

## CONTENTS

<i>List of Illustrations</i>	vii
<i>List of Tables</i>	ix
<i>Preface</i>	xiii
ONE Introduction to the Ditch	1
TWO Before the Ditch	13
THREE Preparing the Ditch	55
FOUR Digging the Ditch	97
FIVE Crossing the Ditch	139
SIX Passed by the Ditch	189
SEVEN Sliding into Irrelevancy	212
EIGHT Ditching the Ditch	264
NINE Concluding the Ditch	313
<i>Notes</i>	333
<i>Index</i>	401

# ONE

## INTRODUCTION TO THE DITCH

FROM A DISTANCE, IN NORTH AMERICA, THE PANAMA CANAL seems like an imperialist anachronism, a historical leftover from a discreditable and nearly forgotten chapter of U.S. history. Up close, however, it is immediately apparent that the Panama Canal is one of the world's great waterways, the highly efficient economic engine for a rather prosperous Latin American country. Both of these interpretations of the Panama Canal are correct. This book was written to reconcile these seemingly conflicting points of view.

There is a stylized narrative many Americans learn about the history of the Panama Canal. In the late nineteenth century, so the story goes, French private interests tried and failed to build a canal across the Isthmus of Panama. Amidst the wreckage of the French effort, President Theodore Roosevelt stepped in, unleashing America's industrial energy on the isthmus, and in the process accidentally inspiring the greatest palindrome in the English language. The Panama Canal became an unparalleled economic and strategic success, cutting the cost of ocean transport and permitting the U.S. Navy to dominate two seas for the price of one. President Jimmy Carter, however, mysteriously decided that the United States could no longer ignore the Panamanians. And so the Americans, controversially, at great risk, and with no gain to themselves, arranged to give one of their greatest engineering triumphs to the Panamanian people, whom they fully expected to squander it.

This standard story of the Panama Canal raises more questions than answers. The Isthmus of Panama might have enjoyed a uniquely privileged geographic location, but Panama remained a

backwater for hundreds of years. The United States and Colombia were unable to negotiate an agreement on the Panama Canal to their mutual benefit, despite the obvious advantages for both nations. The Panama Canal project was a triumph of American engineering skill, but the reports of the time documented extensive delays, cost overruns, and management problems. The independent Republic of Panama remained an underdeveloped country, despite the presence of one of the world's major commercial arteries on its territory. The Carter administration gave into Panamanian requests that American administrations had ignored for decades and agreed to return the canal back to Panama in 1999. Finally, once Panama took back ownership of the canal, the waterway became phenomenally profitable despite the growth of alternative transport routes and fuelled a prolonged economic boom after decades of stagnation and relative decline. What explains these paradoxical outcomes?

Broadly speaking, this book is about the economics of American imperialism. “Imperialism,” of course, has almost as many definitions as it has authors who have written about it. The most useful definition of “imperialism,” we believe, is the use of state-enforced sanctions (or the threat of sanctions) by one political community to impose policies upon another political community.<sup>1</sup> As with any political institution, imperialism can be formal or informal. “Formal” imperialism follows rules laid down in constitutions or treaties, in which the government of the ruling community either exercises full sovereignty or exercises direct control over specific policy spheres in the subordinate community. “Informal” imperialism follows a less transparent but not necessarily less effective set of sanctions and rewards. (The line between the two is fuzzy; an example would be a treaty giving one country the right to intervene in the internal affairs of another under specific circumstances.) Imperialism can also be direct or indirect. When the government of the ruling political community is able to routinely impose its will upon *individual* members of the subordinate political community—most obviously, but not exclusively, through a formal colonial administration—then imperialism is direct. If the

government of the ruling political community exercises its will through intermediaries, be they traditional tribal rulers or “sovereign” elected governments, then imperialism is indirect.

The literature on the economics of imperialism is long and distinguished. It has two general lacunae, however. The first is a relative lack of detailed case studies informed by quantitative analysis and economic theory. This is not to say that there is not a long and distinguished literature on the history of various imperial ventures. It is simply to say that with a few exceptions (such as Foreman’s work on India), they do not engage in the explicit framing and formal testing of hypotheses. To the extent that they are informed by theory, the theories tend to be vague, ill-defined, and often left implicit. There are, of course, a number of large-N studies of imperialism that do engage in explicit hypothesis testing and are informed by economic theory. The unit of analysis in these studies is colonial governments (as in the cases of Ferguson and Schularick or Mitchener and Weidenmier) or imperial enterprises (as in the cases of Svedberg, Edelstein, and Davis and Huttenback).<sup>2</sup> These studies have greatly expanded our understanding of European colonialism, but they suffer from the specification problems common to all large-N studies. It is hard to use them to understand exactly how specific institutional arrangements created certain economic effects. Moreover, most of them tend to find (quite convincingly, for the periods that they study) that imperialism produced few benefits (if any) for the metropole but did create a beneficial “empire effect” for the colonies. What we do not know is whether these results are universal, or limited to the periods and empires studied by the authors.

Similarly, relatively little of the literature on economic imperialism deals with the difference between formal and informal empire in a modern context. (Mitchener and Weidenmier and Alfaro, Maurer, and Ahmed’s work on the effects of U.S. policy in the circum-Caribbean are partial exceptions.) In 1961, David Landes concluded on remarkably little evidence, “Informal imperialism paid—in spite of occasional crashes and repudiations, if only because the use of power in such situations was minimal and the

outlay of funds was based on essentially rational grounds. Formal imperialism, on the other hand, rarely paid.”<sup>3</sup> Both types of imperialism considered by Landes, however, took place in an almost unrecognizable historical and institutional context. The subordinate political societies were often not organized as states. When they were organized into states, those states generally lacked Westphalian legal sovereignty, let alone significant access to modern military technology. Nor were these societies generally motivated by nationalism in the Western sense. Moreover, the dominant European colonizers were rarely characterized by democratic governments that periodically needed to win elections based on universal male suffrage, let alone universal suffrage. The question of the economic impact of old-style European imperialism is an important one for understanding how the world of the early twenty-first century emerged, but it offers only limited lessons for today.

America’s imperial venture in Panama took place in a context that seems remarkably familiar to a reader from a century later, unlike the superficially similar (but actually quite different) Suez Canal project in Egypt. Despite the undemocratic nature of the regimes in the southern states, the general disenfranchisement of women, and the indirect election of the U.S. Senate, American politics circa 1903 were populist and democratic in a way instantaneously recognizable to a modern observer. The states of Latin America, like states today, enjoyed full Westphalian sovereignty (in theory), and despite their internal weaknesses they possessed modern national identities that governments could and did mobilize for their own purposes. The United States may have declared itself “practically sovereign upon this continent,” as Secretary of State Richard Olney maintained in 1895, but it also faced foreign powers lurking in the wings who could potentially do it grievous damage, economically if not militarily. In short, President Theodore Roosevelt faced a context both domestic and external that more resembled that faced by the current leaders of powerful countries—be it Barack Obama, Lula da Silva, Vladimir Putin, or whomever it is that runs the European Union—than it resembled that faced by his European contemporaries.

The specific question that this book seeks to shed light on, then, is whether a relatively modern democratic nation, operating inside the strictures of Westphalian sovereignty, was able to leverage its ability to impose military and economic sanctions into sustainable economic gains. Conversely, why did that selfsame nation decide to withdraw from its imperial commitment a few decades later? Was it because of changing ideologies at home and changing power balances abroad, or was it because the economic value of its imperial venture had declined?

To answer these questions about America's imperial endeavor in Panama, we employed a form of the "analytic narrative" method pioneered by Bates, Greif, Levi, Rosenthal, and Weingast.<sup>4</sup> There is a vast and almost bewildering amount of economic, institutional, and historical data available about the Panama Canal. The analytic narrative allowed us to place these rich sources of information within a theoretical context to move forward from specific to more general conclusions, reasoning from the "thick" to the "thin," as the method's authors described it. In doing so, we borrowed the rational choice assumption that political actors seek to maximize their benefits in their interactions with others. This clarified several confusing points in the political history of the Panama Canal, such as the deliberate policy of the Colombian government to hamstring its own diplomats during its negotiations with the United States over the canal. As later events proved, this was a mistaken strategy for Colombia regarding the Panama Canal, but it was not an irrational one.

Within the narrative, we relied on quantitative techniques, many first developed by Robert Fogel. We especially borrowed from his social savings methodology in order to determine the economic value of the Panama Canal and examine the various policy options surrounding the canal at particular historical junctures. Fogel's simple yet powerful method of analysis compared the cost savings of a historical enterprise—in his case, U.S. railroads—to those of the next-best option that would exist in that enterprise's absence—in his example, a counterfactual network of canals and highways.<sup>5</sup> Fogel defined the difference between the two as the "social

savings,” e.g., the additional amount of economic activity created by the venture.

As an object of economic inquiry, the Panama Canal is obviously well suited for Fogellian methods. In addition, the Panama Canal has a wealth of “roads not taken” in its history, which allow us to evaluate the relative value (to the United States, the titular government of the isthmus, and others) of a variety of political options involving the canal. Finally, because of Panama’s unique geographic location, we could compare the economic and historical effects of the modern Panama Canal to that of other isthmian transportation enterprises in earlier and later eras.

Panama enjoyed a privileged geographic location, but the basic question in its history has always been: who gets the economic rents generated from that geography? Would it be the people who occupied the land, the people who financed the infrastructure, or the people who used that infrastructure to move goods and people? The answer has historically been determined by three related factors: the value of the infrastructure to consumers (itself a function of the availability of good transport substitutes); the ability of those consumers to mobilize their government to defend their interests at a reasonable cost; and the symbolic power of ownership over infrastructure.

The Panama Canal was not the first transportation technology across the isthmus to reshape the world’s economic geography. It was in fact the third. In the early Spanish colonial era, a trans-Panamanian road built by tens of thousands of slaves from Nicaragua allowed the Spanish to transport high-value silver from Peru to the Atlantic. Colonial Panama boomed—and native Panama dwindled—until competition from overland routes via Buenos Aires undercut the Panama route in the seventeenth century. A few centuries later, the process repeated itself. Just as the Spanish conquest of Peru unleashed a mass of precious metals heading east and a wave of prospectors heading west, so did the American conquest of California and subsequent gold rush. The Panama Railroad proved very profitable for its New York investors, until competition from the 1869 opening of the Transcontinental Rail-

road undercut it. Once the United States emerged as a transcontinental power, its geography and industrial economy ensured that its residents stood to benefit more from cheaper passage across the Isthmus of Panama than those of any other country. In that sense, it was inevitable that the United States would become involved in the politics of Panama. The question was what form such involvement would take.

The form of involvement taken by the United States in Panama proved to be a rather odd sort of imperialism. Washington employed a mix of strategies to take, build, and run the Panama Canal. In 1903, President Theodore Roosevelt used the threat of force against the Colombian government to permit local secessionists to peel the Panamanian isthmus away from Colombia. He then used the threat of force against the newly created Republic of Panama to take direct and *formal* control over the Canal Zone. Finally, he imposed indirect but formal rule over Panama (via Article 136 of the Panamanian constitution). Why did Roosevelt's administration choose the mix that it did?

The reasons were economic. The U.S. government under Roosevelt developed a set of political strategies that enabled it to expropriate most of the rents generated by Panama's geography through its imperial control of the Panama Canal. The Canal Zone drew a bright line around the canal, from which it was relatively easy to exclude Panamanian (and other potential foreign) competition from the provision of services or other ancillary operations. Article 136 provided a ready-made justification for intervention that could be wielded against domestic and foreign opponents. In addition, as part of the Panamanian constitution, it provided the occasional presence of American troops on Panamanian streets with an additional dollop of legitimacy—a vital thing in any foreign occupation. Limiting American involvement in Panama to excluding the Panamanians from the Zone and the occasional intervention freed the U.S. government from potential opposition at home.

The rents were enjoyed by a broad base of the imperial power's society—that is, the average American consumer. The cost of defending America's new Panamanian possession was small

compared to these benefits. Unlike other empires of the era, the United States in Panama extracted significant value for its citizens. The flip side of this successful American venture into imperialism, of course, was a thorough lack of economic benefit for Panama, which captured essentially none of the rents from the Panama Canal. Neither did the American involvement in Panama lead to stronger political institutions, greater investment, nor lower borrowing costs for the Panamanian government. Rather, the major—but far from inconsiderable!—benefit from the American presence in Panama was an accidental spillover: the improvement in disease mortality rates caused by the public health programs the United States implemented during construction.

Why then did the United States choose to abandon its formal control over the Panama Canal in 1977—only to invade and overthrow the country’s government in 1989? The answer to the first part of that question is simple: the strategic and economic value of U.S. ownership of the Panama Canal declined after World War II. The strategic benefits proved chimerical. The economic benefits fell as domestic cargoes made up less and less of the traffic through the canal, lured away by falling railroad and trucking costs. In addition, the industrialization of the West Coast meant that it consumed more and more of its own primary product production, leaving less to be shipped east via Panama. Moreover, falling transport costs meant that American agricultural exporters to Asia—who became the largest users of the canal by the 1970s—grew almost indifferent between shipping their grain south to the Gulf Coast and moving it west to Seattle. These changes in the users of the Panama Canal meant that Washington had less and less reason to fear that a Panamanian-owned canal would jack up transit rates at the expense of American consumers and producers. Rather, by the 1970s the primary burden of higher rates would fall on Asian exporters of inexpensive manufactured goods.

As the American interest in the Panama Canal declined, however, Panamanian political voice regarding the canal expanded. While American policy largely denied Panama economic benefits from the canal, increasing Panamanian national sentiment

required the United States to channel compensating aid flows to Panama. At the same time, the long-term American workforce on the Panama Canal had captured the institutional administration of the canal, making it more inefficient and less profitable as a business enterprise. These two factors made the transfer of the Panama Canal from the United States to Panama mutually beneficial by the 1960s. The Panama Canal in Panamanian hands became more valuable to the United States than the Panama Canal in American hands. American nationalism, however, postponed the signing of any agreement to 1977.

Nevertheless, Washington's imperial role in Panama did not come to an end with the signing of the Carter-Torrijos treaties. Following the death of President Omar Torrijos in a mysterious plane crash, General Manuel Noriega rose to power. Noriega proved very useful to an American administration deeply concerned about Communist penetration of Central America. Noriega also proved to be spectacularly corrupt and even more spectacularly brutal. The result was an escalating conflict with Washington. The United States, however, did not contemplate a military invasion of Panama until Noriega made it clear he would interfere with the operation of the Panama Canal.

Noriega's 1989 overthrow by American troops ironically cleared the way for the end of America's imperial relationship with Panama. The two dictatorships of Omar Torrijos and Manuel Noriega had produced the side benefit of greatly weakening Panama's traditional patronage-based politics. (In Torrijos's case, the weakening of the old oligarchy was part of a deliberate reform strategy; in Noriega's it was merely a side effect of his attacks on anyone who threatened his political control or narcotics profits.) In the aftermath of the invasion, with the old parties needing to compete for votes on a far more open political market, Panamanian democracy began to thrive. After decades of dictatorship and despite the long-term effects of the American patron-client relationship, Panamanian voters were finally able to choose and dismiss candidates in favor of their own political and economic interests without fear of losing the benefits that came from membership in

a particular political machine. Tampering with the Panama Canal for political gain (or even seeming to tamper with the Panama Canal for political gain) rapidly became the quickest way to lose support among the electorate. As a result, competitive politics led to a new Panama Canal Administration that ran the canal much more efficiently and commercially than the United States ever did. Consequently, the Panama Canal became an engine of growth for Panama for the first time in its history, and the presence of the United States receded into that of a distant neighbor, rather than one next door, or sometimes on the lawn. The 1999 handover of the Panama Canal to Panama marked the beginning of a new phase in the U.S. Panamanian relationship, one of mutual benefit through voluntary association—or, given the power difference between the two nations, a phase perhaps more accurately described as an “empire by invitation.”

There has been little formal economic history written specifically about the Panama Canal. In writing this book, we found the topic nearly untouched, like the proverbial \$50 bill left on the sidewalk. Even the basic question of the economic impact of the Panama Canal on the world economy produced wildly divergent opinions. Lebergott in 1980 believed the Panama Canal generated little to no benefits for the economic interests of the United States.<sup>6</sup> On the other hand, in 2004 Hutchinson and Ungo estimated that the Panama Canal paid for itself in a single year soon after its opening.<sup>7</sup> Unsurprisingly, this book argues that the economic benefits of the Panama Canal lie between these two poles.

The Panama Canal is richly documented in primary source material. The annual reports first issued by the Isthmian Canal Commission, later the governor of the Panama Canal, the Panama Canal Company, and finally the Panama Canal Commission are invaluable both as sources of economic data and as political documents for understanding the complex relationship of the Canal Zone administration with Washington. The creators of the Panama Canal were not shy about their accomplishments, and left considerable writing in their memoirs and correspondence about their intent. The U.S. Senate testimony in the debate regarding the con-

struction of an isthmian canal is eye-opening, as are the Colombian diplomatic documents collected in the *Libro azul* concerning the canal and the rebellion in Panama.<sup>8</sup> The *Foreign Relations of the United States* provides a somewhat sanitized version of U.S. attempts to placate or ignore Panama in the decades before the handover of the canal. Finally, the U.S. National Archives have an immense amount of material pertaining to the Panama Canal, of which we have only used crumbs from a very rich plate.

We are not ashamed to admit that we have relied on Walter LaFeber's *The Panama Canal* and John Major's *Prize Possession: The United States and the Panama Canal, 1903–1979*, while writing this book to better understand the specific historic, diplomatic, and institutional situation of the Panama Canal. So too we have relied upon many authors about Panama itself, not least among them Conniff, Pearcy, Pippin, Zimbalist, and Weeks. Many of our findings have seemed almost serendipitous: in particular, Bonham Richardson's work on Barbadian history and Samuel Eliot Morison's maritime and naval histories led us down paths of research we would not have previously considered. Finally, we must mention two works that appeared during the writing of this book, Adam Clymer's *Drawing the Line at the Big Ditch: The Panama Canal Treaties and the Rise of the Right*, on the interplay between the domestic American politics of the 1970s and the handover of the canal to Panama; and Julie Greene's *The Canal Builders: Making America's Empire at the Panama Canal*, on the complicated and disturbing history of the foreign workers who built the Panama Canal for the United States.<sup>9</sup> Both Clymer and Greene made points that we wanted to make, but earlier and more thoroughly.

To recap, this book advances two arguments. One is a substantive argument about the nature of economic imperialism. We argue that the United States developed strategies that enabled it to leverage its military dominance into a far better economic outcome than it otherwise could have achieved. We also argue that the United States returned the Panama Canal to Panama when the economic benefits from *ownership* of the canal (if not necessarily the benefits of the canal's existence) sufficiently declined.

Moreover, America's indirect imperialism produced little in the way of institutional or economic development for Panama, which continued to be an authoritarian underdeveloped nation until the 1990s. The United States was instrumental in removing the blight of Manuel Noriega, but the robust democracy that emerged thereafter was *hecho en Panamá*, and had little do with the previous decades of U.S. intervention.

The other argument we make in this book is a methodological statement about history and the social sciences. The social sciences are fundamentally about the study of social processes—the ways that human beings interact and the institutions that structure those interactions over time. Thus, social scientists do not really have a choice regarding the use of history—their interest in change over time gives them little choice but to make historical arguments. The real choice for economists and political scientists is whether the historical arguments they make are supported by systematically gathered and carefully analyzed evidence, or whether they are supported by “stylized facts.” We strongly support the former, and hope that this book provides at least a modest example.

## INDEX

- Abrams, Elliott, 289–90, 292, 294–95  
Acción Comunal movement, 208  
Acemoglu, Daron, 323, 398n20  
Acosta, José de, 17  
*Aedes aegyptii* mosquito, 123–24  
Aegean Sea, 189  
aguardiente, 22  
Ahmed, Faisal, 3, 201, 324  
Aizpuru, Rafael, 67–68  
*Akashi Maru* (ship), 213–14  
Alaskan oil industry, 281–82  
Alemán, José Miguel, 304  
Alemán Zubieta, Alberto, 310  
Alfaro, Ricardo, 3, 194–95, 201, 208–11, 324  
Alianza Democrática, 303  
Alianza Pueblo Unido, 303  
All-American Pipeline, 186–87  
Almagro, Diego de, 19  
Altos Hornos de Chile, 163  
Amador, Manuel, 83–85  
American Federation of Labor, 231, 234  
American Samoa, 321  
Anaconda Plan, 49  
Ancon Hospital, 124  
Ancon reservoir, 127  
*Ancon* (ship), 106  
Andagoya, Pascual de, 13, 15, 17  
Angola, 262  
*Annual Reports of the Secretary of War*, 169–70  
*Anopheles* mosquito, 124  
Anti-Ballistic Missile Treaty, 253, 255  
antitrust laws, 144–45  
Arbitration Convention, 147  
Argentina, 206, 229  
*Argentina Maru* (ship), 166  
Argonauts, 37, 44  
Arias, Arnulfo, 229, 236, 274, 285, 287–88, 302–3  
Arias, Harmodio, 198, 208–9, 230–31  
Arosemena, Alcibiades, 230  
Arosemena, Pablo, 122  
Arthur, Chester, 66–67  
Article 82 (Panamanian constitution of 1904), 121–22  
Article 136 (Panamanian constitution of 1904), 7, 85–86, 94, 121, 201–3, 210  
Aspinwall, William Henry, 36–37, 41–43  
*Atlanta* (war ship), 84  
Atlantic Richfield Company, 281  
Australia, 320  
autocracy, 266–67, 284  
  
Bahamas, 273  
Balboa, Vasco Núñez de, 15–16, 18, 115, 292  
Balboa High School, 240  
Banco Nacional de Panama (BNP), 274, 279, 292, 294  
Barbados: bounty depression and, 130; child labor and, 130; economic boom in, 129–38, 323, 365n162; emigration and, 130–34; labor supply of, 98, 110, 113, 129–38, 323, 365n162; “lazy” workers and, 110; Legislative Council and, 132; middle-class formation and, 98; Panama money and, 129–38; population demographics of, 129, 132–34; potato raids and, 130; reciprocity agreement and, 364n137; transformation of, 134–38; wage issues and, 129–30; wealth of, 98  
Barclays, 365n162  
Barletta, Nicolás Ardito, 278–80, 287–90  
Barrionuevo, Francisco de, 17

- base gold, 14  
Bastidas, Rodrigo de, 15  
Bates, Robert H., 5  
Battle of Guadalcanal, 219, 221–22  
Battle of Midway, 219, 222  
Battle of Palonegro, 77  
Battle of the Coral Sea, 219, 222  
Bay Area Rapid Transport system, 98  
Bay of San Miguel, 16  
Bay of the Honduras. *See* Gulf of Mexico  
Beckel, Bob, 261  
*Belen Quezada* (ship), 271  
Benson, William, 270  
Bethlehem Shipyards, 164  
Bethlehem Steel, 164, 368n38  
Biddle, Charles, 13, 33–35  
Bidlack, Benjamin, 35  
Bidlack-Mallarino Treaty, 35–36, 67, 69, 80–83  
Big Dig, 98, 345n152, 357n4  
Big Inch, 184  
Bishop, Joseph, 191–92  
black market, 195, 198  
Blades, Ruben, 303  
Blandy, W.H.P., 226  
*Blue Book of Panama*, 189  
Blue Spoon (military operation), 297  
Bô, Marius, 75  
Boeing, William, 179  
Bogotá, 29, 32–36, 42, 59, 65, 68, 77–82, 128  
Bolívar, Simón, 29–32, 189  
Bosporus, 40–41  
*Boston* (war ship), 84  
bounty depression, 130  
bourgeoisie, 317  
Boyd, Aquilino, 236  
Boyd, Federico, 85, 122  
Brazil, 126, 206, 314  
*Brazil Maru* (ship), 166  
bribery, 39, 65, 292  
bridges, 23–24, 44, 46, 49, 52  
Bridgetown, 130–31, 134  
British, the, 39, 139, 324; Cape Horn and, 30; Clayton-Bulwer Treaty and, 40–42, 67, 72; empire effect and, 201; Five-Power Treaty and, 168; imperialism and, 319–20; Lesseps and, 57; Mosquito Coast interests and, 35; Panama money and, 129–30; Potsdam Conference and, 228; ship registration and, 272; San Lorenzo fort and, 26; Taft and, 146; Tehuantepec Railroad and, 52; toll controversy and, 146–47; Treaty of Balta-Liman and, 40–41; U.S. Diplomacy and, 14, 33, 72; Vanderbilt and, 40–41  
Brooklyn, 73, 98, 100, 118, 275, 357n4  
Brooklyn-Queens Expressway, 98  
Brooklyn's Twelfth Congressional District, 275  
Bryan, William Jennings, 147  
Brzezinski, Zbigniew, 260  
B-25 bombers, 221  
Buchanan, James, 35  
Buchanan, William, 201  
Buenos Aires, 6  
Bullard, Arthur, 131–32  
Bunau-Varilla, Philippe, 79–80; Culebra Cut and, 61; fraud accusations against, 75; Hay–Bunau-Varilla Treaty and, 84, 87–92, 95, 193, 203, 211  
Burgess, Harry, 194  
Bush, George H. W., 296–97  
  
Cáceres, Alonso de, 19  
California: American conquest of, 6, 14, 36; gold rush of, 36–40; petroleum industry and, 179–88, 314–15; price-reduction effects and, 314–15; transcontinental pipeline and, 183–88  
Calle de Santo Domingo, 17  
Camino de Cruces, 17–18, 23–26  
Camino Real, 17, 24–27  
Canada, 54, 271, 320  
Canal Area, 256  
*Canal Builders, The: Making America's Empire at the Panama Canal* (Greene), 11  
Canal Zone, 7, 10, 361n83, 375n39, 396n179; barriers to growth in, 273–75; birth of, 92–96; Boyd march and, 236–37; Colón Free Zone and, 269, 275–81, 311, 322, 387n26; colonial origins of comparative development and, 323–24; as comfortable sinecure, 326; Commissary and, 190–200 (*see also* Commissary); as corporate enterprise, 102; decolonization and, 325–31; defense of, 105–6, 167–73, 226–28; digging of Panama Canal and, 101–25; disappearance of, 264–65, 282–84, 287, 297, 303, 306; disease in, 97–98 (*see also* disease); empire effect and, 200–

- 208; flying of Panamanian flag and, 236–38; Frelinghuysen-Zavala Treaty and, 87; Hay–Bunau-Varilla Treaty and, 84–92, 95, 193, 203, 211; Hay-Concha Memorandum and, 79–80; Hull-Alfaro Treaty and, 208–11; labor strikes and, 112–14, 293, 323; market advantages of, 230–31; Merchant Marine and Fisheries Subcommittee and, 275; Panamanian economic development before 1977, 266–69; Panamanian flag and, 236–38, 262, 269, 322; private property rights in, 318–19; racial issues and, 115–20, 234–35 (*see also* racial issues); Remón-Eisenhower Treaty and, 231, 234–35, 277–78, 322; as settler colony, 321–22, 332; sliding irrelevancy of, 212–13, 226–31, 234–40, 247, 251, 255–57, 260–63; Thatcher plan and, 101–2; toll controversies and, 146–47, 246–48; United States Citizens Association (USCA) and, 235
- Canary Islands, 16
- Cape Horn, 30, 36–37, 49, 72, 140, 150, 214, 224, 245, 367n25
- Cape of Good Hope, 141, 166, 243
- Cárdenas, Adán, 66
- Carlos V, 16, 321
- Cartagena, 22, 26, 35, 44
- Carter, Gilbert, 133–34
- Carter, James Earl “Jimmy,” 1–2, 262; decolonization and, 326–27; Neutrality Treaty and, 259–60; Noriega and, 296; Panama Canal Treaty and, 259–61, 287; political bravery of, 326–27; Rogers and, 292; Torrijos and, 9, 259–61, 298; vote trading by, 261
- Casey, William, 287, 290
- Castañeda, Francisco de, 20
- Castilia del Oro, 16
- cattle, 193
- Central Intelligence Agency (CIA), 285, 287, 290
- Central Pacific Railroad, 54, 66
- Chagres, 16–17, 26, 34, 36, 42, 44, 99, 102, 108, 225
- Chanís, Daniel, 229–30
- Charco Azul, 282
- Charles V. *See* Carlos V
- Chase Manhattan Bank, 237
- Chase National, 200
- Chatsfield, Frederick, 41
- Chiari, Roberto, 229–30
- Chicago, Milwaukee, and St. Paul Railway, 174
- Chicago Association of Commerce, 174
- Chicago Sanitary and Ship Canal, 72
- Childs, Orville, 37, 39
- Chile, 206, 285; benefits of Panama Canal and, 140; iron and, 152, 162–64, 243, 315; nitrates and, 162–63; price reduction effects and, 314–15
- Chinese, 31, 43, 110, 221, 303, 344n143
- Chiriquí Grande, 282, 284
- Chiriquí Railroad, 204
- Chivela Pass, 53
- Choate, Joseph, 147
- Chuchures, 15
- Churchill, Winston, 219
- cigarettes, 108, 198
- CitiBank, 279
- City of Panama* (ship), 386n16
- Clark, Dick, 262
- Clayton, John, 33, 40–41
- Clayton-Bulwer Treaty, 40–42, 67, 72
- Cleveland, Grover, 67–68, 70, 87
- Clymer, Adam, 11
- Coatzacoalcos, 52–53
- cocaine, 285–86, 292, 375n39, 390n78
- Cocoa Grove, 202
- Cold War: Anti-Ballistic Missile Treaty and, 253, 255; Crittenger plan and, 225–26; Panamanian riots and, 226; Río air base and, 226; sliding irrelevancy of Canal and, 223–27; spies and, 286; Strategic Arms Limitation Treaty and, 253
- Colombia, 2, 5, 318; American negotiations with, 78–82; battle of Palonegro and, 77; Bogotá, 29, 32–36, 42, 59, 65, 68, 77–82, 128; Commissary and, 198–99; Concha and, 78–81, 85–86, 89; Fabian strategy of, 77; Hay–Bunau-Varilla Treaty and, 84, 87–92, 95, 193, 203, 211; Hay-Herrán Treaty and, 81–82, 86, 89, 162; Isthmian Canal Commission and, 76–77; Marroquín and, 77, 82; Martínez Silva and, 76–78; Neutrality Act and, 67; New Granada and, 32–36, 42–43, 46, 341n88; Núñez and, 67; Panamanian secession from, 56; Roosevelt’s intervention and, 7,

- Colombia (*cont.*)  
82–92, 202; Senate Committee on Inter-oceanic Canals and, 79; silver pesos and, 111; Spooner Act and, 80; Thousand Days War and, 76, 199–200; Wyse Concession and, 59; yellow fever and, 126; Yglesias and, 77
- Colón, 132, 198, 231, 267, 298; Aspinwall and, 43; burning of, 68; departure of Colombian troops from, 67–68; health issues in, 123–28; population of, 108; Free Zone and, 269, 275–81, 311, 322, 387n26; Harding and, 114; Hay–Bunau-Varilla Treaty and, 84–85; Hull-Alfaro Treaty and, 210–11; Isthmian Canal Commission and, 76–77; mortality rates and, 123; Panama Railroad Company and, 43–44, 82, 99, 118; Prestán and, 67–68; riots in, 202; sanitation and, 82; Trans-Isthmian Highway and, 210; water purification and, 127–28
- Colón Free Zone, 269, 275–81, 311, 322, 387n26
- Colonial Bank, 365n162
- Columbia River, 30
- Commissary, 208–9, 279, 321–22; as Army Post Exchange store, 231; black market and, 195, 198; cattle and, 193; as commercial juggernaut, 192–95; Eisenhower and, 230–31; establishment of, 190–200; food provisions and, 190–93; freight rates and, 193–94; Goethals and, 191–92; housing and, 190–91; Hull-Alfaro Treaty and, 210–11, 231; invisible earnings and, 198–200; labor and, 190–92, 195; mission creep of, 191–92; Panama Canal Act and, 192; Panama Railroad and, 191–94, 198–99; plantations of, 193; racial issues and, 192; reduction of, 231; Root-Arosemena Treaty and, 191–92; sales demographics of, 195; sliding irrelevancy of Canal Zone and, 230–31, 260, 263; taxes and, 190–94, 198
- Communism, 9, 228, 234
- Compagnie de Panama, 42
- Compagnie Nouvelle du Canal de Panama, 65
- Compagnie Universelle du Canal Interocéanique, 46–48, 54, 60, 316
- Compagnie Universelle du Canal Maritime de Suez, 57–58, 63
- comparative development, 323–24
- Comyn, W. Leslie, 271, 385n10
- Concha, José Vicente, 78–81, 85–86, 89
- Concord* (war ship), 84
- Congressional Research Service, 242–43
- Congress of Industrial Organizations, 231, 234
- Conniff, Michael L., 11
- Constitutional Fund, 85
- Continental Divide, 30, 184
- Cookenboo, Leslie, Jr., 184, 372n93
- Cooley, Lyman, 72
- copper, 14, 163, 261, 368nn35, 65
- Corinth, 189
- Costa Rica, 282, 289, 352n66, 376n54; *Belen Quezada* capture and, 271; Bulwer and, 41; Canal-building preliminaries and, 56, 69–73, 77, 87; conflicts with, 56; Coto, 202–3; González and, 18; Maritime Canal Company and, 69–73, 87; mortality rates in 127; sanctions and, 206
- cost overruns, 2, 44, 97–99, 102, 106, 140, 147, 344n148, 345n152, 357n4
- Council of the Indies, 18
- Cox, Robert, 240
- Cristóbal, 99, 209, 211, 274, 303, 311
- Crittenberger, Willis, 225–26
- Cromwell, William, 73, 79, 81, 100
- Cruz Grande, 163
- Cuba, 229; annexation of, 94; disease and, 123–24, 127; labor supply of, 110–11; Menocal and, 69, 87; modern mills of, 129; Noriega and, 285; sugar industry and, 129, 131; United States and, 94, 172, 201, 206–7
- Culebra Cut, 61, 83, 103, 213–14, 279, 309
- Cyprus, 238
- Czolgosz, Leon, 74
- Daniels, Josephus, 167–68
- Danzig, 272
- Dardenelles, 41
- Darien Province, 16, 198, 288
- David, Paul, 367n22
- Dávila, Pedro Arias “Pedrarias,” 17–19
- Davis, Arthur, 264
- Davis, Lance Edwin, 3, 320
- decolonization: cost-benefit analysis and, 325; interest payments and, 325; mechanistic model for, 325–26; political eco-

- nomy and, 325–31; retrocession and, 325; World War II era and, 325
- defense costs, 105–7
- Delvalle, Eric Arturo, 289–90, 292
- democracy, 9, 12, 234, 332; American invasion of 1989 and, 329; handover of Panama Canal and, 266–67, 284, 289, 328–29; Partido Revolucionario Democrático (PRD) and, 284, 304, 313
- Dewey, George (admiral), 271
- Díaz, Pedro, 202
- Díaz, Porfirio, 50, 52
- Díaz Arosemena, Domingo, 229
- Dickson, Spencer, 139, 365n2
- Diego Parédes, Victoriano de, 43
- Dignity Battalions, 296, 302
- disease, 187, 321, 323; Chinese labor and, 43; construction of Panama Canal and, 98–99, 119, 122–27; Cuba and, 123–24, 127; dysentery, 61; European, 18; fumigation and, 123–24; Gorgas and, 97–98; larvicide and, 124–25; malaria and, 55, 61, 97, 99, 124–28, 322; mortality rates and, 8, 14; resistance to, 15, 43; sanitation crusade and, 122–28; typhoid fever, 61; yellow fever, 61, 97, 99, 123–28, 322
- Dixie* (war ship), 84
- Dominican Republic, 172, 206, 207
- Doolittle raid, 219, 221
- Dorn, Francis, 275
- Douglas fir, 177–78
- Drawing the Line at the Big Ditch: The Panama Canal Treaties and the Rise of the Right* (Clymer), 11
- Drug Enforcement Agency, 289–90
- Duane, William, 32
- Duque, Carlos, 296, 303
- Duque, Manuel Everardo, 277
- Duque, Tomás Altamirano, 297
- Duval, Miles, 227
- dysentery, 61
- Eads, James Buchanan, 49, 49–54, 346n165
- Eads Bridge, 49
- Eastern Airlines, 295
- economic issues, 10–12, 72, 312; American commerce benefits and, 158–62; amortization funding and, 63; ancillary enterprises and, 310–11; antitrust laws and, 144–45; Asian market and, 8; Barbados emigration and, 130–34; barriers to growth and, 273–75; black market and, 195, 198; bounty depression and, 130; bribery and, 39, 65, 292; burning of Colón and, 68; Cabinet Decree 238 and, 279–80; Chilean copper boom and, 163; Colón Free Zone and, 269, 275–81, 311, 322, 387n26; colonial origins of comparative development and, 323–24; Commissary and, 190–200, 208–11, 230–31, 260, 263, 279, 321–22; Compagnie bond failure and, 63, 65; Constitutional Fund and, 85; containerization and, 241; cost-of-living increases and, 113–14; cost savings through Panama Canal and, 140–45; decolonization and, 325–31; defense costs and, 105–7; dieselization and, 241; distributional effects and, 173; elasticity effects and, 155–61, 187, 245–47, 314–16, 368n30, 383n68; elitism and, 33, 236, 267, 277, 284, 290, 311, 328; empire effect and, 200–208; expansion costs and, 225; fiscal agency and, 204–7; Fogel method and, 5–6; Foreign-Trade Zones Board and, 275; freight rates and, 141–45, 160, 173–77, 193–94, 216, 241–45; frozen bank assets and, 292–95; global economic downturn and, 331; Gold Roll and, 111–12, 115, 118, 191–92, 198, 360n58; Great Depression and, 142, 175, 245, 331; Hay-Bunau-Varilla Treaty and, 84–92, 95, 193, 203, 211; Hobson and, 317, 319; illegal drug trade and, 285–86, 289–90, 292, 294; imperialism and, 2–4, 56–57, 317–24, 398nn16,18; interest costs and, 106, 149, 260, 325, 396n179; international banking sector and, 278–81, 292–93; Interstate Commerce Commission (ICC) and, 173–75, 185; invisible earnings and, 198–200; Keynesianism and, 331; large-N studies and, 3; Law 18 and, 279; Lebergett and, 319; Lenin and, 317, 319; long-term profitability and, 305–12; lumber industry and, 177–79; *macuquinas* and, 34–35; Merchant Marine and Fisheries Subcommittee and, 275; middle-class formation and, 98; money laundering and, 285–86, 291–92, 294,

economic issues (*cont.*)

- 390n86; naval spending and, 167–68; New Panama Canal Company and, 74–75; overruns and, 2, 44, 97–99, 102, 106, 140, 147, 344n148, 345n152, 357n4; Panama Canal Company productivity and, 249–51; Panama Canal Treaty and, 260; Panamanian development before 1977, 266–69; Panamanian’s lack of financial skill and, 203–4; Panama’s first peak (1150–1671) and, 21–22; patronage networks and, 265–67, 328–29; petroleum industry and, 179–88; price sensitivity of shippers and, 155–57; private-property rights and, 318–19; railroad losses and, 173–77 (*see also* railroads); Remón-Eisenhower Treaty and, 231; rents and, 7–8, 61, 95, 142, 190, 246, 258, 272, 281; sanctions and, 2, 5, 190, 206, 294–95, 328–29, 333n1, 393n132, 398n18; sanitation and, 128; shipbuilding and, 270–71; ship registration and, 270–73, 281; Silver Roll and, 111–15, 118, 191–92, 198, 274, 323; slavery and, 6, 18–24, 321; smuggling and, 20, 28–29, 267, 271–73, 285, 292, 298; social savings and, 5–6, 313–16 (*see also* social savings); Suez Canal and, 57–58, 349n11; tariffs and, 52, 69, 87, 94, 130, 191–94, 267–69, 278; taxes and, 22, 50, 57, 66–69, 80, 84, 87, 128, 160–61, 173, 190–93, 198, 204, 209, 231, 238, 267–73, 277–81, 295, 306, 314; Third Locks project and, 226–27; tolls and, 146–47 (*see also* tolls); *trajín* and, 23–30; transformation of Barbados and, 129–38; Transisthmian Pipeline and, 265, 281–84; transportation and, 212 (*see also* transportation); U.S. aid payments and, 9, 212–13, 230, 236–39, 248, 255–56, 262–63; U.S. costs of building Panama Canal, 98–100, 103–8, 114, 118, 128, 135–39; U.S. Department of Commerce and, 272, 275; U.S. Treasury and, 149, 153, 157, 160, 162, 172, 213, 218, 248, 260, 263, 325, 396n179; wage caps and, 112; Wyse Convention and, 81–82
- Ecuador, 29, 32, 126, 235, 243
- Edelstein, Michael, 3, 320, 398n16
- Egypt, 4, 190, 348n3; indemnity payments and, 58; Nasser and, 328; Suez Canal and, 4, 55, 57–58, 141, 190, 243, 284, 328, 349n11
- Eiffel, Alexandre Gustave, 62
- Eisenhower, Dwight D., 225, 239, 256; Boyd march and, 237; Commissary and, 230–31; flying of Panamanian flag and, 236–38; Remón and, 228–31, 235–36, 255, 277–78, 285, 322
- elitism, 33, 236, 267, 277, 284, 290, 311, 328
- Elliott, Kimberly Ann, 393n132
- El Niño, 308
- El Salvador, 26
- El Tofo iron ore deposit, 163–64
- Emigration Act, 131
- empire effect: British and, 201; fiscal agency and, 204–7; United States and, 201–7
- Endara, Guillermo, 296, 299, 302–3
- Engerman, Stanley, 323, 357n4, 398n19
- Enterprise* (aircraft carrier), 224
- Erie Canal, 37, 98, 357n4
- Espinosa, Gaspar de, 16–17
- Essex*-class carriers, 222–23
- Esso oil tankers, 273
- European Union, 4
- Executive Order 12635, 293–94
- Fábrega, José de, 29
- Falmarc, Maurice, 31–32
- Fascists, 229
- Federal Bureau of Investigation (FBI), 234
- Felipe II, 321
- Ferguson, Niall, 3, 201, 324, 333n2
- Fermin, Felipe, 81–82
- Feuille, Frank, 102
- Fieldhouse, D. K., 319–20
- Finlay, Carlos, 123
- First National City Bank of New York, 279
- Five-Power Treaty, 168
- flags: American, 143, 236, 238, 240; of convenience, 269–73, 322; Panamanian, 229, 236–38, 262, 269–73, 322; ship registration and, 158, 270–73
- Fogel, Robert, 5–6, 148
- Ford, Gerald, 258–59, 262, 292
- Foreign Relations of the United States*, 11
- Foreign-Trade Zones Board, 275
- Forrestal*-class carriers, 224

- Forty-niners, 37, 43  
France Field, 106  
Franck, Harry, 139  
freight rates: Commissary and, 193–94; decreased, 141–45, 160, 241–45; Interstate Highway System and, 241; railroads and, 173–77, 193–94; World War II and, 216  
Frelinghuysen, Frederick, 66  
Frelinghuysen-Zavala Treaty, 87, 92, 162  
French, the, 1, 277, 348n4, 359n52; attempts at Panama Canal construction by, 59–66, 69, 71, 75, 98–99, 110–11, 123, 187, 199; Colombia and, 77; Compagnie bond failure and, 63, 65; economic law and, 348n4; Eiffel design and, 62; Five-Power Treaty and, 168; imperial interests of, 35, 42, 47–48; Mendoza and, 120; New Granada concession rights and, 32; payroll systems and, 359n52; Potsdam Conference and, 228; Silver Roll and, 111; Suez Canal and, 55, 57–60; useless excavations of, 99; Wyse Concession and, 59, 78, 81–82, 86, 89, 92, 95, 162, 316  
Gaddis, John, 333n1  
Gaillard, David du Bose, 112  
Gaillard Cut, 103. *See also* Culebra Cut  
Galicia, 111  
Galley, Daniel, 224  
Garibaldi, Giuseppe, 57  
Gaskin, Ed, 234–35  
Gatún Dam, 214  
Gatún lock, 306  
Georgia Tech, 294  
Gianelli, William, 295–96  
Gibbs, Stephen R., 243, 247  
Gilberts raid, 219, 222  
Gillette Safety Razor Corporation, 275  
Goethals, George Washington, 194, 321; authority of, 101–2; Canal Zone defense and, 106; Commissary and, 191–92; construction of Panama Canal and, 100–102, 106, 113, 115, 118, 121; and cuts of workday hours, 113; depopulation and, 115; Isthmian Canal Commission and, 100–102, 106, 113, 115, 118, 121; lock-canal plan and, 102–3, 105; Mendoza affair and, 121–22; personality of, 100–101; racial issues and, 101, 115, 118; Thatcher plan and, 101–2  
Goethe, Johann Wolfgang von, 32  
gold: Argonauts and, 37, 44; Aspinwall and, 36–37; base, 14; California gold rush and, 36–40, 43; Forty-niners and, 37, 43; Vanderbilt and, 37, 39–40  
Golden Gate Bridge, 46  
Gold Roll, 111–12, 115, 118, 191–92, 198, 360n58  
González Dávila, Gil, 18–19  
Good Neighbor diplomacy, 209–10  
Goodyear, 373n96  
Gorgas, William Crawford, 118, 187; anti-malaria campaign of, 124–26; fumigation and, 123–24; size of operations of, 97–98; yellow fever campaign of, 123–24  
Government Accountability Office (GAO), 275  
Granada, 20  
Gran Colombia, 32  
Great Depression, 142, 175, 245, 331  
Greene, Julie, 11  
Greenwood Timber Company, 179  
Greif, Avner, 5  
Greytown. *See* San Juan del Norte (Greytown)  
Guadalcanal, 219, 221–22  
Guardia, Ricardo de la, 229  
Guardia, Santiago de la, 121–22  
Guardia Fabrega, Gilberto, 298, 303, 309  
Guatemala, 239, 270  
Guizado, José Ramón, 236, 274  
Gulf of Mexico, 16, 166, 174, 345n155  
Gulf of Nicoya, 20  
Gulf of St. Michael. *See* Bay of San Miguel  
gunboats, 84, 370n63, 376n43, 399n23  
Haber-Bosch process, 162–63  
Hague, The, 147  
Hains, Peter C., 108, 167  
Haiti, 173, 207  
Hanna, Mark “Dollar,” 75, 80  
Harding, Chester, 114–15, 194  
Harding, Warren, 202–3  
Hardy, Thomas, 129  
Hart, Charles, 78–79  
Havana, 22  
Hawaii, 56, 72, 93, 168, 222  
Hay, John, 72, 81–85, 201

- Hayakawa, Samuel, 212
- Hay–Bunau-Varilla Treaty, 84, 95, 211; Commissary and, 193; transportation privileges under, 203; U.S. gains from, 87–92
- Hay–Concha Memorandum, 79–80
- Hay–Herrán Treaty, 81–82, 86, 89, 162
- Hay–Pauncefote Treaty, 74, 146–47
- Hayes, Rutherford, 66
- health issues: Commissary and, 193; disease and, 8 (*see also* disease); infant mortality and, 119–20, 127, 130, 138; racial discrimination and, 118–20; sanitation and, 82, 84–85, 115, 122–28; Spadafora and, 288; UN Standard Minimum Rules for the Treatment of Prisoners and, 323; water purification and, 127–28
- Heilbron, Oswaldo, 273–75
- Helms, Jesse, 287, 290
- Hernández de Córdoba, Francisco, 19
- Herrán, Tomás, 81
- Herrera, Balbina, 313
- Herrera, Roberto Díaz, 290–91
- Hitt, Reynolds, 121, 361n87
- HMS *Bermuda*, 40–41
- HMS *Express*, 40
- Hobson, J. A., 317, 319
- Holland, Henry, 235
- Homestead Air Force Base, 298
- Honduras, 26, 172, 270
- Hong Kong, 303
- Hoover Dam, 98, 357n4
- Hornet* (aircraft carrier), 219, 221
- Hufbauer, Gary Clyde, 393n132
- Hughes, Charles Evans, 195
- Hull, Cordell, 209–10, 229
- Hull–Alfaro Treaty, 231, 274, 322
- Humboldt, Alexander von, 30–32, 53, 62, 340n74, 351n48
- hurricanes, 130
- Hutchinson, William, 10, 152–53, 314, 368n29
- Hutchison Whampoa Limited, 303
- Huttenback, Robert A., 3, 320
- Iberian Union, 28
- Iceland, 238
- Idaho* (battleship), 219
- illegal drug trade, 285–86, 289–90, 292, 294
- Immigration and Nationality Act, 315
- imperialism, 1, 11–12, 95–96, 201, 313, 332; American consumer and, 7–8; American flag and, 240; bourgeoisie and, 317; British, 319–20, 398nn16,18; colonial administration and, 2–3; colonial origins of comparative development and, 323–24; economic issues and, 2–4, 56–57, 317–24, 398nn16,18; empire effect and, 200–208; end of empire and, 333n1; exploitative nature of, 317–18; fiscal agency and, 204–6; flying of Panamanian flag and, 236–38; formal, 2–4; Hobson and, 317, 319; informal, 2–4; large-N studies and, 3; Lebergott and, 319; Lenin and, 317, 319; literature on, 3–4; private-property rights and, 318–19; rent expropriations and, 7–8; Roosevelt and, 7; sovereignty issues and, 3; threat of force and, 7
- Incas, 20
- Independence*-class carriers, 222–23
- Indiana* (battleship), 219
- Indians, 15, 19, 39, 43
- infant mortality, 119–20, 127, 130, 138
- interest costs, 106, 149, 260, 325, 396n179
- International Banking Center, 269, 280
- international banking sector, 269, 278–81, 292–93
- International Research Associates (IRA), 245, 247, 383nn68,74
- Interstate Commerce Commission (ICC), 173–75, 185
- Interstate Highway System, 212, 241, 315–16
- Ionian Sea, 189
- Iran, 239
- Irish, the, 43
- iron: American, 166; Chile and, 152, 162–64, 243, 315; Haber-Bosch process and, 162–63; pig, 368n38; shipping data and, 22, 174–75
- Islas de Perlas, 14
- Isthmian Canal Commission, 10, 131; Commissary and, 190–200, 208–11, 230–31, 260, 263, 279, 321–22; defense costs and, 105–6; Emigration Act and, 131; Goethals and, 100–102, 106, 113, 115, 118, 121; labor unrest and, 108–22; mismanagement of, 99–102; political infighting and, 100; preparing to con-

- struct Canal and, 73–76; Roosevelt's sacking of, 100; sanitation crusade and, 122–28; supervision from Washington by, 99–100
- Isthmus of Panama: Balboa's crossing of, 15; Clayton-Bulwer Treaty and, 40–41; first canal proposals and, 15–17; French private interests and, 1, 6–7, 13–14; gold rush of California and, 36–40; Humboldt and, 30–32; as major commercial center, 14; pre-Columbian trade across, 13–15; unique geographic location of, 1–2
- Isthmus of Tehuantepec, 49–54
- Italians, 111–13, 168
- Jackson, Andrew, 34
- Jamaicans, 43, 110, 130, 269
- Japan, 164–66; attack on Panama Canal and, 213–15; Doolittle raid and, 219, 221; Five-Power Treaty and, 168; Pearl Harbor and, 218–19, 222; World War II and, 214–15, 218–22
- Jewish refugees, 272
- Jim Crow system, 97
- Jiménez, Enrique Adolfo, 226, 229, 275
- Johnson, Lyndon, 255–59, 262, 292
- Johnson, Simon, 323, 398n20
- Johnston, William, 60
- Jones Act, 142–43
- Juan Franco Racetrack, 231
- Just Cause (military operation), 297–98
- Kane, Theodore, 68
- Kansas City Southern Railroad, 310
- Kelley, Frederick, 66, 351n48
- Kennedy, John F., 255, 262, 292
- Keynesian stimulus, 331
- Kinai Maru* (ship), 166
- King, Ernest, 219
- Kissinger, Henry, 257–58
- Kitty Hawk*-class carriers, 224
- Klein, Mathew, 42
- Knox, Philander, 121–22, 362n95
- Korean War, 227
- labor, 318; accident rates and, 251; AFL-CIO and, 231, 234; American, 43; Barbados and, 98, 110, 113, 129–38, 323, 365n162; child, 130; Chinese, 43, 110, 344n143; Colón Free Zone (CFZ) and, 276–77; Commissary and, 190–92, 195; cost-of-living increases and, 113–14; Cuban, 110–11; demographics for, 108–10; discontents and, 108–22; disease and, 61, 97–98 (*see also* disease); Gold Roll and, 111–12, 115, 118, 191–92, 198, 360n58; humanitarianism and, 323; Irish, 43; Italian, 111–13; Jamaican, 43, 110; Jim Crow system and, 97; job force reduction and, 305–6; “laziness” and, 108, 110; mortality rates for, 61; Noriega and, 295–96; Panamanization of, 298–305; Panama Railroad and, 43–44; payroll issues and, 111–12; productivity and, 249–51; racial issues and, 115–22; Remón-Eisenhower Treaty and, 231, 234–35; repatriation costs and, 110; respect and, 113; road building and, 18–21; Silver Roll and, 111–15, 118, 191–92, 198, 274, 323; skilled, 111–12, 238, 276; slavery and, 6, 18–24, 321; social returns and, 147–55; Spanish, 110–13; strikes and, 112–14, 293, 323; suicide and, 43; unskilled, 43, 134, 276–77; UN Standard Minimum Rules for the Treatment of Prisoners and, 323; wage caps and, 112
- LaFeber, Walter, 11
- La Higuera, 163
- Lake Gatún, 99, 103, 214, 308–9
- Lake Nicaragua, 16, 37, 39, 70
- Landes, David, 3–4
- landslides, 98, 103, 168, 213
- Laos, 238
- large-N studies, 3
- Las Cruces, 17
- Leber, Walter, 253
- Lebergott, Stanley, 10, 319
- Lenin, Vladimir, 317
- Lesseps, Charles de, 55
- Lesseps, Ferdinand de, 46, 190, 316; background of, 57; Bunau-Varilla and, 75; Compagnie bond failure and, 63, 65; death of, 66; diplomatic service of, 57; fund-raising by, 59–60; Panama Canal and, 59–66, 75; Panama Railroad and, 60; reputation of, 59; sea-level Panama Canal attempt of, 60–66; Suez Canal and, 55, 57–58; tiered workforce and,

- Lesseps, Ferdinand de (*cont.*)  
111; West Indian labor and, 115; Wyse  
Concession and, 59
- Levi, Margaret, 5
- Liberia, 273
- Liberty ships, 274
- Libro azul* documents, 11
- Libya, 291
- Limón Bay, 99
- Lloyd, John Augustus, 31–32, 341n85
- lock-canal designs, 37, 70, 83, 100–105, 257
- Loomis, Francis, 83–84
- Lula da Silva, Luiz Inácio, 4
- lumber industry, 177–79, 241, 371n76
- Lyons, Thomas, 275, 276
- McAuliffe, Dennis, 298, 305
- McIntyre, Tom, 262
- McKinley, William, 72–74, 370n55
- McMillan, Robert, 303
- macuquinas*, 34–35
- Madden Dam, 297
- Mahan, Alfred Thayer, 167, 370n56
- Maine* (war ship), 84
- Major, John, 11
- malaria: health measures and, 55, 61, 97, 99,  
124–28, 322; mortality rates and, 124–  
26; mosquito transmission of, 124;  
sanitation crusade and, 124–28
- Malucos. *See* Moluccas
- Mamuneas, Theofanis P., 315, 397n4
- Manfredo, Fernando, 298
- Manzanillo Bay, 276
- Marblehead* (war ship), 84
- marijuana, 292
- Maritime Canal Company, 69–73, 87
- markets: ancillary enterprises and, 310–11;  
antitrust laws and, 144–45; black, 195,  
198; Colón Free Zone and, 269, 275–81,  
311, 322, 387n26; cost savings through  
Panama Canal and, 140–45; illegal drug  
trade and, 285–86, 289–90, 292, 294;  
international banking sector and, 278–  
81, 292–93; Interstate Commerce Com-  
mission (ICC) and, 173–75, 185; lumber,  
177–79; money laundering and, 285–86,  
291–92, 294; petroleum, 179–88 (*see also*  
petroleum industry); price sensitivity of  
shippers and, 155–57; ship registration  
and, 270–73, 281; smuggling and, 20,  
28–29, 267, 271–73, 285, 292, 298; tariffs  
and, 52, 69, 87, 94, 130, 191–94, 267–69,  
278; textile, 22, 166, 277, 339n47; *trajín*  
and, 23–30; transportation and, 212 (*see*  
*also* transportation)
- Marroquín, José Manuel, 77, 82
- Marsh, Richard, 121–22, 362n95
- Martinelli, Ricardo, 313
- Martínez Silva, Carlos, 76–78
- Martinique, 80
- Martyr, d'Anghiera, Peter, 18
- Massachusetts Turnpike, 98
- Maury, Matthew Fontaine, 46
- Mayans, 15
- Mayflower* (war ship), 84
- Medellín, 128, 285, 286
- Mendoza, Carlos, 120–22
- Menocal, Aniceto García, 69
- Menocal Contract, 71, 87
- Merchant Marines and Fisheries Subcom-  
mittee, 275
- Mexican-American War, 36
- Mexican Revolution, 106
- Mexico, 141, 163, 386n16; American policy  
in, 147, 172; Díaz and, 50, 52; Eads and,  
50; Isthmus of Tehuantepec and, 14,  
49–54; mortality rates and, 126; mule  
transport and, 27; railroads and, 314;  
social savings and, 314
- Miami Metrorail, 98
- Mi-Jack Products, 310
- military: Anti-Ballistic Missile Treaty and,  
253, 255; Blue Spoon and, 297; burgeoi-  
sie and, 317; Canal Zone defense and,  
105–6; Crittenger plan and, 225–26;  
defense benefits of Panama Canal and,  
167–73; Dignity Battalions and, 296, 302;  
Five-Power Treaty and, 168; ICBMs and,  
253; imperialism and, 202 (*see also* impe-  
rialism); labor strikes and, 114; Monroe  
Doctrine and, 172; naval spending and,  
167–68; Neutrality Treaty and, 260; Op-  
eration Just Cause and, 297–98; Panama  
Canal Treaty and, 260; Strategic Arms  
Limitation Treaty and, 253; suicide ships  
and, 213–15, 224; various U.S. interven-  
tions and, 172; War Department and,  
170–73; War Shipping Administration  
and, 216–18; Zionians' influence in, 258.  
*See also* specific conflict

- Mindanao, 94  
mining, 340n66; copper, 14, 163, 261; gold, 6, 14, 37, 59; iron, 152, 163–64, 243, 315; nitrate, 163; silver, 6, 13, 22, 28  
Miraflores lock, 306  
Miskito Indians, 39  
*Mississippi* (battleship), 219  
Mississippi River, 52  
Mitchener, Kris James, 3, 324, 333n2  
Mohammed, Saif, 141–42  
Moluccas, 16  
money laundering, 285–86, 291–92, 294, 390n86  
Monroe Doctrine, 172  
Morgan, Henry, 28  
Morgan, John, 72–73, 75  
Morgan, J. P., 85  
Morison, Samuel Eliot, 11  
Morris-Knudsen, 282  
Morrow, Jay, 194  
mortality rates, 8, 61, 119–20, 124–27, 130, 138, 148, 323  
Moscoso, Mireya, 303–4  
Mosquito Coast, 35, 40–41  
Motta, Alberto, 273  
Mount Hope reservoir, 127–28  
Mount Pelée, 80  
Movimiento Papa Egoró, 303  
mud slides, 60–61  
mules, 31, 39, 42; Acapulco-to-Veracruz route and, 27; *trajín* and, 23–30, 246  
Muslims, 93–94  
  
Nadiri, M. Ishaq, 315, 397nj4  
Napoleon III, 58  
*Nashville* (battleship), 84  
Nasser, Gamal Abdel, 328  
National Aeronautics and Space Administration (NASA), 249  
National City Bank, 200, 203–4  
nationalism: American, 4, 9, 213, 228, 262, 375n43; Panamamian, 326  
National Vote Counting Board, 288  
Navy Bay, 42  
Neutrality Act, 67, 272, 352n54  
Neutrality Treaty, 259–60, 264–65, 286, 327, 332  
New Cristóbal, 209  
New Granada, 32–36, 42–43, 46, 341n88  
New Jersey Turnpike, 249  
*New Mexico* (aircraft carrier), 218–19  
New Orleans, 36, 39, 166, 241  
New Panama Canal Company: preparations for building Canal and, 65, 73–76, 79–81, 84, 89; U.S. purchase of, 99, 106  
New Spain, 16  
New York, 75, 275, 279, 289; Aspinwall and, 43; Biddle and, 34; Cleveland's dispatching of troops from, 68; Hay–Bunau-Varilla Treaty and, 85, 203–4; drugs and, 285; Lesseps and, 60; Panama Railroad and, 6, 83; Pan-American Exposition and, 73; petroleum industry and, 184–85; transportation from, 36, 39, 142, 145, 163, 216; textile industry and, 166; Vanderbilt and, 37; Wyse and, 48, 59  
*New York Herald*, 271  
New York Stock Exchange, 46, 281  
*New York Times*, 99, 122, 192, 195, 226, 295  
*New York Tribune*, 61  
New Zealand, 320  
Nicaragua, 14, 54, 162, 172–73, 207, 282; cattle and, 193; Frelinghuysen-Zavala Treaty and, 87; geography of, 56; Maritime Canal Company and, 69–73, 87; Menocal Contract and, 87; Mosquito Coast and, 35, 40–41; mule transport and, 26; Pedrarias and, 18–19; preparations for building Canal and, 66–82, 86–89, 95; Sandinistas and, 286–87, 291; San Juan River and, 16, 37, 39, 70, 83, 87; ship registration and, 270; slavery and, 6, 18–21, 24; spies and, 286; Vanderbilt and, 37–38; Zavala and, 66  
Nicaraguan Canal Association, 69  
Nicatlnauac, 18  
Nicoya, 18  
*Nimitz*-class carriers, 224  
nitrates, 162–63  
Nixon, Richard, M., 253, 256–58, 262  
Nombre de Dios, 15–18, 200, 335nn5,10, 336n19, 339n45, 375n40  
Nootka Sound, 31  
Noriega, Manuel, 328–29, 390n86; Balladares and, 303; Barletta and, 289–90; Blue Spoon and, 297; Bush and, 296–97; calls for resignation of, 291; Carter and, 296; Casey and, 287, 290; Central Intelligence Agency (CIA) and, 285, 287, 290;

- Noriega, Manuel (*cont.*)  
covert operations in Nicaragua and, 286;  
Cuba and, 285; and declaration of war  
on United States, 297; Delvalle and, 292;  
Díaz and, 290–91; Dignity Battalions  
and, 296, 302; elections of 1989 and, 296;  
Executive Order 12635 and, 293–94; fall  
of, 287–88; frozen banking assets and,  
292–95; Helms and, 287, 290; illegal drug  
trade and, 285–86, 289–90, 292, 294; as  
intelligence chief, 284–85; intimidation  
tactics of, 295–96; Libya and, 291; as  
Maximum Leader of Panama, 297–98,  
329; money laundering and, 285–86, 291–  
92, 294, 390n86; Operation Just Cause  
and, 297–98; Panama Canal Commission  
and, 284, 295–98; patronage networks  
and, 266, 329; Pérez and, 303–4; petro-  
leum industry and, 295; Reagan and, 287,  
290, 296; removal of, 9–10, 12, 298, 305,  
311; rise of, 284–87; Rogers and, 292–93;  
sanctions against, 294–95, 328–29; Soviet  
Union and, 291; Spadafora and, 288–89;  
Torrijos and, 265, 284, 287–88, 291;  
trigger event of, 297–98; U.S. Justice De-  
partment indictments and, 291–92; U.S.  
National Security Agency and, 284–85
- North, Oliver, 286
- North Carolina* (battleship), 219
- North Slope petroleum discoveries, 281
- Northwest Passage, 331
- Núñez, Rafael, 67–68, 351n52
- Obaldía, José Domingo de, 33, 82, 120
- Obama, Barack, 4
- oil tankers, 180, 183, 185, 272–73, 274, 282
- Olney, Richard, 4
- Operation Just Cause, 297–98
- opium, 43, 375n39
- Oregon, 36–37, 142, 178
- Oregon* (battleship), 71–72
- Organization of American States, 255
- Osaka Shosen Kaisha (Osaka Mercantile  
Marine), 166
- Ottoman Empire, 40–41, 348n3
- Pacific Freighters, 271
- Pacific Northwest, 140, 155, 173–74, 177–  
79, 314–15
- Pacific Steam Navigation company, 49
- palindromes, 1
- Panama: American flag and, 236, 240; as  
American protectorate, 324; Article 82  
(Panamanian constitution of 1904) and,  
121–22; Article 136 (Panamanian con-  
stitution of 1904) and, 7, 85–86, 94, 121,  
201–3, 210; Bidlack-Mallarino Treaty  
and, 35–36; black market and, 195, 198;  
Colón Free Zone and, 269, 275–81,  
311, 322, 387n26; Commissary and,  
190–200, 208–11, 230–31, 260, 263,  
279, 321–22; Constitutional Fund and,  
85; as Corinth, 189; decolonization and,  
325–31; depopulation of, 17–21; eco-  
nomic development before 1977 and,  
266–69; economic opportunities  
in, 189–90; elitism and, 33, 236, 267,  
277, 284, 290, 311, 328; empire effect  
and, 200–208; extensive local exchange  
networks of, 14; first peak of (1550–  
1671), 21–22; fiscal agency of U.S.  
needed in, 204–7; flying of Panamanian  
flag and, 236–38; geographic advantage  
of, 6, 189; Hay–Bunau-Varilla Treaty  
and, 84–92, 95, 193, 203, 211; Hull-  
Alfaro Treaty and, 208–11; illegal drug  
trade and, 285–86, 289–90, 292, 294;  
increased political voice of, 8–9; inter-  
national banking sector and, 278–81,  
292–93; invisible earnings and, 198–200;  
lack of financial prudence in, 203–4;  
Mendoza affair and, 120–22; national-  
ism and, 326; Neutrality Treaty and,  
259–60; Noriega and, 265, 284–98;  
Partido Revolucionario Democrático  
(PRD) and, 284, 303–4, 313; personal-  
ized patronage networks and, 265–66;  
Remón and, 228–31, 235–36, 255, 277–  
78, 285, 322; Republic of, 2, 7, 56–57,  
102, 189–90, 201, 211, 257, 263, 277,  
306, 312; road building and, 17–21;  
Roosevelt’s support of uprising in, 83–  
92; shipbuilding and, 270–71; ship reg-  
istration and, 270–73; slavery and, 6,  
18–24, 321; social savings of, 313–16;  
Spanish administrators of, 6–7, 16–17;  
Torrijos and, 9–10, 255–61, 265–66,  
278, 282–88, 291, 297–98, 302–5, 327–  
28; *Trajin* and, 23–30; two economic  
booms of, 13–14; U.S. aid payments

- and, 9, 212–13, 230, 236–39, 248, 255–56, 262–63; U.S. Free Trade Agreement and, 313, 332; U.S. troops in, 56–57, 68, 77, 80–84, 203, 221, 325; water purification and, 127–28
- Panama Canal: American commerce benefits and, 158–62; amount of excavated rock for, 103; ancillary enterprises and, 310–11; Article 10 and, 190; attack on, 218; budget overruns of, 97–99, 102, 106, 140, 147; changes in revenue sources for, 267–68; Chile's gain from, 162–64; Cold War era and, 223–27; concrete needed for, 103; Culebra Cut and, 61, 83, 103, 213–14, 279, 309; decrease of strategic position of, 226–27; defense issues of, 105–7, 167–73, 214, 224–25; discontents and, 108–10; distributional effects of, 173; Eiffel design and, 62; as engineering marvel, 97, 139; estimating economic value of, 139–40; fear of Panamanian mismanagement of, 248–55; Fogel method and, 5–6; freight rates and, 141–45 (*see also* freight rates); French attempts at, 59–66, 69, 71, 75, 98–99, 110–11, 123, 187, 199; French private interests and, 1, 6–7, 13–14; future of, 331–32; Goethals and, 100–102, 106, 113, 115, 118, 121; imperialism and, 1–4, 7–8, 11–12, 57, 95–96, 201, 313, 317–23, 332, 333n1; increased ship size and, 308–9; interest costs and, 106, 149, 260, 325, 396n179; internationalization of, 255; Japan's gain from, 164–66; Kissinger-Tack principles and, 257–58; labor unrest at, 110–15 (*see also* labor); landslides and, 98, 103, 168, 213; Lesseps and, 59–66, 75; as liability, 228; local canals and, 102–3; local treasury contributions of, 312; lock-canal designs and, 37, 70, 83, 100–105, 257; logistic effects of, 214–18; long-term profitability of, 305–12; management missteps of, 99–102, 248–55; Mendoza affair and, 120–22; modern assessment of, 55; national symbolism of, 228, 262, 264; oil tankers and, 180, 183, 272–73, 282; opens to civilian traffic, 98; palindrome about, 1; Panamanization of, 298–305; petroleum industry and, 179–88; post-Panamax vessels and, 242–43, 245; price sensitivity of shippers and, 155–57; racial discrimination and, 115–20; rainfall and, 306–7; reservation system improvements and, 309–10; sanitation and, 122–28; sea-level design for, 60–66; shipper competition and, 143–44; social savings of, 147–55, 240–46; steel needed for, 103; supertankers and, 243; as symbol of American nationalism, 228, 262; Third Locks project and, 224–27; toll controversies and, 146–47, 246–48; Transisthmian Pipeline and, 265; transportation cost savings from, 140–45; U.S. costs of, 98–100, 103–8, 114, 118, 128, 135–39; U.S. lumber industry and, 177–79; U.S. railroad industry and, 173–77; U.S. returns from, 158–62; wage caps and, 112; World War II era and, 213–23; Wyse Concession and, 59, 78, 81–82, 86, 89, 92, 95, 162, 316
- Panama Canal, The* (LaFeber), 11
- Panama Canal Act, 255; Commissary and, 192; Goethals and, 102; Panama Canal Company and, 248, 251; private-property rights and, 108; repeal of, 147; railroads and, 144; toll provisions of, 146; Wilson and, 146–47
- Panama Canal Authority, 302–5, 308–11
- Panama Canal Commission, 10, 260, 263, 384n75; Guardia and, 298, 303, 309; long-term profitability and, 305, 308–11; Noriega and, 284, 295–98; Panamanization of, 298–305; U.S. handover of Canal and, 264, 284, 295–305, 308–11
- Panama Canal Company, 10, 382n50, 383n73, 384n79; accident rates and, 251; mismanagement and, 248–55; New Panama Canal Company and, 65, 73–76, 79–81, 84, 89, 99, 106; Panama Canal Act and, 248, 251; productivity and, 249–51; raising tolls and, 246–48; sliding irrelevancy of Canal and, 246–55, 260, 263; U.S. handover of Canal and, 274, 306
- Panama Canal Treaty, 327; American public's reaction to, 264–65; long-term profitability and, 305–6; sliding irrelevancy of Canal and, 228, 256, 259–63; U.S. handover of Canal and, 287, 312

- Panama Canal West Indian Employees Association, 234
- Panama City, 209, 248, 344n141; American fiscal agent in, 190; declining revenue of, 269; founding of, 18; historical perspective on, 13, 17–18, 22–24, 27, 33, 36–37, 41–44; mortality rates and, 122–27; preparations for building Canal and, 61, 67–68, 77, 82–85; railroads and, 204; Remón assassination and, 231; riots in, 202–3, 237; Trans-Isthmian Highway and, 210, 276; U.S. construction of Canal and, 108, 114, 122–28; U.S. handover of Canal and, 274–79, 297–98
- Panama Fortification Board, 105
- Panamanian Defense Forces (PDF), 287
- Panamanian flag, 229, 236–38, 262, 269–73, 322
- Panamanian National Assembly, 204, 226, 238, 275, 279, 297
- Panamization, 298–305
- Panama Railroad, 14, 36, 54, 141, 325, 344n146, 348n181, 350n24; amortization funding and, 63; Aspinwall and, 41–43; building of Canal and, 110–12, 115, 118, 127–28; budget of, 44–46, 344n148; Clayton-Bulwer Treaty and, 40–42; Commissary and, 191–94, 198–99; Compagnie Universelle du Canal Interocéanique and, 46–48; completion of, 44; construction of, 42–45; cut tracks of, 68; dividend payments and, 42; economic issues and, 44–47; fading of, 246; as feeder to Pacific shipping, 41–42; freight rates and, 193–94; ground-breaking ceremony of, 42–43; Hay–Bunau-Varilla Treaty and, 84; Hull-Alfaro Treaty and, 210–11; incorporation of, 42; increased business for, 61; labor issues and, 43–44; Lesseps and, 60; lignum vitae ties and, 44; Navy Bay and, 42; new contract of, 46; New Granada concession rights and, 42; Pacific Steam Navigation Company and, 49; preparation of Canal project and, 59–69, 79, 82–86; profits of, 6–7, 46–47; rehabilitation of, 99–100, 103, 105, 310–11; rising stock prices of, 47–48; sliding irrelevancy of Canal and, 231, 246; Stephens and, 42; surveying of, 42; Tehuantepec Railroad and, 52–53; trucking competition and, 274; U.S. communications and, 41–42; U.S. handover of Canal and, 265, 274
- Panameñista Party, 302–4
- Pan-American Airlines, 203
- Pan-American Exposition, 73–74
- Park, Trenor, 59
- Parke-Davis, 276
- Parkinson, Constantine, 108
- Partido Revolucionario Democrático (PRD), 284, 303–4, 313
- Pasha, Saïd, 57
- patronage networks, 265–67, 328–29
- Pauncefote, Julian, 72, 74
- Pearcy, Thomas L., 11
- Pearl Harbor, 218–19, 222
- pearls, 14, 26
- Pearson, Weetman, 52–53, 347n178
- Pérez Balladares, Ernesto, 303–4
- Peru, 71, 243; illicit trade in, 28; oysters and, 15; Pizarro and, 19–20; ship technology and, 29; silver of, 6, 13–14, 22, 28; slavery and, 20, 24; Straits of Magellan and, 29
- petroleum industry: Alaska and, 281–82; Big Inch and, 184; Cookenboo study and, 184, 372n93; crude oil prices and, 179–80; Goodyear and, 373n96; Noriega and, 295; oil tankers and, 180, 183, 185, 272–74, 282; Panama Canal effects on, 179–88; post-Panamax vessels and, 242–43; refining and, 182–83; social savings and, 314–15; Sumed Pipeline and, 284; supertankers and, 243; transcontinental pipeline and, 183–88; Transisthmian Pipeline and, 265, 281–84
- Petroterminal de Panamá S.A., 282
- Pfizer, 276
- Philippines, 56, 93–95, 168, 173, 204, 207, 271, 321
- Philippine War, 93–94
- Pippin, Larry, 11, 381n36
- pirate radio, 272, 386n16
- pirates, 26, 81
- Pizarro, Francisco, 19–20
- politics: Alianza Democrática and, 303; Alianza Pueblo Unido and, 303; Article 136 (Panamanian constitution of 1904) and, 7, 85–86, 94, 121, 201–3, 210; autoc-

- racy and, 266–67, 284; Cold War and, 223–27; Colón Free Zone and, 269, 275–81, 311, 322, 387n26; Communists and, 9, 228, 234; decolonization and, 325–31; elitism and, 33, 236, 267, 277, 284, 290, 311, 328; empire effect and, 200–208; Executive Order 12635 and, 293–94; Fascists and, 229; flying of Panamanian flag and, 236–38; Good Neighbor diplomacy and, 209–10; historical perspective on, 4; illegal drug trade and, 285–86, 289–90, 292, 294; imperialism and, 1–4, 7–8, 11–12, 57, 95–96, 201, 313, 317–23, 332, 333n1; Mendoza affair and, 120–22; Merchant Marine and Fisheries Subcommittee and, 275; Movimiento Papa Egoró and, 303; Neutrality Act and, 67, 272, 352n54; Noriega and, 9–10, 12, 265–66, 284–99, 302–5, 311, 328–29, 390n86; Panama Canal Act and, 102, 108, 144–47, 192, 248, 251, 255; Panamanian National Assembly and, 204, 226, 238, 275, 279, 297; Panameñista Party and, 302–4; Partido Revolucionario Democrático (PRD) and, 284, 303–4, 313; patronage networks and, 265–67, 328–29; populists and, 4, 266, 278, 287–88, 302; Progressive Era and, 321; Republic of Panama and, 2, 7, 56–57, 102, 189–90, 201, 211, 257, 263, 277, 306, 312; sanctions and, 2, 5, 190, 206, 294–95, 328–29, 333n1, 393n132, 398n18; ship registration and, 270–73, 281; sovereignty issues and, 2–5, 33, 36, 69, 78–83, 206, 209–11, 235–39, 257, 333n1, 386n16; tolls controversy and, 146–47, 246–48; Torrijos and, 9–10, 255–61, 265–66, 278, 282–88, 291, 297–98, 302–5, 327–28; U.S. Shipping Board and, 143–44, 270–71; vote competition and, 266; Watergate scandal and, 262. *See also* specific treaty
- Ponce de León, Juan, 19
- populism, 4, 266, 278, 287–88, 302
- Porras, Belisario, 189, 202–4, 207, 376n54
- Portobelo, 22, 26, 27–28, 339n45
- Port Said, 190
- post-Panamax vessels, 242–43, 245
- potato raids, 130
- Potsdam Conference, 228, 255
- Prairie* (war ship), 84
- Prensa, La* (newspaper), 287–88
- Prestán, Pedro, 67–68
- price sensitivity, 155–57
- Prize Possession: The United States and the Panama Canal* (Major), 11
- Probyn, Leslie, 133–34
- Progressive Era, 321
- Prohibition, 209, 271
- prostitution, 375n39
- Prudhoe Bay, Alaska, 281
- Puente del Rey, 23–24
- Puerto Rico, 93–94, 201, 321
- Putin, Vladimir, 4
- Quechua, 15
- Queens (borough of New York city), 98, 290, 357n4
- racial issues, 321; Commissary and, 192; depopulation and, 115, 118; Goethals and, 101, 115, 118; health care and, 118–20; Jim Crow system and, 97; labor and, 115–22; Mendoza affair and, 120–22; payroll systems and, 111–12; wage caps and, 112
- railroads: competition and, 145; containerization and, 241; dieselization and, 241; Eads and, 49–54; effects of Panama Canal on, 173–77; exports and, 241–42; Fogel method and, 5–6; freight rates and, 173–77, 193–94; grade issues and, 53; Hay–Bunau–Varilla Treaty and, 203; Interstate Commerce Commission (ICC) and, 173–75, 185; modernization and, 52–53; Panama Canal’s effect on U.S. industry of, 173–77; social savings and, 314–16; transcontinental, 54; trucking competition and, 241; wind jets and, 53–54; World War II and, 215–18. *See also* specific railroad
- Ranger* (aircraft carrier), 223
- Reagan, Ronald, 259, 262, 287–90, 296, 326–28
- Reed, Walter, 123
- Remón, José Antonio, 228, 231, 236, 285
- Remón–Eisenhower Treaty, 231–35, 277–78, 322
- rents, 7–8, 61, 95, 142, 190, 246, 258, 272, 281

- Republic of Panama, 306, 312; Colón Free Zone and, 277; economic opportunities in, 189–90; Panama Canal Act and, 102; Roosevelt's threats and, 7; sovereignty issues and, 257; as underdeveloped country, 2; U.S. Influence over, 7, 56–57, 189–90, 201, 211, 263
- Reyes, Rafael, 68
- Rhipicephalus annulatus* tick, 193
- Richardson, Bonham, 11
- Río Abajo, 24
- Río Hato air base, 226, 231
- Rivas, 39, 70
- Robinson, James A., 323, 398n20
- Rockwell, John, 46
- Rodriguez, Ramon Milian, 286
- Rogers, William, 292–95
- Rognoni, Mario, 294
- Roman Catholic Church, 296–98
- Roosevelt, Franklin Delano, 208–11, 219, 224
- Roosevelt, Theodore, 1, 4, 291; Bunau-Varilla and, 83; coercive diplomacy of, 82–96, 202; Colombia and, 82–92, 202; defense spending and, 167–68, 170, 172; and Goethals, 100; Gold Roll and, 112; impatience of, 56; imperialism and, 7, 56–57, 321; interventionism and, 324; Isthmian Commission and, 75–76, 100; McKinley assassination and, 74; Monroe Doctrine and, 172; on his greatest accomplishment, 97; Panamanian uprising and, 83–92; Pan-American Exposition and, 73; political infighting and, 100; Progressive Party and, 146; rent expropriations and, 7; threat of force by, 7, 82–92; unrepentant nature of, 92–93
- Roosevelt Corollary, 172
- Root, Elihu, 147, 191, 200
- Root-Arosemena Treaty, 191–92, 374n14
- Rosenthal, Jean-Laurent, 5
- Royal Navy, 28
- rum-running, 271
- Ruyz, Bartolomé, 15
- Saavedra Cerón, Álvaro de, 16
- Sai Baba, Satya, 291
- Salina Cruz, 52, 53
- salt, 14, 19, 34
- sanctions, 2, 5, 190, 206, 294–95, 328–29, 333n1, 393n132, 398n18
- Sandinistas, 286, 286–87, 291
- sanitation: Barranquilla and, 128; building of Panama Canal and, 122–28; crusade for, 122–28; depopulation and, 115; Hay–Bunau-Varilla Treaty and, 84–85; Hay-Herrán Treaty and, 82; mortality rates and, 122–27; U.S. technology and, 128
- San Juan del Norte (Greytown), 39–41
- San Juan River, 16, 37, 39, 70, 83, 87
- San Lorenzo, 26
- Santa Clara Mountains, 24
- Santo Domingo, 19
- Saratoga* (aircraft carrier), 224
- Sardá, José, 31, 31–32
- Saunders, Norman, 292
- Schley, Julian, 209–10
- Schott, Jeffrey J., 393n132
- Schularick, Moritz, 3, 201, 324
- Sea Witch* (ship), 43
- Seybold, John, 275
- shells, 14–15
- shipbuilding, 270–71
- ship registration, 270–73, 281
- Shonts, Theodore, 110
- Silver Roll, 111–15, 118, 191–92, 198, 274, 323
- Singapore, 189
- slavery, 6, 18–24, 321
- Slifer, Hiram, 112
- smuggling, 20, 28–29, 267, 271–73, 285, 292, 298
- social savings: 396n1; cost analysis and, 147–55; decline of, 240–46; decolonization and, 325–31; decreased freight rates and, 242–45; distribution changes and, 315–16; Fogel and, 148; global rate of, 313–14; gravity model for, 152–53; Immigration and Nationality Act and, 315; internal rate of return and, 157; Interstate Highway System and, 315–16; petroleum industry and, 314–15; post-Panamax vessels and, 242–43, 245; price reduction effects and, 314–15; railroads and, 148, 314, 315–16; rate of return on, 153–55
- Social Security, 302

- Sokoloff, Kenneth, 323  
Solís, Manuel, 292  
South Africa, 320  
*South Dakota* (battleship), 219  
Southern (yellow) pine, 177–78  
sovereignty, 2–3, 33, 333n1, 386n16;  
    American flag and, 236, 240; Article 136  
    (Panamanian constitution of 1904) and,  
    7, 85–86, 94, 121, 201–3, 210; Bidlack-  
    Mallarino Treaty and, 35–36, 67, 69,  
    80–83; Boyd march and, 236–37; Colom-  
    bia and, 78–79; empire effect and, 206;  
    flying of Panamanian flag and, 236–38,  
    262; Good Neighbor Policy and, 209–  
    10; Hay–Bunau-Varilla Treaty and, 211  
    (see also Hay–Bunau-Varilla Treaty); ir-  
    relevant position of Canal and, 235–39,  
    257; Westphalian, 4–5  
Soviet Union: Anti-Ballistic Missile Treaty  
and, 253, 255; ICBMs and, 253; ir-  
relevant position of Canal and, 223–28;  
Noriega and, 291; spies and, 286; Stra-  
tegic Arms Limitation Treaty and, 253;  
Strategic Rocket Forces and, 223  
Spadafora, Hugo, 288–90  
Spanish-American War, 56, 71, 172–73  
spies, 286  
*Spondylus* shells, 15  
Spooner, John, 76, 79  
Spooner Act, 80  
steam power: shovels and, 103; steam en-  
gines and, 58; steamships and, 34–44,  
49, 53, 67–68, 71, 132, 140, 144, 148,  
174, 214; Suez Canal and, 58; sugar  
mills and, 129  
steel, 49, 103, 163–64, 174–76, 183, 241,  
243, 368n38, 372n93  
Stephens, John, 42  
Steuart, John, 33–34  
Stevens, John, 99, 100, 110  
Stevens, Simon, 49  
Stimson, Henry, 212  
Strait of Magellan, 13, 16, 150  
Straits of Malacca, 189  
Strategic Arms Limitation Treaty, 253  
Suez Canal, 4, 349n10; closure of, 243; cost  
of, 57–60, 349n11; French and, 55, 57–  
60; indemnity payments and, 58; nation-  
alization of, 328; opening of, 58; Port  
    Said and, 190; shipping and, 141; steam  
    power and, 58; Sumed Pipeline and, 284  
    sugar, 94, 113, 129–31, 134, 155, 166, 191  
    suicide, 43, 375n40  
    suicide ships, 214–15, 224, 226  
    Sumed Pipeline, 284  
    supertankers, 243  
    Svedberg, Peter, 3, 333n2  
    *Sydney Morning Herald*, 33  
Tack, Juan Antonio, 257  
Taft, William Howard, 101–2, 105, 122, 146,  
158, 321, 362n96  
taxes, 173, 238, 306, 314, 396n179; Article  
10 and, 190; Cleveland and, 67; Colom-  
bia and, 80; Colón Free Zone and, 269,  
275–81, 311, 322, 387n26; Commis-  
sary and, 190–94, 198; double taxation  
and, 272; excise, 198, 209; exemptions  
from, 50, 69, 190–94, 198, 273, 277;  
Frelinghuysen-Zavala Treaty and, 87;  
Hay–Bunau-Varilla Treaty and, 84, 193;  
Hull-Alfaro Treaty and, 231; interna-  
tional banking sector and, 279–80; Nica-  
ragua and, 66, 87; Noriega and, 295–96;  
Panamanian revenue and, 270–73, 277–  
81, 295; Peruvian mines and, 22; Prohibi-  
tion and, 209; sanitation works and, 128;  
social savings and, 160–61; subsidies  
and, 57; tariffs and, 52, 69, 87, 94, 130,  
191–94, 267–69, 278; trade, 267, 269,  
278; United Fruit and, 204  
Taylor, Zachary, 40–41  
*tehuano* (wind), 53–54  
Tehuantepec National Railroad Company,  
52–53, 348n181  
Tehuantepec Ship Railway, 49–54  
Tennessee Valley Authority, 249  
Terminales Panama trucking company, 273  
Texaco, 295  
Texas, 178, 182, 184, 188  
textiles, 22, 166, 277, 339n47  
Thatcher, Maurice, 101–2  
Thierry, Charles de, 32–34  
Third Locks project, 224–27  
thorny oyster, 15  
Thousand Days War, 76, 199–200  
through-freight, 274  
TIROS weather satellites, 315

- Title 14 (Panamanian constitution of 1972), 303
- Tocumen Airport, 276, 311
- tolls, 317, 366nn4,5,10; avoiding, 242; British protest over, 94, 146–47; controversy over, 146–47, 246–48; cost analysis and, 218; forecasting revenue from, 60; government cut of, 78–80; loss of revenue and, 284; per transit, 251–52; raising, 238, 251–52, 296, 305, 311, 383n68; reform of, 310; revenue neutral, 92; Taft and, 158
- Torrijos, Martín, 304–5
- Torrijos, Omar: Barletta and, 278; Carter and, 9, 259–61, 298; Kissinger-Tack principles and, 257–58; Manfredo and, 298; as Maximum Leader of Panama, 284, 297; Noriega and, 265, 284, 287–88, 291; patronage networks and, 266, 328; Pérez Balladares and, 303; politics of, 9–10, 255–61, 265–66, 278, 282–88, 291, 297–98, 302–5, 327–28; Trans-isthmian Pipeline and, 282; United Nations and, 257
- trajín*, 23–30, 246
- transcontinental pipeline, 183–88
- Transcontinental Railroad, 6–7, 14, 150, 185
- Trans-Isthmian Highway, 210, 276
- Transisthmian Pipeline, 265, 281–84, 305
- transportation: Acapulco-to-Veracruz route and, 27; antitrust laws and, 144–45; Aspinwall and, 36–37; bandits and, 26; bridges and, 23–24, 44, 46, 49, 52; Camino de Cruces and, 17–18, 23–26; Camino Real and, 17, 24–27; Cape Horn and, 30, 36–37, 49, 72, 140, 150, 214, 224, 245, 367n25; Clayton-Bulwer Treaty and, 40–41; Congressional Research Service and, 242–43; containerization and, 241; cost savings through Panama Canal and, 140–45; dieselization and, 241; Erie Canal and, 37; freight rates and, 141–45 (*see also* freight rates); Hay–Bunau-Varilla Treaty and, 203; Interstate Commerce Commission (ICC) and, 173–75, 185; Interstate Highway System and, 212, 241, 315–16; Jones Act and, 142–43; military, 214–18; mule trains and, 23–31, 39, 42; Panama Canal Act and, 144–45; Panamanian road building and, 17–21; post-Panamax vessels and, 242–43, 245; price sensitivity of shippers and, 155–57; railroads and, 173–77 (*see also* railroads); road conditions and, 267; savings from Panama Canal and, 140–45; shipbuilding and, 270–71; shipper competition and, 143–44; ship registration and, 270–73, 281; smuggling and, 28, 267, 271–73, 285, 292, 298; social returns on Canal project and, 147–55; tolls and, 146–47 (*see also* tolls); U.S. Shipping Board and, 143–44, 270–71; Vanderbilt and, 37, 39–41; War Shipping Administration and, 216–18
- Trinidad, 130, 226
- Tropical Telegraph and Telephone Company, 200
- Truman, Harry S., 223, 226, 228, 255
- T-2 tankers, 274
- tumbaga* (gold-copper alloy), 14
- typhoid fever, 61
- Ungo, Ricardo, 10, 152–53, 314, 368n29
- Union Pacific Railroad Company, 54, 66
- United Brands, 295
- United Fruit Company, 200, 204, 295
- United Nations, 228, 236, 257, 289, 323
- United Public Workers of America (UPWA), 234
- United States: aid payments and, 9, 212–13, 230, 236–39, 248, 255–56, 262–63; American flag and, 143, 236, 240; Anti-Ballistic Missile Treaty and, 253, 255; antitrust laws and, 144–45; Article 136 (Panamanian constitution of 1904) and, 7, 85–86, 94, 121, 201–3, 210; benefits to from Panama Canal project, 158–62; Bidlack-Mallarino Treaty and, 35–36, 67, 69, 80–83; Blue Spoon and, 297; Central Intelligence Agency (CIA) and, 285, 287, 290; Civil War and, 49, 270; Clayton-Bulwer Treaty and, 40–42, 67, 72; Cold War era and, 223–27; Colombian negotiations and, 78–82; Commissary and, 190–200, 208–11, 230–31, 260, 263, 279, 321–22; conquest of California and, 6, 14, 36; construction of Panama Canal by, 98–138; decolonization and, 325–31; distributional effects and, 173; domestic cargoes and,

- 8; empire effect and, 201–7; Executive Order 12635 and, 293–94; as fiscal agent for Panama, 204–7; Five-Power Treaty and, 168; flags of convenience and, 271–73; freight rates and, 142–43, 160, 242–45; Good Neighbor diplomacy and, 209–10; Hawaii and, 56, 72, 93, 168, 222; Hay–Bunau-Varilla Treaty and, 84–92, 95, 193, 203, 211; imperialism and, 1–4, 7–8, 11–12 (*see also* imperialism); Interstate Commerce Commission (ICC) and, 173–75, 185; Interstate Highway System and, 212, 241, 315–16; Jim Crow system and, 97; Jones Act and, 142–43; lumber industry and, 177–79; Mexican-American War and, 36; Monroe Doctrine and, 172; nationalism and, 4, 9, 213, 228, 262, 375n43; Neutrality Act and, 67; Neutrality Treaty and, 259–60; Noriega and, 284–98; Operation Just Cause and, 297–98; Pacific Northwest and, 140, 155, 173–74, 177–79, 314–15; Pan-American Exposition and, 73–74; paternalism of, 190; permanent alliance with Nicaragua and, 66–67; petroleum industry and, 179–88; Philippines and, 56, 93–95, 168, 173, 204, 207, 271; Progressive Era and, 321; Prohibition and, 209, 271; Puerto Rico and, 93–94, 201; returns from Panama Canal and, 158–62; sanctions and, 2, 5, 190, 206, 294–95, 328–29, 333n1, 393n132, 398n18; sanitation crusade and, 122–28; Senate Committee on InterOceanic Canals and, 79; shipper competition and, 143–44; ship registration and, 269–73; Spanish-American War and, 56, 71; Strategic Arms Limitation Treaty and, 253; tolls controversy and, 146–47; War Department and, 170–73. *See also specific presidents*
- United States Citizens Association (USCA), 235
- University of Chicago, 278
- Urabá, 16
- U.S. Army, 106, 123; Boyd march and, 236–37; Corps of Engineers, 103, 108, 121, 167, 252; election observation and, 202–3; evacuation of, 226; Ford and, 258–59; Noriega and, 299, 329; Panama Canal Company productivity and, 251
- U.S. Congress, 50, 70–71, 102, 139, 168, 291, 321
- U.S. Department of Commerce, 272, 275
- U.S. Department of Defense, 225–26, 258
- U.S. Forest Service, 371n76
- U.S. Marines, 68, 77, 80–84, 202–3, 221, 325
- U.S. National Security Agency, 284–85
- U.S. Navy, 1, 73, 285; Bunau-Varilla and, 83–84; Cold War era and, 224; Five-Power Treaty and, 168; pipeline construction by, 184–86; radio monopoly of, 203; Roosevelt and, 93; spending on, 167–68; Third Locks project and, 227; transcontinental pipeline and, 185; two-ocean theater for, 168; World War II and, 184–86, 213–24
- U.S.-Panama Free Trade Agreement, 313, 332
- U.S. Shipping Board, 143–44, 270–71
- U.S. Treasury, 149, 153, 157, 160, 162, 172, 213, 218, 248, 260, 263, 325, 396n179
- Valdés, Ramón, 202
- Vance, Cyrus, 259
- Vanderbilt, Cornelius, 37, 39–41
- Venezuela, 32, 126–27, 155, 183, 193, 206, 296
- Veracruz, 22
- Verdadera Cruz, 16
- Vernon, Edward, 28
- Vietnam War, 227, 256, 259, 262
- Virgin Bay, 39
- Vowell, Sarah, 73
- Waldorf-Astoria, 83
- Walker, Meriwether, 194
- Wall Street, 280
- Wang, Frank, 209
- Ward, Christopher, 27
- War of Jenkins' Ear, 28
- War of the Captains, 19
- War Shipping Administration, 216–18, 378n7
- Washington (battleship), 219
- Washington Metro, 98
- Wasp (aircraft carrier), 219, 221
- Watergate scandal, 262
- water purification, 127–28

- Weeks, John, 11, 385n3, 387n22, 392n120
- Weidenmier, Marc, 3, 324, 333n2
- Weingast, Barry R., 5
- Weitzel, George, 121
- welding technology, 183
- Welles, Summer, 210
- Welsh, Edward, 234
- West Indians, 61, 192–93, 323; building of Canal and, 98, 110–15, 129; “laziness” of, 110; Panama Canal West Indian Employees Association and, 234; Panama Railroad labor and, 43; Panameñista Party and, 302; racial discrimination and, 115–20; Silver Roll and, 111–12
- Westphalian sovereignty, 4–5
- White, Francis, 207
- Williamson, Jeffrey, 141–42
- Wilson, Woodrow, 94, 114, 146–47, 158, 362n96
- wine, 19, 22, 209
- World War I, 324, 386n16; Chilean copper boom and, 163; effects on commercial traffic through Canal, 98; food self-sufficiency and, 192–93; freight rates and, 142; Japanese shipping and, 166; naval spending and, 168; railroad profits and, 175; shipper competition and, 143–44; use of airplanes and, 106, 179; U.S. Shipping Board and, 143; welding technology and, 183
- World War II, 8, 314–16; Arias and, 287; banking industry and, 279; Battle of Guadalcanal and, 219, 221–22; Battle of Midway and, 219, 222; Battle of the Coral Sea and, 219, 222; Boeing and, 179; B-25 bombers and, 221; decolonization and, 325; Doolittle raid and, 219, 221; Gilberts raid and, 219, 222; Guadalcanal and, 219; imperialism and, 320–21; Japanese commerce and, 166; military transport and, 214–18; Neutrality Act and, 272; Pearl Harbor and, 218–19, 222; railroads and, 215–18; ship registration and, 272–73, 281; sliding irrelevancy of Canal after, 218–27, 246; strategic benefits of Panama Canal and, 218–23; U.S. Navy and, 184–86, 213–24; War Shipping Administration and, 216–18
- Wyoming* (war ship), 84
- Wyse, Lucien, 47–48, 54, 59, 65–66
- Wyse Concession, 59, 78, 81–82, 86, 89, 92, 95, 162, 316
- Xaquator. *See* San Juan River
- yellow fever, 322; freshwater screening and, 124; fumigation and, 123–24; Gorgas and, 97, 99; mortality rates and, 61, 123; mosquito transmission of, 123–24, 126; sanitation crusade and, 123–28
- Yglesias, Rafael, 77
- Yorktown* (aircraft carrier), 218–19, 222
- Zavala, Joaquín, 66
- Zimbalist, Andrew S., 11, 385n3, 387n22, 392n120
- Zonians, 213, 240; decolonization and, 325–31; flying of Panamanian flag and, 236–38; imperialism and, 321–22 (*see also* imperialism); job security of, 260; military influence of, 258; mismanagement and, 248–55; Noriega and, 295–96; racial issues and, 321; running for political office and, 303
- zonitas* (little zones), 275–76