerto Rican governor. During Piñero's governorship the Transportation Authority developed the transportation platform of the future. The law allowed the agency to "dispose of any and all equipment, supplies, services, goods, and such other property real and personal as the Authority" deemed necessary.[603] The priority was the establishment of an efficient bus service in the metropolitan area in lieu of establishing an integrated tramway and bus system. The new interest of policy makers was in transportation, and "considerable attention was given to future developments in air travel in the Caribbean area."[604] The promotion of the island as a tourist destination for U.S. citizens was not a new idea and since the U.S. occupation the island was portrayed as the Switzerland of the Caribbean. During the first decades of U.S. control, the infrastructure in Puerto Rico was not in a position to exploit an industry of tourism. In 1936, the Department of Agriculture and Commerce put forward their efforts in making Puerto Rico a place that would be highly attractive to tourists. Since one of the greatest concerns was the lack of suitable accommodation for the tourists, the Department of Agriculture and Commerce tried "to induce someone to build and operate a first class hotel," and would provide him with "free land and exemption of taxes."[605] With these incentives the Industrial Development Company signed an agreement in 1947 with the Hilton Hotels Corporation for the construction of a 300-room hotel at a cost of 5 million dollars.[606]

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[603] Legislature of Puerto Rico, *Puerto Rico Transportation Authority Act*, 7 May 1942.
[604] Rexford G. Tugwell, *Forty-Fourth Annual Report* (San Juan, Puerto Rico: Oficina Insular de Compras Division de Imprenta, 1945), 52.
[605] *Annual Report of the Commissioner of Agriculture and Commerce*, Fiscal Year 1936-37, 59, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 743.
[606] Forty-Seventh Annual Report of the Governor of Puerto Rico, 1947, 96.

Another initiative for the promotion of the tourist industry was the approval of a bill in the legislature for the creation of the Institute of Tourism with an initial budget of $300,000. Using the New York office of the Department of Agriculture and Commerce, the Institute of Tourism conducted an aggressive advertising campaign with "thousands of pamphlets, descriptive literature and views of the Island and a set of five posters in colors were distributed to tourist agencies throughout the United States and Canada."[607] The campaign also included exhibitions and participation in festivals and pageantry contests. From 1937 to 1938 twenty tourist ocean liners arrived in Puerto Rico. However, from 1946 on tourists arrived on planes. As a result, the country needed a new international airport and the insular government relied on the Transportation Authority for its development. The efforts to build an international airport became a priority for the promotion of the tourist industry. Visitors would rely on taxis or buses and railroads were not considered a transportation alternative or a tourist attraction in itself.

Last Stop: Parque Borinquen

Tramway workers in the San Juan trolley also were in a situation of job insecurity. On September 19, 1945 Governor Tugwell announced the prompt cessation of service provided by the electric tramway operated by the *Administración de Fuentes Fluviales* (AFF).[608] In order to cut their losses the board decided to close down the trolley service and the chairman "stated that he had been assured that other means of transportation would be available by November 30, 1945 and

[607] Department of Agriculture and Commerce, *Annual Report to the Honorable Governor of Puerto Rico, Fiscal Year 1937-38*, 51, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 729.
[608] "Cesará el servicio del Trole," *El Mundo*, 19 september 1945, 1, 18.

he recommended that operation of the street railway system be discontinued as of that date."[609] The board voted to lay off 63 workers with a two months severance pay package.

The Water Resources Authority's board ended the railway operation in recognition that competition from cars, buses, and trucks would make the tramway economically unsustainable. Apparently, the governor did not meet with the chiefs of other agencies to inform them of his plans. Antonio R. Barceló, president of the Public Service Commission, and José G. Bloise, director of the Transportation Authority, declared they were unfamiliar with the plans of the Water Resources Authority.[610] The Department of the Interior was widening the Ponce de León Avenue and the project included the leveling of tramway tracks in concrete, but the agency did not receive any official communication from the Water Resources Authority. It was cheaper to remove the tracks and simply asphalt the entire avenue but the status of the trolley was unknown. The editorials of *El Mundo* criticized the decision of the Water Resources Authority and denounced the lack of coordination between governmental agencies. It also asked that those passengers who may have preferred the use of the trolley over the *publicos* be considered.

Rafael Picó, head of the Planning Board, backed the Water Resources Authority's decision. In his words: "La Junta recomendó hace meses que el tranvía fuera eliminado."[611] If the Planning Board had already eliminated the trolley from the San Juan development plans it was just a matter of time before the tramway met its end. This plan to close the trolley clearly explained the lack of

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[609] *Minutes*, Puerto Rico Water Resources Authority, 18 September 1945, 4, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 418.
[610] "Ni Barceló ni Bloise sabían sobre el Trole," *El Mundo*, 20 September 1945, 1, 20.
[611] Translation: "Months ago the board recommended the elimination of the tramway."
"Picó no creía eliminaran tan pronto tranvía," *El Mundo*, 22 September 1945, 5.

interest from the Water Resources Authority in investing in the maintenance of tracks and repairs for the wagons. In order to demonstrate that the trolley was indeed obsolete the agency abandoned maintenance.

The press condemned the imminent cessation of the trolley service. *El Mundo*, the principal newspaper on the island, published various editorial columns questioning the reasons behind the dissolution of the trolley. The main hesitation was the lack of alternatives left to the people without private automobiles.

In mid-November, José G. Bloise, director of the *Autoridad de Transporte,* recognized the impossibility of the agency to provide adequate bus service by month's end. The Agency ordered 80 buses from a factory in the United States but the automobile industry and dockworkers were on strike.[612] For this reason, the board of the Water Resources Authority met and agreed to maintain the trolley in service until the *Autoridad de Transporte* received the units needed from the United States to provide efficient service.[613]

In a report prepared under the auspices of the Division of Economic Research of the Puerto Rico Industrial Development Company the difference between income from the railways and gasoline vehicles was evident. Income from the railways was dramaticaly lower (Table 6.1):

[612] "Las perspectivas de mejora en autobuses son oscuras: Bloise," *El Mundo*, 5 November 1945, 1, 18.
[613] "Cancelada la orden sobre los tranvías," *El Mundo*, 17 November 1945, 1.

Table 6.1. Purchased local transportation: Gross Income (in thousands of dollars), 1944-46.

TRANSPORTATION	1944	1945	1946
Bus & Ferry transportation (s)	4,264	6,282	6,496
Públicos & Taxis (s)	26,160	33,582	30,714
San Juan trolley (s)	120	131	119
Steam railway (s)	607	547	362

SOURCE. - *Gross Product of Puerto Rico, 1944-1946* (Río Piedras, Puerto Rico: Editorial Universitaria, 1949), 9.

The government could justify closing down the trolley but the lack of coordination between agencies helped to create an atmosphere of uncertainty about transportation in San Juan. Almost a year later, in August 1946, the Public Service Commission endorsed the end of the trolley operation, because the *Autoridad de Transporte* finally received new buses to replace the trolley.[614] On September 30, 1946 the San Juan trolley journeyed for the last time. *El Mundo* published a romantic review of the last trip, although, *La Democracia* reported how people vandalized the trolley:

> La despedida al vehículo anticuado y ensordecedor para darle paso al ómnibus modernista y con el necesario confort, fue bellísima oportunidad para que centenares de jóvenes de todas las estratas de nuestra sociedad se dedicaran al saqueo y a la destrucción de una propiedad que por ser pública pertenece a todo el pueblo… El vehículo tuvo que suspender su marcha incontables veces porque los

[614] "CSP sostiene la AT tiene suficientes vehículos para suspender el tranvía," *La Democracia*, 26 August 1946, 7.

diversionistas no desperdiciaban oportunidad para detenerlo.[615]

The *Imparcial* did not explain why people reacted this way, if it was a band of criminals or thieves, or a violent reaction of commuters because of the closing of the trolley. The following morning the Department of the Interior started the removal of the tracks on the Ponce de León Avenue. The agency continued the widening if the road in order to increase the flow of vehicles. With wider roads to accommodate more automobiles and the hasty removal of the tramway tracks the city welcomed a new modern era founded on individual transportation.

ARRC files bankruptcy

On November 1946, the workers of the ARRC celebrated the Boston Court of Appeals' decision ruling that a railroad company must meet "full wage claims of its employees, even though it was contended this might force the company out of business."[616] The *Obreros Unidos de las Ferrovías de Puerto Rico* immediately resumed their demands for retroactive wages that the company had failed to pay since 1938. The ARRC consistently stated their disposition to increase worker's wages, although, they were financially incapable of granting them. Unionized workers did not agree with the company's claims, and condemned the practice of maintaining low wages to increase company's earnings. The union pointed out that workers from the ARRC received the lowest salaries in the transportation industry. For example, a fireman in the Ponce & Guayama

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[615] Translation: "Farewell to the outdated and deafening vehicle to give way to the modernist bus and the necessary comfort, it was a beautiful opportunity for hundreds of young people from all stratum of our society to devoted to the destruction of property and looting what is public and belongs to all the people ... the vehicle had to delayed its march countless times because these people wasted no opportunity to stop it."
M. Mariotta, "La tragedia vivida antenoche por el 'Ultimo Trolley' de S. J.," *La Democracia*, 2 October 1946, 1.
[616] "Money Trouble No Excuse," *Spokane Daily Chronicle*, 30 November 1946, 1.

Railroad earned 45 cents per hour in contrast to 26 cents per hour earned in the ARRC.[617] Although the union was demanding higher wages the administration of the ARRC was proposing a $200,000 payroll reduction. The *impasse* between the workers and the company would be solved after the report of the Insular Board of Minimum Wages. In the meantime the company decided to postpone the discussion of the clauses relating to salary increases.

The Mandatory Decree No. 12 approved by the Minimum Wage Board prescribed wages of 40 cents per hour for skilled workers, 30 cents per hour for semi-skilled workers, and 25 cents per hour for un-skilled workers in the railroad industry, but in all other transportation branches it was 50, 40 and 30 cents per hour for the same group of workers. The Decree also established the 8-hour day and 48-hour week for all transportation workers. Overtime had to be compensated with double pay.[618] For the union the Decree No. 12 was setback for railroad workers, so they filed a petition for review.[619] In order to pressure the company, the *Obreros Unidos de las Ferrovías de Puerto Rico* threatened the ARRC's administration and the government with a railroad strike that would affect the 1947 cane harvest which was about to begin.

After multiple meetings the president of *Obreros Unidos*, Primitivo Meléndez, alerted the General Director of the ARRC, Etienne Totti, of their decision to declare a strike in two days. Meléndez informed Totti that he had the power to halt the strike if there was a commitment to raise

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[617] Unión Obreros Unidos de las Ferrovías de Puerto Rico, *Manifiesto*, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 408.
[618] Forty-seventh Annual Report of the Governor of Puerto Rico, 1947, 105.
[619] Primitivo Meléndez and Mariano Ducrett to Cándido Oliveras, Santurce, Puerto Rico, 13 January 1947, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 457.

workers' salaries.[620] However, the strike began on February 26, 1947 at 6:00 p.m. The local government did not get involved in the conflict and the federal government demonstrated its apathy to intervene after a decision was made to have the Army distribute the mail on the island.[621] The disruption of the mail service was a serious infringement in the federal sphere and the striking workers could be subject to imprisonment for disrupting the mail service caused by the railroad strike.

The strike ended on March 31. A week later, on April 8, Secundino Lozada informed Governor Jesús T. Piñero about the precarious economic situation of the company and urged the governor to offer some economic assistance to maintain the company in operation. Piñero had several alternatives that could assist the ARRC. In 1945 the government created a rental subsidy program known as Aid to Industrial Development (AID) to promote the relocation of U.S. companies on the island. Economic historian James Dietz found that after 726 inquiries from different U.S. companies, only three benefited from AID. Those three companies already conducted business in Puerto Rico thus defeating the *raison d'être* of the program. The ARRC operated on the island and was a U.S. company but did not obtain the subsidy. Evidently, AID was not attractive enough to persuade U.S. corporations to transfer their operations to Puerto Rico. However, the government was eager to attract capital from abroad and decided to create even more incentives. Consequently, on "May 1947 the legislature passed the Industrial Incentives Act, which not only exempted qualifying firms from property, excise, and municipal taxes and license fees, as

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[620] Primitivo Meléndez and Mariano Ducrett to Etienne Totti, 26 february 1947, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 408

[621] "Puerto Rico Railroad Struck," *New York Times*, 1 March 1947, 5.

earlier laws had done, but also provided complete exemption from insular income taxes until 1959 and partial exemption until 1962."[622] Similar legislation was submitted by the legislature in 1944 but Tugwell vetoed it. It was no surprise, that that same year the ARRC submitted a petition for tax exemption. The governor now signed the bill but made no effort to extend it to the ARRC. Evidently, Piñero had no interest in making it easier for the company, not because he rejected public funding or assistance to private companies in principle, but because he desired to eliminate the railways.

In September the ARRC would have to cease operations unless the government bailed them out or granted some kind of financial assistance.[623] Before making any decisions, Governor Piñero provided a copy of the communications between him and the ARRC to the Department of the Interior in Washington in order to receive advice from the head of the Division of Territories and Island Possessions. A study of the Antilles Department determined that military cargo, which was being handled by the railroad, would "be moved by water and highway."[624] Wm. W. Bessell, Brigadier General, requested advance notice from the governor for any decision relating to the railroads in order to make any necessary adjustment in the army schedules.[625]

On July 23, 1947 the governor appointed a special committee to study the finances of the ARRC but before the committee submitted its final report the ARRC filed bankruptcy in the

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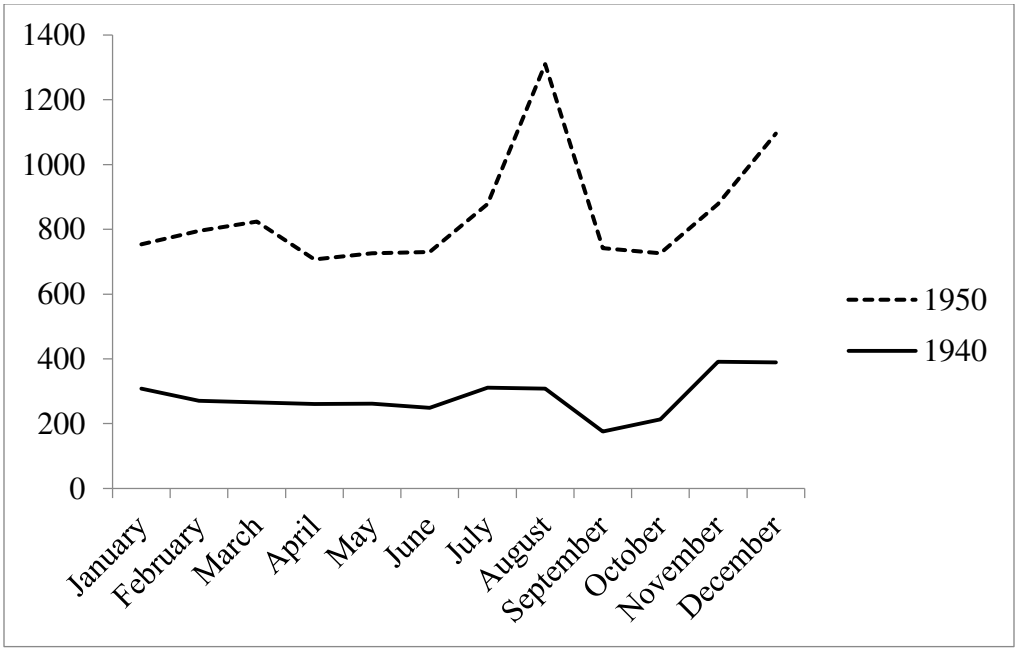
[622] Dietz, *Economic history of Puerto Rico*, 209-210.
[623] Secundino Lozada, letter to Governor Jesús T. Piñero, 6 April 1947, NARA, RG 126, Box No. 1027, File 9-8-93: Transportation-Railroad- General.
[624] Wm. W. Bessell, Brigadier General, to Jesús T. Piñero, Governor, Miami, Florida, 12 May 1947, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 466.
[625] Ibid.

Federal Court.[626] Historian Aurelio Tió claimed that the bankruptcy of the company was the result of workers' wage demands.[627] In fact, the company stated in its annual report that competition and labor relations were the principal causes for the bankruptcy.[628] The acquisition of private automobiles and trucks had increased steadily in a decade (Figures 6.1 and 6.2). However, private ownership of automobiles and trucks did not guarantee a reduction in the impact the closure of the railroad would have on those who had no transportation alternatives. An example of the inconvenience of over dependency on taxis would be the traffic jams in rush hours, the fluctuation in gasoline prices, and the interruption of the service in the case of a strike.

Figure 6.1. Automobiles registered for 1940 and 1950.

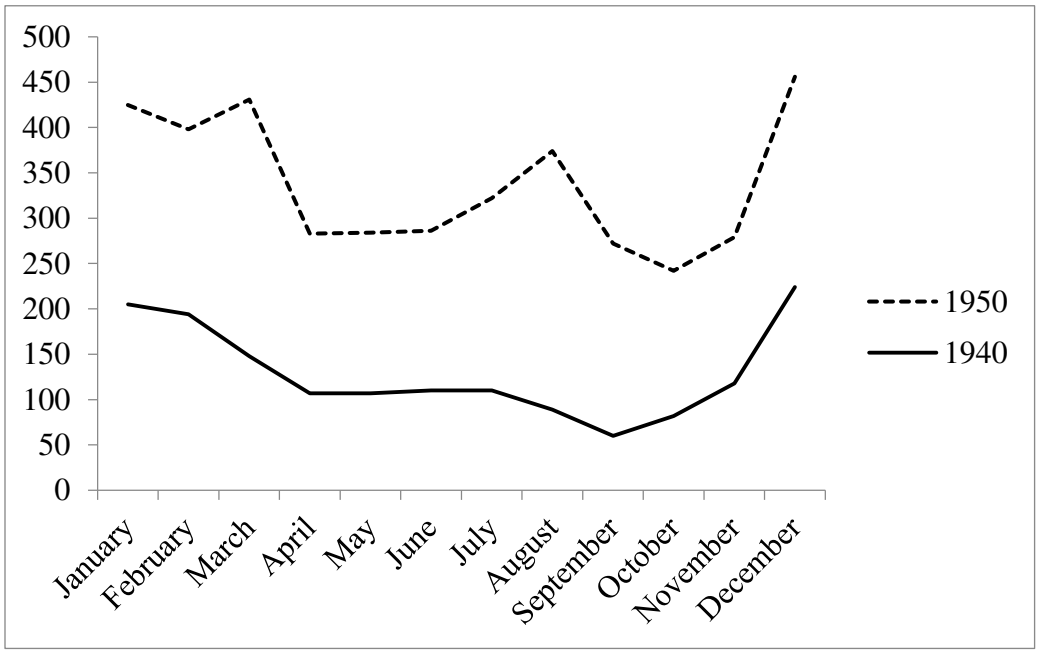


SOURCE. - Economic Development Administration, Office of Economic Research, San Juan,

[626] Juan A. Pons, *Press Release*, 19 August 1947, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 474.
[627] Aurelio Tió, "Breve historia de los ferrocarriles de Puerto Rico," 108.
[628] Compañía Ferroviaria de Circunvalación de Puerto Rico, Informe Annual; Incluyendo los negocios de las afiliadas American Railroad Co. of P. R. y Compañía de los Ferrocarriles de Puerto Rico, 9 August 1948, 16.

Puerto Rico.

Figure 6.2. Trucks registered for 1940 and 1950.



SOURCE. - Economic Development Administration, Office of Economic Research, San Juan, Puerto Rico.

Collective taxis (*carros públicos*) started a strike in February 1947.[629] They protested a decision of the *Autoridad de Transporte Público* to establish fixed routes and protested high gasoline prices. In March of that same year, trucks used in the transportation of cane to Central Lafayette in Arroyo also declared a strike demanding a 75 cents increase per tons transported.[630] In both cases, railroads were an alternative to the shortage in transportation created by the strikes. The

[629] Report of the Insular Police, Re: Huelga de porteadores públicos (automobiles de servicio público), 20 February 1947, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 408.
[630] Cándido Rivera, District Sargent Commander, Informe de huelgas, Maunabo, Puerto Rico, 7 March 1947, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 408.

government provided collective transportation for the metropolitan area through buses operated by the Puerto Rico Transportation Authority, but this service was not extended to the rest of the island. Although, this public corporation only operated in the metropolitan area it still did not function as expected because already in 1947 its financial situation was critical. During the fiscal year 1945-46 the corporation "showed a loss of $22,687" and for the next fiscal year the loss increased dramatically to $222,476. In a report published in January 1948 a consultant firm concluded: "to all intents and purposes the Bus Division is literally bankrupt."[631] The Puerto Rico Transportation Authority adopted economic adjustments including the end of many benefits that had been granted for years, such as free transportation to detectives and police officers in uniform.[632] Both, buses and railways operated at a loss, but the government only subsidized the buses, and turned their back on the railroads.

The federal court selected Don Fernando E. Zegrí, manager of the *Banco de Ponce*, to supervise the operation of the ARRC. José G. González from the law firm Fidler, González & Nido submitted a plan to reorganize the ARRC. The plan proposed the establishment of a new company with a capital of $5 millions distributed in shares of $100. This action would imply the dissolution of the *Compañía de los Ferrocarriles de Puerto Rico* and the ARRC. The new company would get a loan for 1.5 million dollars for repairs, purchase of equipment including four diesel locomotives, and workers' salaries. The company owed more than 3 million dollars in wages, but the proposal included a court settlement to reduce the quantity to $889,000 including

[631] F. Hall Hately, *Report No. 7-A: Emergency Examination of the Bus Division*, 20 January 1948, 2-3, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 420.
[632] AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 197.

lawyers' fees.[633] The union reluctantly supported the plan, probably because the alternative was the end of the company and complete end of employment. However, this proposal never materialized.[634]

In an official letter directed to Ellmer Elsworth, coordinator of insular affairs, the ARRC questioned the unwritten policy of railway exclusion from the new infrastructure plan. Fernando E. Zegri, trustee of the ARRC, was particularly concerned about the lack of tracks in the plans for the development of a bulkhead in Ponce. Without railroad tracks it would be impossible to participate in the transportation of cargo to and from the port. Zegri claimed that in Cataño another bulkhead was under construction near an army base, where railroad tracks were also not included in the blueprints. The trend was clear Zegri concluded in a letter: "At times, I cannot understand the antipathy of the Government officials in general, barring your goodself, towards giving the railroad any opportunity."[635] In conclusion, the ARRC declared bankruptcy and the government was not willing to extend any economic aid to the corporation.

It was evident that the direction was to abandon the railroads for the development of another type of infrastructure. Railroads were a thing of the past, and highways and airports were the future of a new, dynamic, and modern economy. In 1948, the island had 3,500 kilometers of roads as well as a master plan developed by the Puerto Rico Transportation Authority for a new

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[633] "Radican plan de reformas a ferrocaril," *El Mundo*, 7 December 1948, 1.
[634] "Trabajadores Ferrovías favorecen plan," *El Mundo*, 9 December 1948, 7.
[635] Fernando E. Zegri, letter to Mr. Elmer Elsworth, San Juan, Puerto Rico, 5 May 1948, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 474.

international airport in Isla Verde, Carolina.[636] Airplanes, trucks, buses, and *carros públicos*, became the best choice for cargo and passenger transportation because the service was faster, cheaper, and more convenient.

In a booklet published by the Puerto Rico Industrial Development Company in 1948 titled: *Puerto Rico, U.S.A.: Moving Forward* the government circulated several statistics to illustrate the economic progress of the island after 50 years of being part of the United States. The booklet included data for demographic density, per capita income, literacy, trade per capita, and transportation. Puerto Rico was compared to other Latin American countries and a selection of states in the U.S. The graphs and figures illustrated that Puerto Rico was doing better than all Latin American countries but still fell behind all of the states in the union. *Moving Forward* meant becoming more like those developed states in the U.S. In the case of transportation, railroads were never mentioned. Instead, *Moving Forward* indicated that an increase in road building was a "significant aspect of the multilateral program of economic and social expansion now under way."[637] That is to say, that there was a new plan of economic development and that only automobiles and trucks were in the plan. The government did not have to articulate the railway's demise because the silence concerning the future of railways was thunderous.

The message was clear: Puerto Rico was *moving forward*. In a report titled "El financiamiento del desarrollo económico en Puerto Rico" the island occupied third place in

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[636] Salvador V. Caro, letter to Jesús T. Piñero, 21 January 1948, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 474.
[637] Puerto Rico Industrial Development Company, *Puerto Rico, U.S.A.: Moving Forward* (New York, U.S.A.: Amalgamated Lithographers of America, 1948), 11. AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 1169.

automobiles per 100 inhabitants after Panama and Argentina, but Puerto Rico had more roads per 100 square miles than all the countries in the study.[638] In contrast with other Latin American countries as the report established, Puerto Rico exhibited more economic progress than its neighbors. The government increased expenditures by 83 percent for road construction and maintenance from 1941 to 1948. Without a doubt, the government developed an active campaign to portray the island as one in the process of rapid transformation and one measure of this transformation was the purchase of automobiles and the advancement of new road infrastructure.

The shift in the economic model was directly related to the neglect of the railways. The official policy was the promotion of manufacturing industries in place of agricultural production, because after 50 years of exporting sugar, tobacco, coffee, and citrus fruits the change was necessary to move ahead. The government claimed that they pursued "a better balance between industry and agriculture".[639] In reality, the government promoted the industrialization of the island at the expense of agriculture and there was no "balance." This model was catastrophic for the sugar industry, as it was for agricultural production in general. It was also the final blow for the railroads.

The first elected governor of Puerto Rico, Luis Muñoz Marín, followed the plans of industrialization for the island. He embraced those ideas that have been developed by Chardón in his "Plan" and continued the work started by Tugwell and Piñero for the transformation of the insular economy. As governor, Muñoz Marín appointed Santiago Díaz Pacheco, Ángel Silva, Jose

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[638] Sol Luis Descartes, *El financiamiento del desarrollo económico en Puerto Rico* (San Juan, Puerto Rico: Oficina de Relaciones Públicas de la Fortaleza, 1950).
[639] Puerto Rico Industrial Development Company, *Puerto Rico, U.S.A.: Moving Forward* (New York, U.S.A.: Amalgamated Lithographers of America, 1948), 6, AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 1169.

Trías Monge, Frank T. Martocci, and José M. Feliciano to study the role of the government in the reorganization of the CFC. There was no serious attempt by the committee to intervene in the bankruptcy proceedings. Instead the committee focused on reasons why the purchase of the railroad by the government would be economically unwise. In the first paragraph of the preliminary report the committee made their point clear:

> It is generally believe that a railroad in Puerto Rico is not economically justified. If the island were without railroad today, no informed group would be willing to construct one. Its operations would never yield a reasonable return over the big investment required for such a project.[640]

The report further went on to say that there were only four benefits from the service provided by the CFC. First, it was a source of income for 1,179 families; second, competition between railroads and trucks kept down freight costs; third, highway maintenance costs were kept down; and fourth, it was useful in time of war. The CFC had operated with losses for years and these four reasons were not enough to justify the purchase of an insolvent railroad. The loss of the benefits caused by the closure of the CFC could easily be overcome. First, the laborers of the CFC could find new jobs as truck drivers; second, the Public Service Commission could regulate the trucks and the prices; third, it was difficult to calculate the savings of highway maintenance if the railroad continued to operate; and fourth, in case of another war, the military could use trucks for

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[640] *Preliminary report of the Committee on Purchase of the American Railroad Company by Insular Government*, 22 September 1949, 2. AGPR, Fondo Oficina del Gobernador, Tarea 96-20, Caja 862.

transport. The conclusion was evident: trucks made the railroad unnecessary. This study was obviously a *pro forma* document to excuse the government for not rescuing the CFC from bankruptcy.

Without the aid of the government the CFC shutdown passenger service in 1953. The most widely circulated newspaper on the island, *El Mundo*, published under the title "A city without rails" in September 1953:

> Con el progreso urbano y los adelantos en la transportación la entrada del ferrocarril a San Juan se ha considerado desde hace algún tiempo un estorbo y una amenaza para la seguridad de los habitantes de las barriadas por donde cruza la vía férrea.[641]

The newspaper depicted the railroads as "obstacles" and a "menace" for the urban population. Deceptively there was no more space in the city for the railroad. In the press there was a change in the perception of the railways and their relevance.

Policy makers were building an industrial Puerto Rico and the transformation included the disappearance of the railroads because railroads seemed obsolete, slow, and unsustainable. In order to give meaning to the island's economic reality Puerto Rico used the U.S. as well as Latin American countries as a gauge. That is to say, the island would overcome the poverty characteristic

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[641] Translation: "With the urban progress and the advances in transportation the tramway in San Juan has been considered for some time a hindrance and a threat for the security of the inhabitants of the neighborhoods where the tracks crosses."
José M. Ufret, "Una ciudad sin rieles; tren se irá de San Juan el día 21 de septiembre," *El Mundo*, 3 September 1953, 13.

of agrarian countries by attracting factories from the United States, and motor vehicles would be indispensable for the transportation of manufacture goods.

CONCLUSION

During the mid-nineteenth century the establishment of railways was essential in order to promote economic modernization and progress in Puerto Rico. This desire for economic progress flourished among creole intellectuals, planters, and merchants. However, Spain lacked a serious commitment to invest capital for the establishment of railways. The state assumed a passive role and looked to private capital for the financing and development of railways. Consequently, the first railroads in Puerto Rico were urban tramways financed by local entrepreneurs. Tramways offered passenger service in the main urban centers but did not impact the transportation of export products.

Sugar planters were particularly interested in the establishment of railroads to stimulate their businesses. Cane fields located in coastal valleys were suitable for rail lines so the proposals for railroad franchises originated mostly in sugar-producing areas. The government approved all the petitions for feasibility studies but the projects were expensive and the lack of capital impeded the realization of the projects.

In 1877 the insular government assumed an active role in the development of railroad infrastructure. Leonardo de Tejada, Chief Public Works' engineer, designed a state supported railroad project to be financed with private capital. The beltway railroad was conceived by state officials after an analysis of the island's economic and geographic realities. It was the only instance in the period under study when the state developed a coherent plan for the establishment of railways. A steam railroad built from private capital would circle the island enjoying state support.

However, it was difficult to find investors for the construction and operation of a railroad in Puerto Rico. Eventually, a Spaniard with Spanish and French capital acquired the project.

The opening of the first railroad lines on the northern coast produced great jubilance, even though development was extremely slow. The corporation confronted internal problems, did not meet their deadlines, and started to file petitions for extensions of previously agreed contracts and timetables for development.

The acquisition of the island by the United States marked a new era for railway expansion because of greater investment capital availability. The new century brought with it a renaissance of the sugar industry which used the railroads extensively. Sugar *centrales* built their own internal rail lines to transport cane among neighboring plantations and farms to mills and the beltway railroad was the trunk line that moved the sugar to the ports.

The latest studies on railroads in Latin America stress the essential role of railways in the strengthening of internal economic exchanges along with the importance of railways in integration with the world markets. However, this did not apply to Puerto Rico. The documentary evidence suggest that railroads were not significant in the development of the internal markets than they were for the transportation of goods to export outlets. The reason for this was the unique relation Puerto Rico had with the United States after the approval of the Foraker Act. The Puerto Rican economy was integrated with the United States. The island imported a broad variety of consumer goods from the United States, including food; and exported sugar, tobacco, coffee, and citrus fruits to U.S. markets without restrictions. Railways were part of the infrastructure that had been developed for the export of goods to the United States primarily sugar. Internal exchange of goods

was enhanced with the construction of roads particularly in mountainous rural areas. With the U.S. occupation of the island road construction became a priority. Railroads were too expensive to construct in the highlands because of the steep nature of the mountainous interior, and for this reason railways operated only on the coast. To fill the demand for internal transportation the Department of the Interior consistently funded the construction and maintenance of roads. Year after year, the governors included a summary in their annual reports of the advances made in the construction of new roads as a commitment toward the modernization of the island's infrastructure.

Up to the First World War the state actively promoted the construction of railways and roads to make Puerto Rico a territory with a modern infrastructure. After the war a final attempt to complete the last portion of the beltway railroad did not materialize and effectively ended the era of the railroad "boom." In the 1920s railway companies started to deal with competition, not between different railroad companies, but with trucks, buses, and automobiles. Initially, unrestricted competition had an impact on the passenger service, but not on freight. Railroad companies required from the Public Service Commission a more vigorous overview of the transportation industry. It was also in the 1920s when railroad companies confronted the first financial problems when freight service contracted as a result of fluctuations in sugar prices.

A critical period began after a devastating hurricane that struck the island in 1928. Hurricane San Felipe caused a great deal of economic destruction and the next year the stock market crash. With the establishment of the New Deal Program, as a response the crisis caused by the Great Depression, the construction of more rural roads made the interior of the island more accessible. Large corporations did not benefit from the relief measures as a result of a shift in

government priorities from focusing on production to consumption. From this point onward the promotion of automobile and truck sales for individual transportation was more desirable than the encouragement of collective transportation.

With the onset of the Second World War railroad companies were once again important to the government as railways were vital for the defense infrastructure. As a result, railroad companies improved their incomes and had less competition from automobile and buses; although, their financial situation continued to be delicate. During the war, politicians on the island planned economic projects that would take place in the country once the war came to an end. But, railroads were not included in the island imagined by policymakers. Moreover, the country had a brand new web of roads to aid in the development of a future industrial economy. Soon after the war, the biggest railroad companies went out of business. In the case of the PRRC, the state seized the power plants and closed the tramway, and in the case of the ARRC the company simply filed for a bankruptcy. The other two public service railroads (Fajardo Development Company and Ferrocarriles del Este) survived longer, because they were an integral part of the sugar business.

The "meaning" of the railroads

The original need to establish railways on the island came from the premise that the inclusion of railroads in a country's infrastructure was essential for a modern and growing economy. The island had a backward economy that required substantial investment in the construction of new infrastructure to promote exports. The prescription "railroads equal modern economy" was clear through the second half of the nineteenth-century.

The occupation of the island by the United States at the end of the century was significant

for the development of railroad lines because U.S. investors built steam railroads and urban electric tramways. The railroad boom had a powerful message for the people in Puerto Rico. The U.S. government demonstrated their interest in stimulating the Puerto Rican economy through the development of a modern railroad infrastructure supplemented with new road construction. The advance of the railroad project originated by the Spanish government was slow; in contrast, the U.S. occupation honeycombed the island with kilometers of rail tracks and roads.

The First World War marked the end of the railroad boom. Railroads assumed a new role because they became part of the defense infrastructure but when the war ended the railway industry underway important defies. After 1921 sugar prices dropped producing unexpected losses after an economic bonanza just after the war, coupled with the approval of the Federal Highway Act by the United States Congress. Although the economy recovered after the crisis and the Federal Highway Act was not immediately applied to the island, both events were significant. The 1920s were tough years for the insular economy because the prices of the main export products fluctuated, railways confronted problems to maintain their financial stability, and the federal government committed with the development of the infrastructure needed by the increase circulation of motor vehicles.

The crisis of the 1930s and its long-term remedies, were critical in the demise of the railroad system which was associated with the sugar monoculture economy that was under attack by the New-Deal policy-makers. When the sugar production was restricted because of quotas the profits from the railway industry declined to an unsustainable level. The attack on the sugar industry became an indirect attack on the railroads. The federal programs for economic relief did not benefit the railroad business.

The demise of the railways occurred in the 1940s. Railways did not survive the shift in the economic model promoted from the government from 1942. In this decade official reports made no mention of railways because the industrialization of Puerto Rico was planned without them. The government wanted to end large-scale agricultural production and sponsored the small farmers and their organization into cooperatives and the establishment of new industries in urban areas. Sugar *centrales* were under attack by the government and railroads were connected to the sugar industry. Decreasing freight and passenger incomes and increasing operational costs forced railroad companies to seek governmental assistance, but the aid was not granted. The exclusion from the industrialization program sealed the ill fate of the railways in Puerto Rico not accusations of corruption or mediocrity in the management of their finances. The closing of the "Railway Age" in Puerto Rico paralleled the takeoff of the island's industrialization.

Railroad workers were principal players in the transformation of the railways. Unionization became a headache for railroad administrators. Workers believed they deserved higher wages but this struggle was in some ways counterproductive because it raised operating costs and decreased profits. The enemies of big corporations used the labor movement to validate the undesirability of the railroads as businesses incapable of maintaining profitable operations. The workers appeared directly responsible for the company failure given that the bankruptcy of the CFC occurred in the middle of a labor dispute. The government took advantage of the strike to move forward on their plans to withdraw all support for the railway companies and the impression was that the unions had pressured the company to its limit.

Finally, the rejection of railways by state policy-makers in favor of motor vehicles had

some resistance. Newspapers denounced the inconvenience of exchanging the trolley with buses. Passengers would be better served if the trolley route was complemented with buses, but the plan was simply the elimination of the trolley although the routes continued by transforming trolley stations in bus stops. Each person reliant on railways had to make adjustments. The closing of the railroad displaced those who relied on an informal economic activity around the stations as was the case of *chicharrón* vendors (fried pork skin) in Bayamón, which moved away from the rail tracks to continue their sales on the side of Road no. 2. They had to relocate to the side of roads. Railway infrastructure became debris of an "obsolete" economic model of agricultural production and roads and highways became the answer to the transportation needs of industrial Puerto Rico.

Epilogue

The history of railways did not end with the island's industrialization program known as Operation Bootstrap. A renaissance emerged in the 1990s. During this period, Governor Pedro Rosselló developed various mega-infrastructure projects, among them an urban passenger train, a shuttle between San Juan and Bayamón. In today's Puerto Rico, cars outnumber inhabitants. During rush hour, highway congestion in the metropolitan area is utterly chaotic. An efficient system of mass transportation would have remedied or ameliorate the situation. Regrettably, the Urban Train has not succeeded. Rails are once more part of a public debate where an efficient mass transportation system becomes crucial to achieve the Puerto Rico of progress envisioned and reimagined since the nineteenth century.

APPENDIX 1

Compañía de los Ferrocarriles de Pto. Rico

Cuadro de las mermas naturales por evaporación, desecación, derrame ú otras causas de que son susceptibles diversas mercancías en su transporte por ferrocarril, formado por la compañía á los efectos del artículo 148 del Reglamento para la ejecución de la Ley de Policía vigente.

MERCANCÍAS	TANTO POR 100. RECORRIENDO HASTA 100K.
Abonos, en cajas, barricas ó sacos.	2
Aceite, en barriles, ú otros recipientes.	2
Aceitunas, en barril.	1
Acidos, en piedra ó polvo	½
Achicoria, en polvo.	½
Aglomerados (carbón mineral.)	1
Aguardiente, en barril.	1½
Aguarrás, en barril.	1½
Ajos, frescos.	2
id., secos.	1
Algodón, en faldos.	1
Alquitrán.	1
Arcillas.	1
Arroz, en sacos.	½
Azucar, centrifuga en sacos.	1
id., moscabado en bocoyes.	2
Baruices, en barriles.	2
Bacalao, en barriles.	1
Batatas.	2
Brea.	1
Cacao, en sacos.	½
Café, en sacos.	½
Cal apagada, á granel.	2
Cal ó cemento, en sacos o barriles.	1
Cañamo.	1½
Cañas de azucar.	2
Carbón vegetal, en sacos.	½
id. id. á granel.	1
Caruaza.	1
Carue, ahumada y salada.	1

Cebollas.	2
Cereales.	½
Cerveza.	1½
Cocos, á granel.	2
Coke.	1
Colores, en cascos.	1½
id. molidos, en sacos.	½
Confituras.	1
Cordages. (cordelería)	1½
Cortezas tintóreas y medicinales, en fardos.	2
Cuernos.	2
Cueros, frescos.	2
Crin vegetal.	1½
Drogas, en barriles.	½
Embutidos.	1
Esencias, en barriles.	2
Especias.	½
Estearina.	1
Féculas, en sacos.	½
Forrajes	2
Frijoles.	1
Frutas, frescas.	2
id. secas.	1
Gandures.	½
Garbanzos.	½
Grasas.	1
Habichuelas, frescas.	2
id. secas.	½
Harina, en sacos.	½
Hortalizas.	2
Huesos.	5
Hulla, á granel.	1
Jabón, en cajas.	2
Legumbres, frescas.	2
id. secas.	1
Lentejas.	1
Limones.	2
Maderas, tintóreas.	1
Manteca.	2
Miel de caña, en barriles.	1
Miel de abeja.	1
Minerales en bruto, á granel.	1

Naranjas, dulces ó amargas.	2
Ñames.	2
Paja.	½
Pastas, alimenticias.	½
Papas ó patatas.	2
Pescados, secos.	1
id. frescos con sal.	2
Pieles, curtidas y charoladas.	1
Pieles, frescas ó saladas.	2
Pimienta molida, en cajas ó sacos.	½
Platanos.	2
Productos químicos, en barriles.	½
Quesos.	1½
Raices tintóreas ó medicinales.	2
Resinas sólidas, en barriles ó sacos.	½
Rón, en barriles.	1½
Sal común.	½
Salazones, en barriles ó en cajas.	1
Sebo.	1
Semillas, en sacos	½
Tabaco en hojas, en barriles	1½
Tierra para industria, á granel.	1
Trapos, en fardos.	1
Vinos, en barriles	1½
Vinagres, en barriles	1½
Yautias	2

Nota. A las demás mercancías que se transporte, y que no están comprendidas en este cuadro, se les calculará la **MERMA** aplicando el tanto por 100 señalado á las que tengan con aquellas más analogía.
San Juan 9 abril 1897
El Director int^{o}

Aprobado por acuerdo de la comisión provincial y asociado de quince de enero de mil ochocientos noventa y ocho.
El Vicepresidente

Source: Diputación Provincial de Puerto Rico,"Expediente sobre tarifas e itinerarios de la Compañía del ferrocarril de circunvalación, cuadro de mermas. 1897 – 1898,"AGPR, Fondo Obras Públicas, Subfondo Ferrocarriles y Tranvías, Serie Expedientes y documentos relativos a ferrocariles, Caja 34, Legajo 51, Expediente 161.

APPENDIX 2

Statement of tonnage of traffic moved over the line during the last nine years

	1930	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*
Sugar - Cane	1,415,657	1,655,935	1,575,209	1,647,124	1,895,073	1,460,304	1,442,423	1,592,968	1,426,801
Sugar - Raw	131,145	159,817	152,918	150,249	151,733	129,425	131,940	151,023	139,804
Molasses - scrap	35,160	40,852	46,885	24,392	27,666	50,097	19,131	27,008	19,255
Fertilizers	42,509	34,153	51,967	53,123	39,299	26,608	36,370	34,931	33,158
Groceries	20,351	18,959	7,795	5,923	5,359	3,965	4,156	4,593	4,475
Coal	13,710	10,449	11,032	7,344	7,441	7,567	8,653	8,793	8,249
Building materials	6,722	5,085	7,509	5,662	7,763	5,848	6,713	13,601	13,845
Fuel oil	31,265	23,348	28,571	25,514	27,043	31,280	36,167	30,662	35,938
Gasoline	2,629	2,229	964	676	509	219	185	399	280
Kerosene	891	952	1,195	860	350	229	255	424	444
Oil & Alcohol	3,005	4,358	1,968	1,437	1,389	2,021	1,122	2,484	2,921
Lumber	5,811	5,993	11,498	14,432	6,971	5,132	5,065	7,784	10,224
Coffee	1,147	1,561	548	1,165	405	590	983	1,174	1,254
Miscellaneous	14,182	11,897	6,373	7,051	6,972	7,242	7,725	6,345	6,470
Leaf Tobacco	276	138	71	68	43	21	26	29	23
Minor Native Products	3,000	2,178	2,510	1,191	2,464	2,756	2,333	1,841	1,508
Machinery	2,816	2,952	1,813	2,059	2,162	3,425	3,159	3,103	3,058
Wood and Fuel	553	666	152	192	179	124	959	524	234
Hardware	2,107	2,095	2,530	2,935	2,936	2,758	3,341	3,368	3,116
Oranges & Pineapple	111	128	13	2	1	-	25	-	-
Cull Fruits	1,604	1,285	691	420	987	490	125	36	19
Woolen Fab.	1,154	1,609	1,189	1,222	1,249	1,189	1,373	1,310	1,414
Bagging	1,273	1,515	1,557	1,327	1,502	779	746	1,182	1,939
Charcoal	77	65	89	180	103	66	143	88	98
Seeds	2,895	1,186	1,099	2,887	595	68	62	256	269
Livestock	56	83	48	134	12	23	4	16	4
Transshipments	-	-	14,600	13,856	13,161	15,715	18,726	27,223	23,397
TOTAL	1,740,106	1,989,488	1,930,794	1,971,425	2,203,367	1,757,941	1,731,910	1,921,165	1,738,197

SOURCE: American Railroad Company of Porto Rico. Traffic Department. Statement of tonnage of traffic moved over the line during the last nine years.

APPENDIX 3

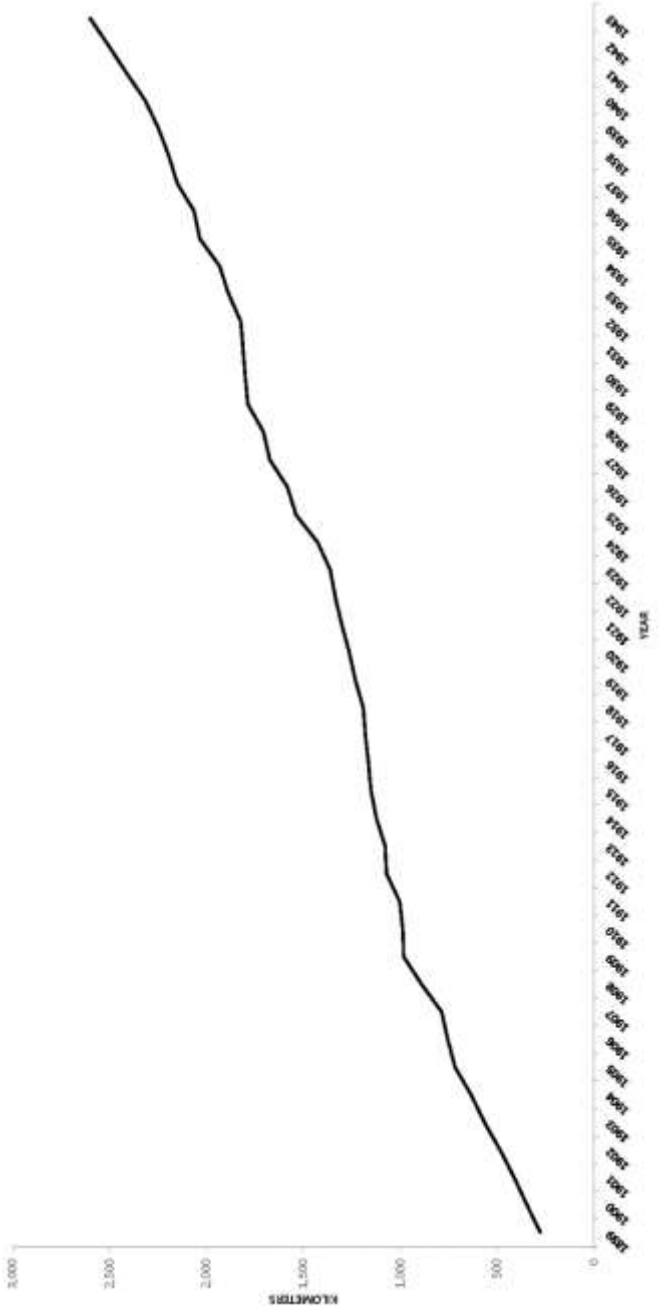
Statement of revenue of traffic moved over the line during the last nine years.

	1930	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*
Sugar - Cane	$750,735.06	$938,731.81	$848,662.63	$921,228.55	$1,093,651.15	$830,852.07	$822,262.68	$922,704.13	$822,201.01
Sugar - Raw	251,193.03	225,455.49	248,403.54	152,884.64	180,892.64	152,647.41	155,539.42	176,636.52	139,432.11
Molasses - scrap	60,210.23	65,734.04	83,896.53	19,989.17	16,281.82	59,330.54	10,809.46	14,593.58	7,179.01
Fertilizers	72,354.05	65,915.78	67,565.79	75,668.30	52,358.11	26,636.28	38,484.92	34,035.13	30,686.04
Groceries	61,751.77	44,839.22	15,810.67	10,325.88	9,328.98	6,909.05	7,314.06	8,610.83	8,563.52
Coal	17,620.26	17,008.88	12,657.10	12,128.47	9,453.93	8,734.77	8,803.69	8,766.62	8,001.47
Building materials	10,250.48	8,087.90	10,301.38	7,895.89	10,101.97	8,257.69	9,435.56	17,373.67	17,768.92
Fuel oil	37,430.14	27,153.72	29,478.62	24,346.69	27,279.21	25,937.23	29,072.15	28,332.98	33,445.09
Gasoline	5,636.96	4,335.70	1,718.87	1,287.39	908.51	396.62	276.40	964.14	691.26
Kerosene	1,745.44	2,012.82	2,294.78	1,622.28	539.29	380.25	669.19	1,104.79	1,135.98
Oil & Alcohol	7,406.56	7,147.73	5,125.24	3,633.19	3,172.61	5,392.92	2,692.28	6,582.99	6,997.97
Lumber	11,638.59	11,960.15	15,850.40	19,482.10	9,377.06	10,760.98	10,009.78	14,416.23	17,442.83
Coffee	2,927.29	4,864.81	1,553.68	2,712.65	1,234.26	1,395.12	2,197.91	2,698.61	2,436.32
Miscellaneous	49,041.59	40,097.18	19,396.84	17,419.83	13,943.65	13,397.26	14,298.55	13,318.02	14,061.35
Leaf Tobacco	1,549.69	861.73	386.55	258.35	203.65	111.37	90.35	139.44	122.20
Minor Native Products	8,232.90	4,699.50	5,242.62	2,367.23	4,773.16	5,156.57	4,557.18	3,604.70	3,081.36
Machinery	8,422.86	6,533.93	4,145.74	4,634.91	4,789.31	4,383.35	6,285.74	6,422.34	7,113.08
Wood and Fuel	469.25	515.34	102.79	147.12	139.45	104.92	675.11	327.23	142.74
Hardware	8,619.05	7,474.97	7,570.80	8,261.27	8,030.57	7,855.04	9,058.63	10,301.69	9,829.81
Oranges & Pineapple	346.93	337.77	36.45	8.82	2.82	-	65.63	0.99	-
Cull Fruits	3,641.24	3,261.17	1,421.44	945.70	1,904.37	849.26	262.42	99.17	42.39
Woolen Fab.	6,052.25	7,588.62	5,318.74	5,129.63	5,116.46	5,289.04	5,614.71	5,685.42	6,121.66
Bagging	3,634.39	3,818.92	3,035.29	2,683.57	2,816.62	1,209.56	1,179.32	1,770.69	2,796.99
Charcoal	176.51	150.65	170.32	323.57	187.50	99.34	230.56	196.21	176.74
Seeds	4,915.09	1,884.07	1,255.38	2,603.53	643.94	121.11	98.49	319.64	418.88
Livestock	312.77	330.35	127.67	427.00	122.23	54.40	27.80	53.05	13.80
Transshipments	-	6,879.56	37,692.20	36,386.02	27,305.91	33,052.28	38,818.57	49,251.00	46,602.14
TOTAL	1,386,314.38	1,507,681.81	1,429,222.06	1,334,801.75	1,484,559.18	1,209,314.43	1,178,830.56	1,328,309.81	1,186,504.67

SOURCE: American Railroad Company of Porto Rico. Traffic Department. Statement of revenue of traffic moved over the line during the last nine years.

APPENDIX 4

Road construction in Puerto Rico, 1899-1943



SOURCE. - AGPR; Fondo Oficina del Gobernador; Caja 743.

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