Escaping the Periphery: Railroad Regulation as American Industrial Policy

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ABSTRACT

The essay examines railroad rate regulation in the United States over the latter part of the nineteenth century. It argues that rate regulation was a form of industrial policy that set price controls upon the age's leading economic sector for protectionist purposes. Inspired by theoretical work on developmental states, it analyzes rate regulation as an effort to impose political developmental priorities and costs on private corporations and nurture a diversified manufacturing economy on the western American frontier. The essay situates US railroad rate regulation in comparative perspective in relation to regulatory policies in Mexico and by implication other peripheral economies and then in relation to deregulation within the United States during the second half of the twentieth century. It argues that proactive state policies such as railroad rate regulation help account for the unusual transition of the United States from an exporter of primary commodities to a large manufacturing economy.

How did the United States, which had initially emerged as a slave republic and exporter of raw cotton, become the world's leading industrial nation by the end of the nineteenth century?[1] Powerful and persuasive accounts

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1. Adam Rothman, *Slave Country: American Expansion and the Origins of the Deep South* (Cambridge, MA: Harvard University Press, 2005); Walter Johnson, *River of Dark Dreams: Slavery and Empire in the Cotton Kingdom*

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have emphasized the country's massive territorial expansion and the government's ability to "capture a huge continent by force and . . . integrate that territory administratively into its state structure."[2] Indeed, by the end of the century, western territories, violently seized from native peoples after the country's independence, supplied most of America's agricultural and mineral resources. These resources fed a large-scale process of industrialization. But how precisely and on what terms were these territories integrated into the national, and by extension the world, economy? Moreover, how did the integration of these vast, resource-rich regions fuel domestic manufacturing? Development scholars have observed the phenomenon of a "resource curse" associated with extraction of primary commodities.[3] In many places around the globe, the ready availability of fertile land and natural bounty has been associated not with industrialization and economic development but rather with extractive economies and *under*development How did the United States, the most favorably endowed country in the world in the nineteenth century, manage to escape this curse? Economic historians have reflected on this question and observed the presence of unique "linkages and complementarities to the resource sector" that allowed the natural bounty of North America to nurture industrialization in the case of the United States.[4] These connections between extraction and industry, they have argued, were not natural or inevitable but rather "socially constructed."[5] What precisely were those effective political and legal arrangements and how were they forged?

(Cambridge, MA: Harvard University Press, 2013); Matthew Karp, *This Vast Southern Empire: Slaveholders at the Helm of American Foreign Policy* (Cambridge, MA: Harvard University Press, 2016); Caitlin Rosenthal, *Accounting for Slavery: Masters and Management* (Cambridge, MA: Harvard University Press, 2018).

2. Sven Beckert, "American Danger: United States Empire, Eurafrica, and the Territorialization of Industrial Capitalism, 1870–1950," *American Historical Review* 122, no. 4 (October 2017): 1147. See also Charles S. Maier, *Once within Borders: Territories of Power, Wealth, and Belonging since 1500* (Cambridge, MA: Belknap Press at Harvard University Press, 2016); Steven Hahn, *A Nation without Borders: The United States and Its World in an Age of Civil Wars, 1830–1910* (New York: Viking, 2016); Emma Teitelman, "The Properties of Capitalism: Industrial Enclosures in the South and West after the American Civil War," *Journal of American History* 106, no. 4 (March 2020): 879–900.

3. Raymond F. Mikesell, "Explaining the Resource Curse, with Special Reference to Mineral-Exporting Countries," *Resources Policy* 23, no. 4 (December 1997): 191–99; Jeffrey D. Sachs and Andrew M. Warner, "The Curse of Natural Resources," *European Economic Review* 45, no. 4 (2001): 827–38; Edward Barbier, *Scarcity and Frontiers: How Economies Have Developed through Natural Resource Exploitation* (Cambridge: Cambridge University Press, 2011). See also Sven Beckert, Ulbe Bosma, Mindi Schneider, and Eric Vanhaute, "Commodity Frontiers and the Transformation of the Global Countryside: A Research Agenda," *Journal of Global History* 16, no. 3 (November 2021): 435–50.

4. Gavin Wright and Jesse Czelusta, "Resource-Based Growth Past and Present," in *Natural Resources: Neither Curse nor Destiny*, ed. Daniel Lederman and William F. Maloney (Palo Alto, CA: Stanford University Press, 2007), 184.

5. Paul A. David and Gavin Wright, "Increasing Returns and the Genesis of American Resource Abundance," Industrial and Corporate Change 6, no. 2 (March 1997): 204. See also Gavin Wright, "The Origins of American Industrial Success, 1879–1940," *American Economic Review* 80, no. 4 (September 1990): 651–68;

This article engages with these questions by looking at railroad regulation, a controversial policy field that greatly preoccupied Americans in the second half of the nineteenth century and beyond. In those decades railroads allowed Americans to effectively penetrate the hinterlands of the continent. Railroad corporations were also the largest business enterprises, constituting the country's biggest and most rapidly growing economic sector. They have rightly been at the core of all histories of this period.[6] But railroad expansion was, of course, a worldwide process, and it had very different economic outcomes elsewhere.[7] Countries around the world built railroad infrastructure in the late nineteenth century, massively expanding the ability to govern and dominate continental interiors. Railroads everywhere were agents of rapid economic growth. However, on the periphery of the world economy—in places such as Argentina, India, Russia, Australia, and the Middle East—railroad-driven economic growth also accelerated dependence. The same transportation that made it profitable to harvest and extract primary commodities to be sold in global markets also made it cheaper to import manufactured goods from more industrialized countries halfway across the world.[8] Why did railroad expansion set in motion a radically different process in the context of the United States, putting this resource-rich, land-abundant exporter of agricultural goods on a trajectory toward a broad and diverse manufacturing economy? How did the institutional political and legal environments in which American railroads expanded shape this trajectory?

The regulation of railroads in the United States has attracted the attention of historians, legal scholars, and political scientists for many decades, but rarely with an eye toward questions of comparative economic development.[9] Business historians

Gavin Wright and Jesse Czelusta, "Resource-Based Growth Past and Present," in Lederman and Maloney, *Natural Resources*, 183–211.

6. Alfred D. Chandler, *The Visible Hand: The Managerial Revolution in American Business* (Cambridge, MA: Belknap Press of Harvard University Press, 1977); William Cronon, *Nature's Metropolis: Chicago and the Great West* (New York: Norton, 1991); Richard White, *Railroaded: The Transcontinentals and the Making of Modern America* (New York: Norton, 2011).

7. Eric J. Hobsbawm, *The Age of Capital, 1848–1875* (New York: Vintage Books, 1996); *The Age of Empire, 1875–1914* (New York: Vintage Books, 1989).

8. Kevin H. O'Rourke and Jeffrey G. Williamson, *Globalization and History: The Evolution of a Nineteenth-Century Atlantic Economy* (Cambridge, MA: MIT Press, 1999); Ronald Findlay and Kevin H. O'Rourke, *Power and Plenty: Trade, War, and the World Economy in the Second Millennium* (Princeton, NJ: Princeton University Press, 2007); Jeffrey G. Williamson, *Trade and Poverty: When the Third World Fell Behind* (Cambridge, MA: MIT Press, 2011).

9. On how and why historians take American industrialization for granted, and why this has been part and parcel of American exceptionalism, see Stefan Link and Noam Maggor, "The United States as a Developing Nation: Revisiting the Peculiarities of American History," *Past and Present* 246, no. 1 (February 2020): 269–306.

have operated under the assumption that American railroads were on the whole unregulated or very ineffectively regulated.[10] Legal scholars have examined the question of regulation as a doctrinal debate pitting private rights against public interest.[11] Historians of the American state have viewed railroad regulation as a milestone in the construction of a modern administrative and regulatory state. Social historians have tended to view the issue in narrow distributional terms, as a battle between exploitative railroad corporations and aggrieved farmers.[12] But a great deal more—and in some ways more of substance—was, in fact, at stake. Government regulation of railroads shaped railroad construction and operation to a much larger extent than commonly assumed, and more so in the United States than in many other countries elsewhere on the periphery of the world economy. Regulation represented more than a chapter in the American state's quest to modernize itself or a melodramatic battle against corruption and greed. It was above all a nineteenth-century form of industrial policy that imposed price controls upon the age's leading industry for protectionist purposes.[13] Significant in itself, it was also broadly emblematic of the ability of the US state to generate economic development and manufacturing against the gravitational pull, politically structured into world trade, of economic specialization and extractivism.[14]

10. Chandler, *Visible Hand*.

11. Charles W. McCurdy, "Justice Field and the Jurisprudence of Government-Business Relations: Some Parameters of Laissez-Faire Constitutionalism, 1863–1897," *Journal of American History* 61, no. 4 (March 1975): 970; William Forbath, "Politics, State-Building, and the Courts, 1870–1920," in *The Cambridge History of Law in America*, vol. 2, *The Long Nineteenth Century (1789–1920)*, ed. Christopher Tomlins and Michael Grossberg (Cambridge: Cambridge University Press, 2008), 643–96.

12. William J. Novak, *New Democracy: The Creation of the Modern American State* (Cambridge, MA: Harvard University Press, 2022); Robert H. Wiebe, *The Search for Order, 1877–1920* (New York: Hill and Wang, 1967); White, *Railroaded*. Richard White's magnum opus returns to the old Weberian theme of order and disorder with a twist: previously agents of rationality and order, in his account railroads generate volatility and chaos.

13. Economic historians have done tremendous quantitative work on the economic impact of railroads but generally disregarded the question of shipping rates. Donaldson and Hornbeck, for example, elide the question of rates by using average national rates and holding them constant ("freight rates are held constant throughout the net-work database"). Dave Donaldson and Richard Hornbeck, "Railroads and American Economic Growth: A 'Market Access' Approach," *Quarterly Journal of Economics* 131, no. 2 (May 2016): 817. This approach goes back to Robert William Fogel, *Railroads and American Economic Growth: Essays in Econometric History* (Baltimore: Johns Hopkins University Press, 1964).

14. For a pioneering study in this vein, see Gerald Berk, *Alternative Tracks: The Constitution of American Industrial Order, 1865–1917* (Baltimore: Johns Hopkins University Press, 1994). I am indebted to Berk's penetrating insights about government action in this period. But whereas Berk sees an American "alternative track" as an unfulfilled vision, the evidence suggests otherwise. I also draw on an excellent account of railroad regulation as industrial policy, although it unfortunately does not frame it in these broad terms: William R. Childs, *The Texas Railroad Commission: Understanding Regulation in America to the Mid-Twentieth Century* (College Station: Texas A&M University Press, 2005).

Scholars have done a lot over the last two decades to uncover the long underestimated power of the American state.[15] Working against the deeply engrained assumptions of Cold War historiography, this new literature established that the American state has always been "powerful, capacious, tenacious, interventionist, and redistributive." The success of this historiographical project, associated above all with William J. Novak, now calls for an extension beyond the long hidden technologies of statecraft to its goals and objectives. There is no longer doubt that state action pervaded American economy and society, but we nevertheless remain unsure about the nature of these interactions and relationships. Above all, how did the state position itself vis-à-vis private market actors? Did it seek to replace, empower, or instrumentalize them?[16] Political scientist Yeling Tan articulates a typology that, although (and in some ways precisely because) it is inspired by the literature on development in the Global South, is useful for discerning analysis of the nineteenth-century United States.[17] Tan identifies three modalities of state action

15. William J. Novak, "The Myth of the 'Weak' American State," *American Historical Review* 113, no. 3 (June 2008): 752–72. See also Richard R. John, "Governmental Institutions as Agents of Change: Rethinking American Political Development in the Early Republic, 1787–1835," *Studies in American Political Development* 11, no. 2 (1997): 347–80; Brian Balogh, *A Government Out of Sight: The Mystery of National Authority in Nineteenth-Century America* (Cambridge: Cambridge University Press, 2009); James T. Sparrow, William J. Novak, and Stephen W. Sawyer, eds., *Boundaries of the State in US History* (Chicago: University of Chicago Press, 2015); Gary Gerstle, *Liberty and Coercion: The Paradox of American Government from the Founding to the Present* (Princeton, NJ: Princeton University Press, 2015); Nicolas Barreyre and Claire Lemercier, "The Unexceptional State: Rethinking the State in the Nineteenth Century (France, United States)," *American Historical Review* 126, no. 2 (June 2021): 481–503.

16. This set of questions would mark a return to an older conversation about state autonomy that once stood at the core of the debate over strong and weak states: see Nicos Poulantzas, "The Problem of the Capitalist State," *New Left Review*, no. I/58 (November/December 1969): 67–78; Ralph Miliband, *The State in Capitalist Society* (London: Weidenfeld and Nicolson, 1969); Michael Mann, "The Autonomous Power of the State: Its Origins, Mechanisms and Results," *European Journal of Sociology* 25, no. 2 (1984): 185–213; Peter B. Evans, Dietrich Rueschemeyer, and Theda Skocpol, eds., *Bringing the State Back In* (Cambridge: Cambridge University Press, 1985); Bob Jessop, *State Theory: Putting the Capitalist State in Its Place* (University Park: Pennsylvania State University Press, 1990). The question of autonomy has never faded from debates about economic development in the Global South: see Chalmers Johnson, *Miti and the Japanese Miracle: The Growth of Industrial Policy, 1925–1975* (Stanford, CA: Stanford University Press, 1982); Robert Wade, *Governing the Market: Economic Theory and the Role of Government in East Asian Industrialization* (Princeton, NJ: Princeton University Press, 1990); Peter B. Evans, *Embedded Autonomy: States and Industrial Transformation* (Princeton, NJ: Princeton University Press, 1995); Linda Weiss, *The Myth of the Powerless State* (Ithaca, NY: Cornell University Press, 1998); Vivek Chibber, *Locked in Place: State-Building and Late Industrialization in India* (Princeton, NJ: Princeton University Press, 2003); Fred Block and Marian Negoita, "Beyond Embedded Autonomy: Conceptualizing the Work of Developmental States," in *The Asian Developmental State: Reexaminations and New Departures*, ed. Yin-wah Chu (New York: Palgrave Macmillan, 2016), 57–72.

17. Yeling Tan, *Disaggregating China, Inc.: State Strategies in the Liberal Economic Order* (Ithaca, NY: Cornell University Press, 2021), 6–7, 41–43. See also, in this vein, Alice H. Amsden, *Asia's Next Giant: South Korea and Late Industrialization* (New York: Oxford University Press, 1989); *The Rise of "the Rest": Challenges to the West from Late-Industrializing Economies* (New York: Oxford University Press, 2001); Chibber, *Locked in Place*; Ha-Joon Chang, *Kicking Away the Ladder: Development Strategy in Historical Perspective* (London: Anthem,

vis-à-vis markets: first is a "directive strategy," in which the state pursues "market-replacing" policies. In these cases state-owned institutions carry out a top-down, planned, command-and-control approach. With some notable exceptions, the substituting approach was not common in the nineteenth-century United States, leading many observers at the time—and scholars since—to too hastily characterize it as a quintessential market society.[18]

Second, Tan talks about the "regulatory strategy," where the state is geared toward "market-enhancing" mechanisms. The state in this case works to expand and deepen private market activity, strengthen price signals, secure property rights, promote the rule of law, eliminate corruption and criminal activity, and ultimately create a level and efficient playing field for market competition.[19] This is the state approach identified (and often celebrated) by institutionalist economists such as Douglass C. North and Daron Acemoglu and their many followers.[20] Much of the work on the economic role of the American state has indeed cast the American state in the nineteenth century as a market-enhancing state. This work has emphasized the role of the state in, among other things, enshrining contractual relations and commodified labor; chartering corporations; conquering, surveying, and privatizing land; providing a legal framework for commerce and trade; and obliterating precapitalist traditions and customs.[21] These studies, while not incorrect, have nevertheless

2002); Mariana Mazzucato, *The Entrepreneurial State: Debunking Public vs. Private Sector Myths* (London: Anthem, 2013).

18. For the best recent work in this vein, see Michael Zakim, *Ready-Made Democracy: A History of Men's Dress in the American Republic, 1760–1860* (Chicago: University of Chicago Press, 2003); Michael Zakim and Gary J. Kornblith, eds., *Capitalism Takes Command: The Social Transformation of Nineteenth-Century America* (Chicago: University of Chicago Press, 2011); Michael Zakim, *Accounting for Capitalism: The World the Clerk Made* (Chicago: University of Chicago Press, 2018).

19. Tan, *Disaggregating China, Inc.*, 6–7, 41–43.

20. Douglass C. North, John J. Wallis, and Barry R. Weingast, *Violence and Social Orders: A Conceptual Framework for Interpreting Recorded Human History* (Cambridge: Cambridge University Press, 2009); Daron Acemoglu and James A. Robinson, *Why Nations Fail: The Origins of Power, Prosperity and Poverty* (New York: Crown, 2012).

21. Two otherwise opposed schools of thought nevertheless converge on this particular point: the Brennerites, who emphasize capitalist property relations and market dependence as themselves engines of productivity growth, and the Northians, who emphasize secure property rights and competitive markets. For the former, see Charles Post, *The American Road to Capitalism: Studies in Class-Structure, Economic Development, and Political Conflict, 1620–1877* (Leiden: Brill, 2011); James Parisot, "The Two Hundred and Fifty Year Transition: How the American Empire Became Capitalist," *Journal of Historical Sociology* 30, no. 3 (2017): 587–618; Brad Bauerly, "Economic Transition, Class Formation, and the Superintendent State in the Midwest: 1850–1900," *Journal of Historical Sociology* 33, no. 1 (2020): 39–60. For a Northian take on the United States, see Eric Hilt, "Early American Corporations and the State," in *Corporations and American Democracy*, ed. Naomi R. Lamoreaux and William J. Novak (Cambridge, MA: Harvard University Press, 2017), 37–73; Naomi R. Lamoreaux and John Joseph Wallis, "Economic Crisis, General Laws, and the Mid-Nineteenth-Century Transformation of American Political Economy," *Journal of the Early Republic* 41, no. 3 (2021): 403–33. For a more discerning reading of Brenner that shows capitalist property relations to be a necessary

been too narrowly framed, thereby downplaying other key aspects of American statecraft and ultimately mischaracterizing the state's overall orientation.

Third, Tan discusses the "developmental strategy," in which the state proactively deploys "market-shaping" policies—or what is generally known as industrial policy.[22] Here the state acts in ways that neither substitute for nor merely enhance markets. Rather market-shaping policies purposefully influence market forces. Private actors make their own choices, but the government deliberately engineers inducements and constraints that influence those choices.[23] When the state skews incentives to promote political priorities, (neo)liberal observers often cry out that the government is illegitimately and unwisely distorting and disrupting the smooth functioning of the market. But especially for developing economies, distorting markets has in fact always been precisely the point. As heterodox economist Alice H. Amsden provocatively put it in her study of South Korea, economic development has in fact required "getting relative prices 'wrong.'"[24] Successful development has rested on a deliberate government manipulation of market incentives to destabilize an existing equilibrium and move toward a different one. The case of railroad regulation demonstrates market shaping of this variety to have been central to and broadly emblematic of the American state's proclivities in the nineteenth century. Regulation in the context of the United States sought and largely succeeded in getting prices very "wrong" indeed, skewing incentives away from

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but insufficient precondition for development, especially on the periphery, and thus also not entirely incompatible with some versions of world-systems theory, see Teddy Paikin and Sam Salour, "In the Tracks of Political Marxism: Imperialism, Colonialism and Capitalist Development," *Historical Materialism* (forthcoming). See also Robert Brenner, "The Pre-history of Core–Periphery," in *Cores, Peripheries, and Globalization*, ed. Peter Hanns Reill and Balázs A. Szelényi (Budapest: Central European University Press, 2011), 203–32.

22. Industrial policy has come back into the social sciences and policy debates as an immense topic of study in recent years but with little resonance among historians and particularly Americanists (with some notable exceptions). See Reda Cherif and Fuad Hasanov, "The Return of the Policy That Shall Not Be Named: Principles of Industrial Policy," *IMF Working Papers* 19, no. 74 (2019): 1; Ha-Joon Chang and Antonio Andreoni, "Industrial Policy in the 21st Century," *Development and Change* 51, no. 2 (2020): 324–51; Karl Aiginger and Dani Rodrik, "Rebirth of Industrial Policy and an Agenda for the Twenty-First Century," *Journal of Industry, Competition and Trade* 20, no. 2 (June 2020): 189–207; Réka Juhász, Nathan J. Lane, and Dani Rodrik, "The New Economics of Industrial Policy," Working Paper, Working Paper Series, National Bureau of Economic Research, August 2023; Réka Juhász and Claudia Steinwender, "Industrial Policy and the Great Divergence," Working Paper, Working Paper Series, National Bureau of Economic Research, September 2023.

23. Tan, *Disaggregating China, Inc.*

24. Amsden, *Asia's Next Giant*, 139. Amsden's framework offers useful correctives to traditional versions of dependency theory, especially their deterministic qualities and inattention to domestic factors. See Alice H. Amsden, "Comment: Good-Bye Dependency Theory, Hello Dependency Theory," *Studies in Comparative International Development* 38, no. 1 (March 2003): 32–38; "Taiwan's Economic History: A Case of Etatisme and a Challenge to Dependency Theory," *Modern China* 5, no. 3 (July 1979): 341–79.

specialization in agriculture and extractive sectors toward the proliferation of urban centers and the rise of a diverse industrial base.

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Government manipulation of transportation to enact industrial policy in the context of the United States—and control over freight rates in particular—did not await the railroad age. The early patterns of the politics of space were set as soon as the American states launched their canal building projects in the 1820s and 1830s. Histories of the canal era tend to emphasize the canals' dramatic market-enhancing effects. Allowing Americans to migrate and trade across greater distances, the antebellum boom in canal construction indeed drew massive territories and large populations into the nation's commercial economy. By 1860 American canals had formed an enormous interlinked system with other waterways for a total length of more than 4,000 miles.[25] But as government owned and operated enterprises, canals did not simply enhance markets but more deliberately shaped them. Both access and cost of shipping in this era remained deeply beholden to political priorities. As state canal commissioners readily explained, their mandate was not simply to set rates as to maximize the volume of commerce but to more specifically "encourag[e] exportation" of homegrown commodities from their states, "develop . . . the resources of the State," and "equalize the benefits of navigation between various portions of the State."[26] In other words, they were called upon to play an active role in molding the structure and geography of the economy in their respective communities, balancing competing domestic imperatives and calibrating relations with neighboring states, which were assumed to be competitors for investment, settlement, trade, and industry.

The power to establish freight rate schedules became one of the canal commissioners' main levers in their pursuit of regional development. One of their urgent objectives, as historian Harry N. Scheiber pointed out long ago, was the promotion of "domestic" in-state industry vis-à-vis "foreign" out-of-state competition.[27] Canal commissioners accordingly manipulated the terms of trade to give local, in-state producers preferential shipping rates that made their goods cheaper relative to

25. Carter Goodrich, *Government Promotion of American Canals and Railroads, 1800–1890* (New York: Columbia University Press, 1960); *Canals and American Economic Development* (Port Washington, NY: Kennikat, 1972); George Rogers Taylor, *The Transportation Revolution, 1815–1860* (New York: Rinehart, 1951).

26. Ohio Office of the Board of Public Works, "Doc. No. 35, Special Report of the Board of Public Works Relative to the Rates of Tolls on the Canals on the Canals of This State," in *Messages, Reports, and Other Communications, Made to the Forty Third General Assembly of the State of Ohio*, vol. 9 (Columbus, OH: Samuel Medary, State Printer, 1845), 3.

27. Harry N. Scheiber, "The Rate-Making Power of the State in the Canal Era: A Case Study," *Political Science Quarterly* 77, no. 3 (September 1962): 404.

goods produced elsewhere. In their own explicit terminology, they "arrang[ed] tolls as to encourage and induce" manufacturing, using "discrimination" in rates to afford "protection" to local industry.[28] Thus in 1841, for example, Ohio authorities increased shipping rates on New York salt to twice to four times the rate of domestic salt and eliminated tolls on wood and coal used as fuel by in-state salt producers.[29] In 1845 canal authorities set tolls that favored shipping flour over unprocessed grain, giving in-state millers in Toledo cheaper access to Ohio wheat over more established "New York Monopolists" in Buffalo and Rochester.[30] A growing list of other goods—candles, cordage, crockery, cooper's ware, glass and glassware, lard oil, paper, powder, saleratus, starch, and woodware—soon enjoyed similar protections if they were "manufactured in this State." These policies did not go unchallenged. Commission merchants, always an affluent and powerful lobbying group, protested that protectionism hurt consumers, "pamper[ing] a few at the expense of hundreds." Ohio producers, by contrast, insisted that eliminating the protection would amount to a "triumph gained by the Com[mission] Merchant over the poor manufacturer of his own state." Subject to political negotiations and pressure from competing interests, the use of canal rates to promote in-state manufacturers varied over time but nevertheless remained in place.[31]

States responded in kind to protectionist measures of their neighboring states, doing their best to privilege their own producers under the banner of "fair" or "healthy" competition.[32] Indiana commissioners set rates that discouraged transport of Indiana grain to mills in Ohio, nurturing mills in Indiana. Policymakers in New York moved to not only impose prohibitive tolls on imported salt but also offered bounties and rebates to their own producers on salt exports across the border of the state.

28. Ohio Office of the Board of Public Works, "Doc. No. 35," 4.

29. Harry N. Scheiber, *Ohio Canal Era: A Case Study of Government and the Economy, 1820–1861* (Athens: Ohio University Press, 1969), 257–58. The report explained that the board endeavored "to establish such a discriminating duty between the salt manufactured in this state and foreign salt, as to produce a healthy competition, thereby affording ample protection to the manufacturers of salt in this state, and at the same time, not to the extent of enabling them to create a monopoly, by entirely prohibiting the introduction of foreign salt"; Ohio Office of the Board of Public Works, "Doc. 61, Special Report of the Board of Public Works in Answer to a Resolution of the Senate in Relation to Tolls on Salt," in *Documents, Including Messages and Other Communication Made to the Fortieth General Assembly of the State of Ohio*, pt. 2, vol. 4 (Columbus, OH: Samuel Medary, State Printer, 1842), 5. Consequently salt "imports" via Cleveland collapsed from 109,000 barrels to 36,000 by 1847.

30. Qtd. in Scheiber, *Ohio Canal Era*, 255.

31. Office of the Board of Public Works, "Doc. No. 35." See also Scheiber, *Ohio Canal Era*, 254–55. Overall, state charges on merchandise declined marginally from 3.6 cents per ton-mile to 2.8 between 1834 to 1851, while the charges of private shipping companies dropped precipitously, making the impact of public charges relatively more important over time. Scheiber, *Ohio Canal* Era, 259.

32. Qtd. in Scheiber, *Ohio Canal Era*, 254.

Every step by one state promoted retaliation from other states (and in turn counter-retaliation), creating a densely politicized landscape of trade. As the Ohio commissioners explained in their report for 1848, "Each state finds a justification on the score of interest, in furnishing to its own citizens the cheapest transportation of the surplus production of its industry to a market; while . . . the importations are burdened with as heavy a tax as their value will bear."[33] This interstate competition over manufacturing did not prevent Indiana, Ohio, and New York from cooperating on low through rates for agricultural goods to counter the rival power of Pennsylvania, which had its own ambitious canal program. But this was simply another case of proactive state-level policy in shaping interstate commerce and the emerging regional economy as a whole.[34]

Beyond protectionism, canal construction policy was more generally dictated not by market-enhancing considerations but by political imperatives. Policymakers did not concentrate canal service in the densely settled counties of the state, where traffic was bound to be voluminous and freight revenues high and steady. Rather they embraced the market-skewing political commitment that the various parts of the state "benefited alike."[35] They argued that the "fostering care" of the government be "extended to all portions of our great and growing State," regardless of preexisting demand.[36] The established commercial interests in the state urged the legislature to be fiscally prudent and focus on strategic arteries of trade, rather than wasting precious resources on a multitude of what detractors called "mean and contemptible" routes.[37] Nonetheless, the ability to effectively recoup the high costs of canal construction became a secondary concern. As a result states followed up on the initial phases with branches to sparsely populated counties, which leveraged their outsized political power in the legislature, often in alliance with other rural districts, to secure canal service in what was pejoratively referred to as "logrolling." Like in other states, the Ohio legislature began the canal system with two lines that served already settled counties—the Ohio and Erie and the Miami and Erie. These lines quickly proved remunerative, but this was only the beginning of much more aggressive expansion. The initial phase provided legislators with the fiscal and political validation that allowed them to launch the construction of four lengthy and

33. Qtd. in Scheiber, "Rate-Making Power of the State," 404–5.

34. Scheiber is explicit about the "mercantilist" orientation of canal rate setting in this period, which protected "inefficient manufacturing firms" with the hope of nurturing them to greatness, "allocate[d] local markets" to domestic producers, and limited the "entrée" of eastern manufacturers and wholesalers into the interior. Scheiber, *Ohio Canal Era*, 257–62.

35. Qtd. in ibid., 91.

36. Qtd. in ibid., 93, 91.

37. Qtd. in ibid., 107.

costly extensions, coupled with further hefty subsidies to private turnpike companies. These politically driven commitments tested the fiscal capacities of the state and the confidence of out-of-state lenders in New York and London, who bemoaned the legislatures' "profligacy"—a fiscally conservative lament that historians and economists have too uncritically echoed since.[38] Canal extensions were nevertheless completed, providing widespread access to transportation and generating geographically diffuse and decentralized growth.[39]

In all, canal construction indeed drastically reduced the cost of shipping, facilitating a large increase in interregional trade. But market-shaping policies such as rate regulation and leveled-up canal expansion obstructed the acceleration of economic specialization. The canals connected the urbanized East and the frontier West but, as economic historians have documented, did not encourage exclusive emphasis on comparative regional advantage. Western districts greatly expanded their agricultural production and resource extraction, but they did not become narrowly reliant on exporting these primary goods. Instead they developed their own urban manufacturing economies. Interregional commerce with the East thus increased in tandem with the expansion of local markets, providing the foundation for the rise of regional urban hubs, each with its own diversified manufacturing base.[40] New western cities—Pittsburgh, Cincinnati, Dayton, Cleveland, Fort Wayne, and others—grew by leaps and bounds, supplying the countryside with manufactured goods while providing a local market for agricultural produce.[41] After starting with the processing of agricultural goods—flour mills, saw mills, meatpacking, and the like—western cities took advantage of freight-rate protections to expand into metalworking, ironworking, woodworking, clothing, and machine making.[42] The

38. This is a near universal theme in the literature about the canal era. As one passage explains in a typical vein, "the Wabash and Erie Canal helped to open up and develop northern Indiana; nevertheless, as a financial venture, at least, it must be regarded as one of the greatest canal failures." Taylor, *Transportation Revolution*, 48. On "productive bubbles," a relevant concept in this context, see William Janeway, "Productive Bubbles," *Noēma*, July 27, 2021, https://www.noemamag.com/productive-bubbles.

39. This was very much the same in Indiana; see Taylor, *Transportation Revolution*, 47.

40. Ibid., 45–47; Scheiber, *Ohio Canal Era*. Cincinnati producers became competitive, making stoves, agricultural implements, household utensils, clothing, and wooden goods, for a total of $18–40 million in the course of the 1840s. Cleveland gained a foothold in iron milling and ironware manufacture.

41. These cities grew rapidly between 1820 and 1857: Cincinnati (from 2,600 to 200,000), Cleveland (400 to 60,000), and Dayton (1,100 to 25,000). Columbus and Toledo were also fast catching up. William F. Gephart, *Transportation and Industrial Development in the Middle West* (New York: Columbia University/Longmans, Green, 1909), 126. On Fort Wayne, Indiana, see Ralph D. Gray, "The Canal Era in Indiana," in *Transportation and the Early Nation: Papers Presented at an Indiana American Revolution Bicentennial Symposium* (Indianapolis: Indiana Historical Society, 1982), 128–29.

42. The growing economic diversification of western districts, even as they became more integrated into the national economy, has raised questions about Douglass C. North's thesis on American growth driven by regional specialization in this period. See Douglass C. North, *The Economic Growth of the United States,*

persistent pattern, as Scheiber observed, created "a diversified economic structure [based on] interaction between agricultural growth and urban-based commerce and industry."[43] These early patterns only glimpsed much more dramatic trajectories in later decades.

* * *

The railroad era did not fundamentally transform canal-era precedents. Unlike canals, which were government ventures from start to finish, states conventionally chartered railroad corporations to be financed, built, and operated by private actors. In most accounts this shift signals a retreat from public enterprise and public purpose. From a developmental perspective, however, the transition from canals to railroads was no great departure. Market-shaping measures continued unabated.[44] The states' approach to railroad expansion represented a wager typical of developing countries. Like peripheral economies elsewhere, western states lacked the financial means to build their own infrastructure.[45] The American frontier had

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1790–1860 (Englewood Cliffs, NJ: Prentice-Hall, 1961). By one assessment, between 1820 and 1840, the percentage of western Pennsylvanians employed in manufacturing increased from 19.3 to 26.7. In New York, in the rural districts west of Albany, the numbers increased from 16 to 23 percent. In Ohio's canal districts, those numbers increased dramatically from 15.3 to 24.2 percent at a time of rapid population growth. See Albert W. Niemi, "A Further Look at Interregional Canals and Economic Specialization: 1820–1840," *Explorations in Economic History* 7, no. 4 (Summer 1970): 499–520; "A Closer Look at Canals and Western Manufacturing in the Canal Era: A Reply," *Explorations in Economic History* 9, no. 4 (Summer 1972): 423–24. Canal commissioners in Indiana reported nine flouring mills, eight sawmills, three paper mills, two oil mills, and an iron mill along the Wabash and Erie Canal between Evansville, Indiana, and Toledo, Ohio. Edwin Maldonado, "Urban Growth during the Canal Era: The Case of Indiana," *Indiana Social Studies Quarterly* 31 (1978): 20. See also Goodrich, *Canals and American Economic Development*, 235–38.

43. Scheiber, *Ohio Canal Era*, 198.

44. Important continuities are obscured in many accounts of the early decades of the nineteenth century, in which government oversight of business always reaches an expiration point. See, for example, Oscar Handlin, *Commonwealth: A Study of the Role of Government in the American Economy; Massachusetts, 1774–1861* (New York: New York University Press, 1947); Louis Hartz, *The Liberal Tradition in America: An Interpretation of American Political Thought since the Revolution* (New York: Harcourt, Brace, 1955); Scheiber, *Ohio Canal Era*; Morton J. Horwitz, *The Transformation of American Law, 1780–1860* (Cambridge, MA: Harvard University Press, 1977). Richard John has commented on this tendency to see government developmental efforts in the early nineteenth century as ultimately "short-lived." John, "Governmental Institutions as Agents of Change," 356. Lamoreaux and Wallis, in "Economic Crisis, General Laws," emphasize a new departure in the aftermath of the Panic of 1837 marked by the emergence of "general incorporation" (423), which they argue "curbed the power of legislatures" and "opened access" to the corporate form (408). The case of railroad regulation suggests that state legislative power in fact grew. More specifically, the implications of "general incorporation" for an immensely complex and yet crucial sector like the railroads are questionable. As Charles F. Adams Jr. explained, "No general law can be framed which will meet the exigencies of a whole railroad system in all its manifold details." Charles F. Adams Jr., "The Government and the Railroad Corporations," *North American Review* 112, no. 230 (1871): 53–54.

45. Leland Hamilton Jenks, *The Migration of British Capital to 1875* (New York: Knopf, 1927); Lance Edwin Davis and Robert A. Huttenback, *Mammon and the Pursuit of Empire: The Economics of British Imperialism*, abridged ed. (Cambridge: Cambridge University Press, 1988); Mira Wilkins, *The History of Foreign Investment*

tremendous economic potential, of course, but expansion could not—or at the very least would be very slow to—proceed without investment from external sources, particularly from the East and from European financial markets. As they entered the railroad age, states embraced the notion that they could, on one hand, tap into the huge resources that financial markets in this period eagerly provided while, on the other hand, imposing government oversight and control over those investments.[46] The strategy welcomed private capital into these states to fund crucial infrastructure, but it in turn sought to enact meaningful regulations and constraints to prevent the emergence of extractive economies. It sought to promote broad-based, long-term economic benefits. This was a fraught undertaking, for sure, and mishandling these types of arrangements between state sovereignty and private ownership spelled disastrous consequences. Nevertheless western states consciously embarked upon this path.

From the outset, even as they created railroad corporations and as these corporations began to raise capital in faraway financial markets, US states insisted on, and at times explicitly stipulated, their right to modify or repeal corporate charters. Notwithstanding that private capital drawn from financial markets in the East and in Europe financed construction, they asserted their legal right to govern railroads as public highways and common carriers, just as they had long governed turnpikes, bridges, and ferries.[47] State constitutions affirmed the authority to control transportation as a fundamental aspect of their sovereignty, including the power to oversee freight charges. Most vigorously, the states moved in the 1870s to bolster their regulatory power vis-à-vis railroad corporations, forming permanent state railroad commissions tasked with setting or monitoring railroad rates on behalf of the legislature.[48] The act that created the Illinois Board of Railroad and Warehouse

in the United States to 1914 (Cambridge, MA: Harvard University Press, 1989); Lance Edwin Davis and Robert E. Gallman, *Evolving Financial Markets and International Capital Flows: Britain, the Americas, and Australia, 1865–1914* (Cambridge: Cambridge University Press, 2001).

46. Investors, of course, were engaged in their own wager: they sought to gain an economic foothold in various jurisdictions and then claw and leverage their way toward a "friendlier" business climate over time. These tensions are explored in Noam Maggor, *Brahmin Capitalism: Frontiers of Wealth and Populism in America's First Gilded Age* (Cambridge, MA: Harvard University Press, 2017); "To 'Coddle and Caress These Great Capitalists': Eastern Money and the Politics of Market Integration in the American West," *American Historical Review* 122, no. 1 (2017): 55–84.

47. William J. Novak, *The People's Welfare: Law and Regulation in Nineteenth-Century America* (Chapel Hill: University of North Carolina Press, 1996). Thomas McIntyre Cooley, for example, affirmed the right to regulate as "in strict accord with the principles of the common law, and by virtue of powers which are inherent in every sovereignty." Thomas McIntyre Cooley, "State Regulation of Corporate Profits," *North American Review* 137, no. 322 (1883): 211.

48. This was the pervasive pattern. Massachusetts, for example, is often cited for its "weak" and merely "advisory" railroad commission, headed for many years by Charles F. Adams Jr., who was a harsh critic of

Commissioners in 1871 provided the template, which was quickly followed by Minnesota, Iowa, Wisconsin, and then others. The legislation authorized the commissioners to enforce the laws of the state, prosecute violators, report to the governor, and issue a schedule of "just and reasonable" rates. To carry out their mission, the commissioners were given real teeth, including the right to examine infrastructure, inspect the books, cancel licenses, compel witnesses to appear before them, and impose financial penalties. The attorney general of the state was required to pursue all suits and proceedings initiated by the commissioners.[49] Railroad leaders militated against this regulatory surge, especially the key issue of rates. Interference with freight rates, as the president of one railroad announced, "deprive[d] capital permanently invested under the sacred promise and pledge" of the states "of a suitable and reasonable return." He explained that political meddling was bound to have bad implications for communities that engaged in it. Their reputation "in money centres" and thus ability to raise further funds would be negatively affected.[50] When states showed no sign of relenting, railroads deemed regulation unconstitutional and even in some cases announced their outright refusal to abide by it.[51] The confrontation soon made its way to the judiciary, where it brewed for several decades.

American courts fully appreciated the high stakes involved in the question of rate regulation. They had traditionally been guardians of property rights and corporate autonomy. In the context of the 1870s, however, they seemed more worried about delegating strategic power to private interests, as was becoming the practice in other colonial and semicolonial settings (more on this later), than about protecting investors from government overreach. They therefore stood behind state jurisdiction over rates. When the issue reached the Supreme Court in the landmark case of *Munn v. Illinois* and its associated "Granger" cases in 1876, the court emphatically ratified the right of the states to dictate the terms of trade as "powers of government

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Granger regulation and focused his work on market-enhancing financial transparency, information gathering, and voluntary cooperative relations with railroads. But even in Massachusetts the legislature reserved the right to alter, amend, or repeal corporate charters "at pleasure" and enact "reasonable" and "equal" rates. As elsewhere, all "fares, tolls, and charges" remained "subject to revision or alteration by the legislature, or by officers appointed thereby." United States Congress, *Report of the Senate Select Committee on Interstate Commerce, 49th Cong., 1st Session* (Washington, DC: Govt. Print. Off., 1886), 67.

49. Ibid., 72. On the case of Illinois in particular, see Mark T. Kanazawa and Roger G. Noll, "The Origins of State Railroad Regulation: The Illinois Constitution of 1870," in *The Regulated Economy: A Historical Approach to Political Economy*, ed. Claudia Goldin and Gary D. Libecap (Chicago: University of Chicago Press, 1994), 13–54.

50. Alexander Mitchell, qtd. in A. B Stickney, *The Railway Problem* (St. Paul, MN: Merrill, 1891), 107, 103.

51. As Alexander Mitchell, president of the Chicago, Milwaukee, and St. Paul Railway Company, wrote to the governor of Wisconsin, "The directors feel compelled to disregard the provisions of the law so far as it fixes a tariff of rates for the company." Qtd. in Stickney, *Railway Problem*, 109.

inherent in every sovereignty." It thus armed the states with wide-ranging authority to discipline capital. "When . . . one devotes his property to a use in which the public has an interest," the court memorably explained, the owner "in effect, grants to the public an interest in that use, and must submit to be controlled by the public for the common good." The decision reached back to "time immemorial" to recognize the right of every jurisdiction to exercise police power, even as it affirmed the legislature's authority to pass legislation in response to changing conditions, "to remedy defects in the common law as they are developed, and to adapt it to the change of time and circumstances." It nodded to the principle of due process, grounded in the Fourteenth Amendment, that protected owners of property from unwarranted deprivation but applied to it a narrow definition relevant only in some circumstances rather than in the act of regulation itself. If property could not be taken away without due process, this meant that it could be taken away once due process was observed. The decision acknowledged that under the Constitution, states were not allowed to infringe upon interstate commerce but insisted that this should not prevent them from regulating businesses within their own limits, even if "they may indirectly operate upon commerce beyond [their] immediate jurisdiction." Most remarkably, perhaps, it designated regulation as an inherently political question: "We know that this [power to regulate rates] is a power which may be abused, but that is no argument against its existence. For protection against abuses by legislatures, the people must resort to the polls, not to the courts."[52] This would hardly have been a happy prospect for railroad investors in the arena of democratically elected state assemblies.

Throughout the 1880s and 1890s, railroad executives, investors, and experts railed against the *Munn* doctrine and its far reaching implications.[53] For them "the tide of popular feeling" that drove the regulation of rates represented "an arbitrary and oppressive, if not actually destructive, course toward the railroads."[54] How could railroad corporations operate under state commissioners whose task it was "to secure to the people such railroad service as they may demand, under such regulations as they may think proper, and for such compensation as they may be willing to pay"? They explained that living "under commissioners' rule" was a regime of domination akin to slavery and perhaps even worse: "Slaves in the South served their

52. *Munn v. Illinois*, 94 U.S. 113 (1877). More broadly, see Novak, *New Democracy*, 128–45.

53. See, insightfully, Alexia Blin, "'Une autre loi que celle de l'État': Modalités politiques de la résistance des compagnies ferroviaires à la régulation publique (Wisconsin, années 1870)," *Entreprises et histoire* 104, no. 3 (November 2021): 82–92. See also Robert Eugene Cushman, *The Independent Regulatory Commissions* (New York: Oxford University Press, 1941).

54. M. L. Sykes, vice president of the Chicago and Northwestern Railway, qtd. in Iowa Board of Railroad Commissioners, *Annual Report of the Board of Railroad Commissioners for the Year Ending 1887* (Des Moines: State of Iowa, 1888), 39.

masters on similar terms."[55] So reminiscent of earlier hierarchies under bondage, this dubious claim went, rate regulation had no place in a free society organized around voluntary contractual relations. Railroad leaders decried politicization of railroad policy and of rate making in particular, "the belief in the efficacy of State interference in the management of railways," which had become "cardinal in many parts of the United States." These policies, they further argued, were bound to lead to economic disaster and maybe even the end of civilized society as such: in setting rates, "legislators have, in fact, subverted the law of competition upon which the world is dependent for its development, and the comforts and the necessities it enjoys. . . . No more monstrous proposition ever found birth in the brain of civilized man."[56] These inflated concerns registered the real power that state commissions were endowed with vis-à-vis capital.

These claims, however exaggerated, nevertheless found a hearing among a minority on the Supreme Court, who, while never questioning the well-established legal basis of rate regulation, worried that frontier regions seeking economic development could ill afford to alienate potential investors.[57] Justice Stephen Field's minority opinion in *Stone v. Farmers' Loan & Trust* (1886) contemplated the question of regulation precisely in these terms. The opinion explained that the railroads in question ran for hundreds of miles in "sparsely settled" territories. It would take "several years, and the expenditure of many millions," with the hoped-for return on this "heavy investment" for capitalists arriving only in the "distant future when the country should become more densely populated and its resources better developed." No investor would endure the "difficulties, expenses, and hazards of the projected enterprise" in these types of contexts only to allow the state legislature to set their compensation. With exacting government regulation in place, therefore, frontier territories would remain unable "to secure the necessary capital for an enterprise so costly in its character, so remote in its completion, and so uncertain in its returns."[58] Justice John Harlan shared this position. "Does anyone believe that

55. Chicago & Alton Railroad Company, *Annual Report of the President and Directors of the Chicago & Alton Railroad Co* (1886), 13–14. The metaphor of slavery as the inverse of contracts was not coincidental; see Amy Dru Stanley, *From Bondage to Contract: Wage Labor, Marriage, and the Market in the Age of Slave Emancipation* (Cambridge: Cambridge University Press, 1998).

56. Marshall M. Kirkman, *Railway Rates and Government Control: Economic Questions Surrounding These Subjects* (Chicago: Rand, McNally, 1892), 53.

57. On the judicial concern with "investment capital necessary for expanding and improving services to the public," see Mary Cornelia Porter, "That Commerce Shall Be Free: A New Look at the Old Laissez-Faire Court," *Supreme Court Review* 1976 (1976): 135–59. See also Charles Warren, *The Supreme Court in United States History* (Boston: Little, Brown, 1922), 311. Warren accurately identifies the cases involving railroad rate regulation as the ones that "most profoundly affected the course of American history" (296).

58. *Stone v. Farmers' Loan & Trust*, 116 U.S. 307 (1886).

private capitalists would have supplied the money necessary to establish and maintain these lines . . . had they supposed that the states through which the roads were extended reserved the right, by commissioners, to take charge of the whole matter of rates, and abrogate at their pleasure such tariffs of charges?"[59] Seen from this perspective, rate regulation threatened to be deeply detrimental to the further growth of the railroad system.

This assertive minority gained traction over time even as—and precisely because—the states marched boldly into the terrain that *Munn* had rendered wide open.[60] Indeed, the court articulated an increasingly restrictive position on the question of government regulation around a slew of cases that sought to challenge the authority of state railroad commissions. The trickle of cases brought forth by railroad corporations and investment firms chipped away at the states' jurisdiction, even as the court never overturned *Munn* and consistently affirmed their authority to regulate railroad rates. In a slow and prolonged process, the court established, for example, that railroads had to have recourse to explain why their rates were in fact reasonable and needed no modification. It affirmed the judicial branch's authority to overturn exceptionally low "confiscatory" rates that left no room for remuneration. It limited the commissioners' authority in cases that affected interstate commerce. These modifications weakened state regulatory authority but never eliminated it altogether, leaving considerable scope for government action.[61] State railroad commissions therefore continued to proliferate, reaching 25 (of 38 states) and counting by 1887.[62] The voluminous reports of these bodies, published annually

59. Ibid.

60. Novak is therefore absolutely correct that *Munn*, rather than a "road not taken," was "the very superhighway" for "a truckload of far-reaching experiments in state regulation of new economic and business activities." William J. Novak, "Law and the Social Control of American Capitalism," *Emory Law Journal* 60, no. 2 (2010): 402. Methodologically, I am guided by his critique of the conventional overemphasis on the "naysaying function of constitutional judicial review." Novak, "Myth of the 'Weak' American State," 767.

61. Among the relevant cases are *Ruggles v. Illinois*, (1883), *Dow v. Beidelman* (1888), *Budd v. New York* (1892), *Chicago & Grand Trunk Railway v. Wellman* (1892), *Brass v. North Dakota* (1894), and *St. Louis & Santa Fe Railway v. Gill* (1895). *Stone v. Farmers' Loan & Trust* affirmed *Munn*—"it is now settled in this court that a State has power to limit the amount of charges by railroad companies"—but established the principle of judicial review, declaring that "this power to regulate is not a power to destroy." *Chicago, Milwaukee & St. Paul Railway Co. v. Minnesota* (1890) established that regulation must provide a process of appeal. *Reagan v. Farmers Loan and Trust Co.* (1894) overturned a particular rate schedule as unreasonable but did not question the right of the railroad commission to establish rates as such. See Alton D. Adams, "Reasonable Rates," *Journal of Political Economy* 12, no. 1 (1903): 79–97; Harrison Standish Smalley, "Railroad Rate Control in Its Legal Aspects: A Study of the Effect of Judicial Decisions upon Public Regulation of Railroad Rates," *Publications of the American Economic Association* 7, no. 2 (1906): 4–147; Bradley A. Hansen, *Institutions, Entrepreneurs, and American Economic History* (New York: Palgrave Macmillan, 2009), 129–44.

62. By 1908 there were 39 state commissions, almost all of them possessing extensive powers over rates. William Zebina Ripley, *Railroads: Rates and Regulation* (New York: Longmans, Green, 1912), 629.

into the twentieth century, reveal meticulous and ongoing government engagement with railroads and their policies through this critical era.[63]

What practical and economic difference did all this regulatory authority make? Historians have not done enough to grapple with the overall impact of railroad regulation, leaving it unclear and at times dismissing it altogether. This has left intact a corporate-driven paradigm that explains economic change in this period almost entirely in terms of business strategy.[64] The nature of rate regulation, however, was one of the core questions of the age, one that contemporaries debated endlessly, particularly the questions of rate discrimination and the distinction between "long haul" and "short haul." What was ultimately at stake in this debate? To use Tan's terminology somewhat anachronistically, I propose that the question hinged on whether government policy should be market enhancing or market shaping. Should rates best reflect market considerations—relative costs, conditions of competition, potential for revenue, and return on investment—or should they push back against these market dictates, deliberately skewing incentives to best promote broad developmental goals? In other words, at the core was not simply a debate about a general reduction in freight rates and not even simply a battle over the structure of rates—how they allocated costs and benefits—but whether the states would be allowed to engage in protectionism and industrial policy. What was at stake was not merely the distribution of resources between investors and farmers but the emerging economic landscape writ large. The nature of the problem also explains why, somewhat counterintuitively, the growth of national commerce over time made state-level regulation more rather than less urgent as a policy question.

Analysts of railroads at the time, and historians since, have correctly observed that railroad economies were not linear. Railroads had massive fixed costs (costs

63. For an overview of railroad legislation in the state and the work of state commissions, see United States Congress, *Report of the Senate Select Committee on Interstate Commerce* (1886), 63–137. For case studies of state commissions, see Richard Harvey Barton, "Michigan Railroad Regulation" (MA thesis, Michigan State College of Agriculture and Applied Science, 1948); George H. Miller, "Origins of the Iowa Granger Law," *Mississippi Valley Historical Review* 40, no. 4 (1954): 657–80; Robert Lewis Peterson, "State Regulation of Railroads in Texas, 1836–1920" (PhD diss., University of Texas at Austin, 1960); Leonard Floyd Ralston, "Railroads and the Government of Iowa, 1850–1872" (PhD diss., University of Illinois at Urbana-Champaign, 1960); Gerald D. Nash, "The California Railroad Commission, 1876–1911," *Southern California Quarterly* 44, no. 4 (December 1962): 287–305; William L. Burton, "Wisconsin's First Railroad Commission: A Case Study in Apostasy," *Wisconsin Magazine of History* 45, no. 3 (1962): 190–98; Carl Johnathan Moses, "The Washington State Railroad Commission 1905–1911: A History of a Progressive Reform" (PhD diss., University of Washington, 1984); Kanazawa and Noll, "Origins of State Railroad Regulation"; Childs, *Texas Railroad Commission*.

64. Chandler, *Visible Hand*.

that did not change based on the volume of traffic) and a complex array of variable costs (labor, fuel, repairs, and so forth) that were difficult to ascertain, let alone predict in advance. Trains carried a complex mix of goods and materials, some of which were very heavy but of low grade (lumber, wheat, coal)—and therefore could not sustain relatively high freight rates—and others that were relatively light but high grade (dry goods) and therefore could. Some parts of the railroad network served densely settled regions in the Northeast, while others spread out way ahead of remunerative settlement. Some railroads competed with water-based transportation: canals, rivers, lakes. Others served interior regions unreachable by other means. Issues of topography, geography, and demography introduced numerous other complicating factors. This is why, as Richard White has rightly argued, freight rates did not, and could not, accurately reflect the relative costs of shipping particular commodities on particular lines. Rates were, rather, "educated guesses constructed by trial and error" regarding—as railroad executives and economists often explained—what the market would bear.[65]

What indeed did the market bear when it came to freight rates? Analysists often pointed out that railroad technology, where much of the expenses lie with handling cargo, loading and unloading it, made long-haul relatively cheap vis-à-vis short-haul shipping. Once a shipment was underway, they reasoned, it could travel longer distances with relatively little additional cost. It thus made sense to charge relatively more for short-haul than for long-haul shipping. As one oft-quoted railroad executive put it, taking this logic to an extreme, "A railroad is a cheap means of transportation for long distances and relatively less cheap as the distance diminishes until, when it becomes very small a wheel-barrow is the cheapest and for still smaller distances a shovel."[66] But much more crucially, long-haul shipping, by definition, faced greater competitive pressures. Railroads often enjoyed monopoly power over a local line serving a particular town or county. In these situations they could almost dictate prices. At longer distances shippers enjoyed many alternative routes to choose from, allowing them to negotiate better rates between rival interregional roads. Faced with fierce competition, railroads indeed tended to cut rates on interregional through lines to the bare bone. Any revenue on those lines was better than no revenue at all. The rates on local shipping, by contrast, rose to pay not only for operating expenses but for the railroad's overall fixed expenses as well. Put a different

65. White, *Railroaded*, 162. See also Richard White, *The Republic for Which It Stands: The United States during Reconstruction and the Gilded Age, 1865–1896* (New York: Oxford University Press, 2017).

66. Qtd. in Cronon, *Nature's Metropolis*, 84.

way, railroads sought to use monopoly revenues from noncompetitive short-haul traffic to subsidize competitive rates on long-haul traffic.[67]

The main authorities on the issue lectured to the public that the immutable logic of railroad economics dictated differentiated rate structures. As such these rates were necessary and even desirable. Arthur Hadley, a Yale professor who established himself as the foremost scholarly voice in the debate, never aligned himself against government oversight of railroads, as long as it was used to enhance markets by cleansing them of corruption, financial manipulation, and fraud. Led by erudite men like himself, or who were trained by him on a university campus, Hadley explained, government could improve markets by collecting and disseminating accurate standardized data.[68] Some accounts have therefore, not incorrectly, cast him as a railroad "reformer." When it came to differentiated rates, however, Hadley stood firmly with the railroads against the regulators. "In order to live at all," he confidently explained, "the road must secure two different things—the high rates for its local traffic, and the large traffic of the through points which can only be attracted by low rates."[69] Any effort to legislate against this tendency and equalize charges was not only contrary to the higher economic "laws," as the title of his book asserted, but also eminently counterproductive: "Any such attempt to enforce equality, whether between classes [of goods], localities, or individuals, will diminish the profit and efficiency of the railroads, and not bring the expected advantage to the shippers, still less to the general public."[70] In Hadley's analysis, which became famous for its hypothetical oyster parable, this differentiated rate structure allowed railroads to stay profitable and provide service in remote places or small communities that would otherwise prove unremunerative. Regulation mandating more equal rates would

67. Arthur Twining Hadley, *Railroad Transportation, Its History and Its Laws* (New York: Putnam, 1885). Historians have largely accepted Hadley's version: White, *Railroaded*, 140–78; Cronon, *Nature's Metropolis*, 81–86; Herbert Hovenkamp, *Enterprise and American Law, 1836–1937* (Cambridge, MA: Harvard University Press, 1991), 149–68; Chandler, *Visible Hand*. Cronon memorably announced that differentiated rate structures represented the very "logic of capital" (81). With this view embraced as the embodiment of scientific analysis, historians have cast midwestern Grangers and subsequent grassroot railroad reform movements as fools (who failed to understand the underlying dynamic behind rate discrimination), reactionaries (who looked wistfully to earlier, less volatile times before railroads), utopians (whose quest to find a panacea to the monopoly power of the railroads was admirable but ultimately doomed to failure), or finally opportunists (who were in this sense indistinguishable from profiteering robber barons). For a critique, see Link and Maggor, "United States as a Developing Nation." See also Anton Jäger, "State and Corporation in American Populist Political Philosophy, 1877–1902," *Historical Journal* 64, no. 4 (September 2021): 1035–59.

68. Northeasterners of Hadley's elite predisposition argued that only men like themselves—"honest, intelligent and experienced"—were qualified to serve as railroad commissioners, ensuring regulation would be apolitical and scientific, "as a physician would observe the progress of disease." See US Congress, *Report of the Senate Select Committee on Interstate Commerce*, 1208.

69. Hadley, *Railroad Transportation*, 115.

70. Ibid., 111.

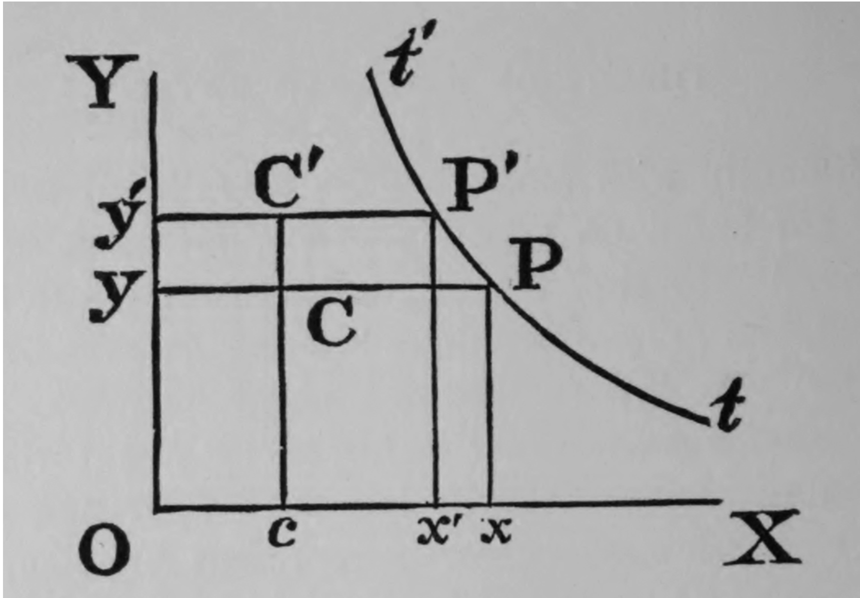

Figure 1. The mathematical "laws" governing railroad rates over distance. Source: Hadley, *Railroad Transportation*, 262.

thus diminish service and hurt vulnerable communities above all—in a nineteenth-century version of trickle-down economic thinking—paradoxically denying them the opportunity to participate in the nation's commercial life. Monopoly profits, in this analysis, were not a problem to be tackled but a positive feature that allowed railroads to expand service. From this perspective, to prohibit differentiation of rates was to prohibit economic rationality and sanction a form of madness (fig. 1).

And yet this is precisely what state regulators aimed to do when they enacted "long-haul, short-haul" legislation. Regulators resisted what they labeled "unjust discriminations and extortions" and stipulated that the charges for short-haul could not be higher than the rates for long-haul freights: "No railroad corporation organized or doing business in this state . . . shall charge . . . for the transportation of goods, merchandise or property . . . for any distance the same nor any . . . greater amount . . . than is at the same time charged . . . for the transportation of similar quantities of the same class of goods . . . over a greater distance."[71] This

71. The full text for the Illinois law was as follows: "No railroad corporation organized or doing business in this state under any act of incorporation or general law of this state now in force or which may be hereafter enacted shall charge or collect for the transportation of goods, merchandise or property on its said road for any distance the same nor any larger or greater amount as toll or compensation than is at the same time charged or collected for the transportation of similar quantities of the same class of goods,

formulation—and its many iterations in the different states—was an explicitly defiant market-shaping measure. Alpheus B. Stickney, a practical railroad man from Minnesota who wrote a heterodox book on the topic, defended this approach. He assailed those "writers who live in the vicinity of Wall Street" for their claim to represent impartial scientific authority, instead casting them as deeply superstitious "priests of the mysteries of the spirit of discrimination" who "like the children of Israel . . . refused to recognize the true God, but continued to worship the calf of their own creation."[72] By contrast, Stickney explained that legislatures were perfectly reasonable in their opposition to differentiated rates. Lawmakers rightfully concluded, he argued, that "the competitive rates were rather too low, the non-competitive rates too high, and that, to do justice to the people, the legislature should reduce the rates which were too high, and leave the companies free to advance the rates which were too low; thus securing a proper adjustment."[73] In other words, to combat rate differentials and their effects, state regulators had little need to touch long-haul rates, let alone gain jurisdiction over interstate lines. By reducing rates on noncompetitive local traffic over which they had clear jurisdiction, they could force railroads to look for larger revenues elsewhere, indirectly compelling them to raise rates on their long-haul lines. Put another way, whereas railroads wanted local traffic to subsidize long-distance, high-volume traffic, state regulators sought the opposite—for long-haul traffic to subsidize local and regional traffic.[74]

Long-haul, short-haul regulation was emblematic of a broader pattern in how states sought to impose expenditures on railroad corporations with the aim of forcing them to subsidize local and regional economic development. The legislative record of this period marked persistent efforts by the states, to again use present-day terminology somewhat anachronistically, to socialize the benefits of railroad

merchandise or property over a greater distance upon the same road." The same law also curbed "discrimination" between locations—"nor shall such corporation charge different rates for receiving, handling or delivering freight, at different points on its road"—and small and large shippers: "Nor shall any such railroad corporation charge or collect for the transportation of goods merchandise or property over any portion of its road a greater amount as toll or compensation than shall be charged or collected by it for the transportation of similar quantities of the same class of goods merchandise use." *Public Laws of the State of Illinois* (1871).

72. Stickney, *Railway Problem*, 36, 38–39.

73. Ibid., 38.

74. Richard John's work on the post office underscores the significance of undifferentiated postage rates as a form of "cross subsidies" that forced densely settled regions in the East to fund postal service in sparsely settled ones in the West; see Richard R. John, *Spreading the News: The American Postal System from Franklin to Morse* (Cambridge, MA: Harvard University Press, 1995), 49; "Study on Universal Postal Service and the Postal Monopoly, Appendix D. History of Universal Service and the Postal Monopoly," School of Public Policy, George Mason University, November 2008, 65–67. According to John, this policy remained politically uncontroversial until late in the twentieth century. This was emphatically not the case when it came to railroad rates.

construction—expanding and deepening access to cheap transportation—while privatizing as much as possible of the costs.[75] The Supreme Court routinely stood as the railroads' main line of defense against these state laws, but even this conservative body had to concede that imposing costs on corporations was constitutionally permissible: "Constitutional rights, like others, are matters of degree, and . . . the great constitutional provisions for the protection of property are not to be pushed to a logical extreme, but must be taken to permit the infliction of some fractional and relatively small losses without compensation, for some, at least, of the purposes of wholesome legislation."[76] State legislatures stepped fully into this space to make "fractional" and "relatively small" as large as possible. Statutes coming out of the states, and particularly from the emerging periphery, therefore forced railroads to fund adjacent infrastructure that made railroad transportation affordable, safe, and accessible on the local level. They required railroads, for example, to fence railroad tracks, protect grade crossings, elevate tracks, build viaducts and tunnels, construct additional stations along the line, devise connection with other roads, change station locations, and supply switching services and side tracks. More significantly, they mandated that railroads must provide regular and adequate service to small communities, maintaining frequent service and stopping in every county along their lines—even at a loss—including when a particular line was part of an interstate railroad line.[77] "The cumulative effect" of these provisions, as one legal study concluded, "constituted a serious modification of the right of private property" and "impose[d] vast expense upon the companies."[78] There were always court-sanctioned limits on these provisions, of course, and they always remained contested. But on the whole they reveal that the states routinely dealt with railroad corporations from a position of strength.

75. Mariana Mazzucato, "The Entrepreneurial State: Socializing Both Risks and Rewards," *Real-World Economics Review*, no. 84 (2018): 17.

76. *Interstate Railway Co. v. Massachusetts*, 207 U.S. 79 (1907).

77. "A railroad corporation created by a state is, for all purposes of local government, a domestic corporation, and its railroad within the state is a matter of domestic concern. Even when its road connects, as most railroads do, with railroads in other states, the state which created the corporation may make all needful regulations of a police character for the government of the company while operating its road in that jurisdiction. It may prescribe the *location and the plan of construction* of the road, the *rate of speed* at which the trains shall run, and the *places at which they shall stop*, and may make any other reasonable regulations for their management in order to secure the objects of the incorporation and the *safety, good order, convenience, and comfort* of the passengers and of the public. All such regulations are strictly within the police power of the state" (emphasis added). *Gladson v. Minnesota*, 166 U.S. 427 (1897). See, more generally, Francis J. Swayze, "Judicial Construction of the Fourteenth Amendment," *Harvard Law Review* 26, no. 1 (November 1912): 1; Kenneth F. Burgess, "Compulsory Construction of New Lines of Railroad," *Michigan Law Review* 20, no. 7 (May 1922): 699.

78. Swayze, "Judicial Construction of the Fourteenth Amendment," 17.

The state regulators' policy of adjusting local rates vis-à-vis through rates—and the slew of other impositions on the railroads—remained at odds with prevailing theories among scholars of political economy, who regularly questioned the legality and wisdom of such policies. But these policies were nevertheless very well considered. The well-known US Senate Select Committee, headed by Senator Shelby Cullom, that studied the issue in 1886 and interviewed dozens of railroad executives, regulators, businessmen, and farmers in preparation for federal legislation identified state reduction of local rates as a key feature of railroad regulations as it was practiced. Far from dismissing state regulation as ineffective or obsolete, the committee could not help but applaud state regulators who, driven by "agitation . . . [and] popular uprising," forced the railroads to "recognize their public obligations."[79] Representatives out West repeatedly explained that rate differentiation offended their deep-seated republican sensibilities. Railroad corporations, they argued, were creatures of government and needed to put all citizens and locales under their jurisdiction on an equal footing. They were not supposed to absorb and reproduce the inegalitarian imperatives of the market, granting some citizens (large-volume shippers, for example) or communities (those situated in competitive junctures) special privileges while denying them to others (small producers or communities in uncompetitive points along the line). But a similarly grave concern were the detrimental long-term economic effects of differentiated rates. Cheap long-distance, high-volume trade, these westerners observed, benefited large metropolitan hubs at the expense of medium cities and small towns, large-scale manufacturers and merchants at the expense of smaller ones, and worst of all, aggravated regional economic specialization, creating further polarization between core and periphery. They argued that economic specialization would doom the West to be perpetually subservient to eastern economic interests. The regulation of rates sought to push back against this tendency to allow the region to diversify its economic base beyond agriculture and extraction.[80]

79. United States Congress, *Report of the Senate Select Committee on Interstate Commerce*, 64.

80. This section follows Gerald Berk's analysis of railroad regulation, who, as mentioned, vastly understated the implications of his own profound insights. Berk pessimistically announces the defeat of "constitutive" rate making with the Supreme Court's decision in the case of *ICC v. Alabama Midland Railway Co.* (1897), which indeed significantly weakened the ICC's ability to fight rate discrimination. Berk, *Alternative Tracks*, 107–15. But the decision was merely a setback in a much longer battle. Congress consistently fought back to enhance the ICC's power, making it autonomous of the secretary of the interior (1889) and giving it authority to compel testimony (1893), enforce safety concerns (1893), and penalize railroads that deviated from posted rates (1903). Finally, in part in response to the *Midland* decision, Congress passed the Hepburn Act (1906) and then the Mann-Elkins Act (1910) to greatly expand and broaden the ICC's jurisdiction, including a rehabilitated long-haul and short-haul clause and the authority to prescribe rates. See Cushman, *Independent Regulatory Commissions*, 67–87; William Zebina Ripley, *Railway Problems* (Boston: Ginn, 1907),

These western advocates of rate regulation were explicit about it as a protectionist form of industrial policy. They warned that rate differentials would keep them in a state of dependency. "This is an agricultural State and we are mainly the producers of raw materials," J. M. Joseph, an Iowa farmer, explained to the committee. "It seems to be the policy of the railroads to keep us producers of raw material." Whereas the rates farmers paid to ship their produce east declined precipitously, high rates within each state obstructed the growth of industry. As Joseph explained, "Our troubles and hardships are not mainly on the stuff we ship out of state, by any means . . . the grain has come to be only a small matter even in Iowa. Some might think that was the main thing, but the tonnage on grain in the State of Iowa is less than the tonnage on coal alone." High short-haul charges on coal as well as timber—raw materials that were essential for the growth of cities and industry—were in fact "a greater hardship on us than the shipment of grain."[81] William B. Dean, a trader from Saint Paul, similarly framed rate regulation as a method for fostering local industry. "As producers of grain, remembering that we desire to get our products to the seaboard, we ought to favor what is termed the long haul." And yet "only about one-tenth of our products are shipped abroad [i.e., out of state]." The decline in average shipping rates, driven by rapid decline in long-haul rates (which railroad companies liked to celebrate), obscured a much more complicated situation by which long-distance commerce choked local economic activity. The alternative was a rate that favored short-haul over long-haul rates, providing trade protection and allowing a state like Minnesota to develop along more balanced lines: "My own opinion is that even if higher rates prevail to the sea-board and to the manufacturing States of the East, so that it would not be possible to carry our grain or meats to them as cheaply as we now can, the result of it might be that it would lead to the establishment of the same branches of industry farther West, nearer to the grain-fields and nearer to the ranches." The sources of energy and raw materials meant little if cheap long-haul shipping rates whisked those resources to older metropolitan centers. As Dean put it, "Illinois is underlaid with coal-fields, as is also Iowa, so that fuel is at our own doors, and there is no reason why manufactures cannot be established and maintained in adjoining fields, as it were, instead of carrying our products clear to Vermont and Massachusetts." If the rates to ship these resources East were not so low, "we would be diversifying the interests of the whole country throughout its borders."[82]

531–56; Clyde B. Aitchison, "Evolution of the Interstate Commerce Act: 1887—1937," *George Washington Law Review* 5, no. 3 (1937–36): 289–403.

81. United States Congress, *Report of the Senate Select Committee on Interstate Commerce*, 1032–33.

82. Ibid., 1293.

Jabez Burrows, a Nebraska farmer, similarly decried the threat of economic specialization. "We buy everything we need. We sell a few raw products to pay for these things." Rate structures that favored long-haul commerce were to blame: "The cheap long haul and the high local rate is of itself a discrimination against the agricultural interest." It forced agricultural communities to depend on a single potentially volatile export crop for their income. Burrows used all of the keywords of protectionist economic thinking, discussing the need to "diversify" the economic base, create a "home market" for high-value agricultural goods, allow urban centers to grow, and develop regional "manufacturing":

> What we want here and what the farmers want everywhere is labor in our community. What would cause this State to be a very wealthy and magnificent State would be to establish here the manufacture of the articles that are consumed by the agricultural population of this State. . . . We cannot diversify our industries; we have no home market. . . . Wherever you can establish a center where there is labor employed, whether in manufacturing or in wholesale business, or anything else, if it is labor that consumes products, you establish to that extent a home market. We here are prevented from having that home market practically by this system of discrimination. The State is cheated out of the wealth it would have by the establishment of manufactures in this section of the country. I know of absolute cases where enterprises have been started . . . and have failed for the reason that the manufacturers of the same articles a long distance off could ship into the State and distribute the manufactured article cheaper from their point than the local center here could distribute the same goods.[83]

The key was to prevent railroads from squeezing local trade—"the milk in the cocoanut"—to offset losses on "through business and . . . [the] ruinously low rates" they charged on it.[84]

S. J. Loughran, a Des Moines machinist and newspaperman, came before the committee to articulate the same general analysis of the situation, complaining about "discrimination against localities." "Our city is admirably situated for manufacturing," he argued:

> We have an extensive territory to supply with machinery and implements. We have an abundance of fuel and considerable water power. But the freight

83. Ibid., 1175.
84. Ibid., 1176.

> on raw materials, lumber, iron and steel, pig-iron, anthracite coal, and coke, and other articles required for the construction of wagons, plows, cultivators, seeders, hay-rakes, corn planters, mowers, harvesters, threshers, steam-engines, boilers, and other machinery and implements used in this State and beyond, and the high rates for the distribution of our manufactures make it impossible for us to compete with the manufacturers in the States east of us, who can send their goods across States to almost any point in Iowa for less than we charged from one point to another within the State by the same railway companies.[85]

Again and again, the question of regulation was framed in terms of protectionism, price controls, and the imperatives of economic diversification, particularly the desire to support local manufacturing. The committee's final report dismissed these views and made a recommendation in favor of differentiated rates, reflecting the power of eastern commercial interests and orthodox economic thinking among national regulators, but the legislation that created the Interstate Commerce Commission the following year in 1887 heeded the desires and political power of western constituencies. It included the controversial Section 4, which prohibited these policies: "It shall be unlawful for any common carrier subject to the provisions of this act to charge or receive any greater . . . for the transportation of passengers or of like kind of property, under substantially similar circumstances and conditions, for a shorter than for a longer distance over the same line."[86]

* * *

Beyond their remarkable legislative achievement of Section 4 in the face of massive opposition, what is most striking about this agenda and these statements from peripheral farmers, workers, and businessmen are their convergence with agendas and viewpoints from a variety of other peripheral contexts around the world. As Eric Helleiner has shown, an array of late nineteenth-century and early twentieth-century politicians, policymakers, and intellectuals articulated economic grievances and aspirations that were not fundamentally different from those of western Americans at the time. They similarly complained about the effects of economic specialization and dependence. Indian economist Mahadev Govind Ranade, for example, blamed railroads for making "competition with Europe more helpless" for Indian

85. Ibid., 1051.

86. Interstate Commerce Act, 24 Stat. 379 (1887). The question of what counted as "substantially similar circumstances and conditions" became the next legal controversy.

producers, because the roads facilitated "the conveyance of foreign [manufactured] goods to an extent not otherwise possible." He identified excessive Indian reliance on the export of raw materials and lamented excessive ruralization. He advocated for greater economic diversity, Indian manufacturing, the creation of a market for Indian-produced goods, and "a healthy proportion between the Rural and Urban Populations."[87] Others elsewhere came to similar conclusions. Uruguay's José Batlle y Ordóñez decried the country's heavy reliance on agricultural exports and advocated greater "economic self-sufficiency," in part via greater government control over transportation.[88] China's Sun Yat-sen sought to counter the "invasion" of European goods into China and foster Chinese industry with tariffs protections and government control over transportation.[89] Russia's Sergei Witte wanted Russia to escape its position as an exporter of raw materials to western Europe and develop a domestic market. He advocated that the Russian state draw in foreign capital but discipline it to meet Russia's industrial needs.[90] Argentina's Carlos Pellegrini warned that his country would forever be "the farmyard of the great industrial nations" if it did not cultivate local manufacturing—by manipulating the value of the peso, deliberately devaluing it to foster Argentinian manufacturing.[91] Most famously, Japanese Meiji modernizers such as Fukuzawa Yukichi and Maeda Masana strove to reverse Japan's European-imposed free trade policies in an effort to overcome the nation's position as an exporter of primary commodities and importer of manufactured goods.[92]

In most other cases, however, calls for proactive policies to counteract economic specialization and dependence achieved a lot less in terms of policy than what westerners in the US were able to enact. The case of Mexico's railroad expansion provides a good guidance as to why. This counterexample also underscores what was ultimately at stake in the struggle for political sovereignty against the meddling power of private investors and foreign governments in this period.[93] Similarly to

87. Eric Helleiner, *The Neomercantilists: A Global Intellectual History* (Ithaca, NY: Cornell University Press, 2021), 109–15. For the limits of bourgeois forms of neomercantilism, as embodied in the case of Henry Carey, see Matteo M. Rossi, "The Obstacles to Capital: Henry Carey's Political Economy in 19th Century U.S. History" (PhD diss., Universita Degli Studi Di Torino, 2023). Carey tellingly opposed freight rate regulation in the context of late nineteenth-century Pennsylvania but failed to prevent its enactment (Rossi, "Obstacles to Capital," 303–4.

88. Helleiner, *Neomercantilists*, 322–23.

89. Ibid., 245–53.

90. Ibid., 90–92.

91. Ibid., 97.

92. Ibid., 216–29.

93. This is the leitmotif of a magnificent slew of recent global histories but not always with enough clarity about the types of practices liberal governance aimed to obstruct: see Quinn Slobodian, *Globalists: The End of Empire and the Birth of Neoliberalism* (Cambridge, MA: Harvard University Press, 2018); Adom

western railroads, Mexican railroads were financed and built overwhelmingly by capitalists from the northeastern United States, primarily New York and Boston.[94] And like railroads in the American West, these railways represented a wager by the Mexican state that privately funded and operated infrastructure could, with proper regulation, serve broad developmental goals. Mexican policymakers envisioned railroads facilitating the export of Mexican commodities and generating much-needed revenues that would allow greater investment in the domestic Mexican economy. Under the leadership of Porfirio Diaz, the Mexican government granted American financiers concessions, providing them (as was the custom everywhere, including in the United States) with financial incentives and tax exemptions to build and operate railroads.[95] American investors happily rushed in to construct Mexico's major trunklines, the Mexican Central Railway, which was financed and controlled by a group of New Englanders, and the Mexican National Railway, which was financed and controlled by a Wall Street group headed by Jay Gould. For several decades the program appeared to be a smashing success, rapidly expanding the country's railroad system from 572 kilometers in 1873 to 19,205 by 1910.[96]

Soon after the start of the railroad boom in the 1870s, the question of freight rate regulation exploded in the Mexican context. As in the United States, the issue hinged on the question of rate differentiation. Like their neighbors north of the border, Mexican shippers did not simply seek to reduce rates, and railroads did not simply seek to raise them. Rather, railroads more specifically pursued differential rates that would allow them to offer more competitive rates on long-distance traffic. Insisting that handling charges justified higher relative charges on short-haul

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Getachew, *Worldmaking after Empire: The Rise and Fall of Self-Determination* (Princeton, NJ: Princeton University Press, 2019); Stefan J. Link, *Forging Global Fordism: Nazi Germany, Soviet Russia, and the Contest over the Industrial Order* (Princeton, NJ: Princeton University Press, 2020); Christy Thornton, *Revolution in Development: Mexico and the Governance of the Global Economy* (Oakland, CA: University of California Press, 2021); Jamie Martin, *The Meddlers: Sovereignty, Empire, and the Birth of Global Economic Governance* (Cambridge, MA: Harvard University Press, 2022). See also Maggor, *Brahmin Capitalism*; "To 'Coddle and Caress These Great Capitalists.'"

94. Maggor, *Brahmin Capitalism*, 114–18; John M. Hart, *Empire and Revolution: The Americans in Mexico since the Civil War* (Berkeley: University of California Press, 2002).

95. Cyrus Veeser, "A Forgotten Instrument of Global Capitalism? International Concessions, 1870–1930," *International History Review* 35, no. 5 (October 2013): 1136–55; "Concessions as a Modernizing Strategy in the Dominican Republic," *Business History Review* 83, no. 4 (December 2009): 731–58.

96. John H. Coatsworth, *Growth against Development: The Economic Impact of Railroads in Porfirian Mexico* (DeKalb: Northern Illinois University Press, 1981), 36–37. This merits much more attention, but in Mexico, as in the United States, the expansion of the railroad system accelerated the dispossession of indigenous communal lands, which did not proceed without violent and nonviolent resistance. "[Indian] villagers probably lost more, and more rapidly, during the Porfiriato than ever before." John Coatsworth, "Railroads, Landholding, and Agrarian Protest in the Early Porfiriato," *Hispanic American Historical Review* 54, no. 1 (1974): 65.

traffic, their rate structures accordingly set the lowest rates on full-car, long-distance shipments. Mexican shippers complained that these rates benefited large-volume, long-haul shippers, privileging in particular shipments from and to the United States. Business lobbying groups such as the Sociedad Agrícola and the Confederación Mercantil de la República Mexicana explained that low through rates from various American cities to Mexico City, being significantly lower than the rates within Mexico, made it impossible for Mexican producers to compete. Like their counterparts in the American West, these Mexican producers lobbied the government to promote greater parity between long-haul through rates and short-distance domestic rates. By contrast, railroad managers, echoing similar arguments made in the United States, insisted that their rates represented not discrimination against Mexican domestic interests but simply good economic reason. They explained that given the sparse volume of Mexican domestic trade, rate policies had no choice but to prioritize long-distance trade simply to stay solvent. Furthermore, they argued, parity in rate schedules only served to benefit inefficient, backward domestic industries and agriculture, hindering Mexico's efforts to modernize. It was in fact best for Mexican producers to be exposed to greater competition rather than rely on government interference and control.[97] In other words, the contours and substance of the debate regarding rate differentiation paralleled the one that waged at the same time among Americans.

However, whereas in the United States, western state assemblies and subsequent federal policy, driven by the disproportionate political empowerment of a large farming population, enacted interventionist developmental measures against fierce opposition from financial interests, the Mexican government, which was relatively insulated from similar grassroots pressures, followed a much more liberal approach.[98] The political balance of power in these two contexts diverged in ways that mattered a great deal, producing very different policies.[99] Thus in 1885 the

97. Lorena Parlee, "Porfirio Diaz, Railroads, and Development in Northern Mexico: A Study of Government Policy toward the Central and National Railroads, 1876–1910" (PhD diss., University of California, San Diego, 1981), 108–12; Coatsworth, *Growth against Development*, 27. Business lobbies, including chambers of commerce and the Sociedad Agricola Mexicana, continued to complain about unfair rates into the twentieth century; see Arthur Schmidt, *The Social and Economic Effect of the Railroad in Puebla and Veracruz, Mexico, 1867–1911* (New York: Garland, 1987), 182.

98. On the political muscle of American farmers and its implication for American state formation, see Elizabeth Sanders, *Roots of Reform: Farmers, Workers, and the American State, 1877–1917* (Chicago: University of Chicago Press, 1999); Monica Prasad, *The Land of Too Much: American Abundance and the Paradox of Poverty* (Cambridge, MA: Harvard University Press, 2012); Ariel Ron, *Grassroots Leviathan: Agricultural Reform and the Rural North in the Slaveholding Republic* (Baltimore: Johns Hopkins University Press, 2020).

99. Put a different way, the political muscle of American farmers gave the state more autonomy vis-à-vis capital. On institutions as political settlements, see Adrian Leftwich, "Bringing Politics Back In: Towards

Mexican government's Secretaría de Fomento—the official office of economic development—studied the railroads' rate schedules and proclaimed the government's official position. At that point the railroads demanded the full deregulation of rate making, which had been subject to government oversight from the industry's earliest inceptions. Like their American analogues, Diaz and his expert advisers—the illustrious "Científicos"—were never willing to surrender that authority. They announced their utter refusal to "leave the public, in the matter of transporting goods, entirely at the mercy of the railroad company."[100] The *secretaría*, however, overwhelmingly accepted the railroads' position and their expert advice regarding rate structure. The new rate schedule the Científicos announced lowered shipping costs but focused rate reductions exclusively on high-volume, long-haul traffic. Unlike legislators north of the border, the Mexican commissioners openly proclaimed their embrace of "the principle of differential tariffs"—"the fee per kilometer decreases as the distance increases"—with the explicit aim of "favoring the traffic to long distances." In another departure from American policy, the new Mexican tariffs also favored large-volume shippers. Shippers who delivered "whole carloads" thus received significantly lower rates than those who shipped goods in "less than full carloads."[101] The divergence in rates became more pronounced as distances increased, especially as they exceeded 1971 kilometers (which was not coincidentally the distance from Mexico City to the US border in El Paso). Low long-distance rates,

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a Model of the Developmental State," *Journal of Development Studies* 31, no. 3 (February 1995): 400–427; Anush Kapadia, "The Structure of State Borrowing: Towards a Political Theory of Control Mechanisms," *Cambridge Journal of Regions, Economy and Society* 10, no. 1 (March 2017): 189–204; Mushtaq H. Khan, "Political Settlements and the Analysis of Institutions," *African Affairs* 117, no. 469 (October 2018): 636–55. For a largely theoretical discussion of democracy as a check on the power of capital in developmental contexts and by contrast the undue power of capital in nondemocratic contexts, see Vivek Chibber, "The Developmental State in Retrospect and Prospect: Lessons from India and South Korea," in *The End of the Developmental State?*, ed. Michelle Williams (New York: Routledge, 2014), 30–54.

100. Parlee, "Porfirio Diaz, Railroads, and Development in Northern Mexico," 114.

101. Secretaría de Fomento, "Documento Numero 42," in *Memoria presentada al Congreso de la Union por el secretario de Estado y del Despacho de Fomento, Colonizacion, Lndustria y Comercio de la Republica Mexicana General Carlos Pacheco, corresponde a los anos trascurridos de enero de 1883 a junio de 1885*, vol. 2 (Mexico City: Oficinia Tip. de la Secretaría de Fomento, 1887), 560, 563. It should be noted that the original concession, while subjecting charges to government oversight, had conceded the issue of differential rates to the company, allowing it to set rates "without the need to keep proportion to the number of kilometers of the entire track." Qtd. In Sandra Kuntz Ficker, *Empresa extranjera y mercado interno: El Ferrocarril Central Mexicano, 1880–1907* (Mexico City: Colegio de México, 1995), 127. Critics noted the relative weakness of the government in its dealings with the railroads in this context, charging that "the government as magnetized by that incontrovertible power, will only bow its head as if it were under one of the decrees of fate" ["el gobierno como magnetizado por ese poder incontrastable, sólo inclinará la cabeza como si estuviera bajo uno de los decretos del hado"] (qtd. in ibid., 128–29). Kuntz Ficker shows that these statements overstated and oversimplified more contentious and more complicated relations.

the report finally explained, encouraged shippers to load and unload at terminal stations rather than at midpoints along the line, further cutting handling costs for the railroads. In a manner reminiscent of Hadley's analysis, the commissioners expected the benefits of these savings to be passed down to shippers in ways that would benefit Mexican industry.

Again and again the report pointed to the sound economic logic behind the new tariffs, in ways that would have pleased the financial community and educated audiences in the American Northeast. It explained that the relative low cost of long-haul over short-haul shipping made differential rates not only extremely beneficial for commerce but also fair and just. It cited the "principles and practices of mercantile equity," the high fixed costs that made "maximum use of [the road's] capacity" a top priority, the operational savings that large wholesale shippers made possible, the economic advantages of geographically expanding markets for producers, and the boon of lowering prices for consumers. By contrast the report explained that parity between long and short haul, and between small and large shippers, would be uneconomical and unfair. It would "go in the opposite direction of all the economic conveniences of the country and against the strictest justice." In other words, the report bolstered its case by showing that the new tariffs embodied market enhancing and thus self-evidently beneficial principles.[102]

The same market-enhancing approach also led the government to soften its requirements on the construction of regional feeder lines, which had been part of the original charters. Once the mineral-rich areas in the Mexican northeast were connected, the railroads held back on any further high-risk and potentially low-reward construction, with the exception of a branch line to an Atlantic port in Tampico. Observers noted that in order to "develop traffic," different regions in Mexico needed "branch lines which would serve as feeders to the trunk lines," but these were not forthcoming.[103] The northwest and south of the country thus remained cut off from service, which triggered no legal challenge from government regulators, who sought to avoid confrontation with foreign investors. A promised branch line to the Pacific was likewise never built. For local traffic the masses continued to use their own backs, mules, and burros—"beasts and men of burden," as one European

102. Secretaría de Fomento, "Documento Numero 42," 563. See also Parlee, "Porfirio Diaz, Railroads, and Development in Northern Mexico," 118–19; Coatsworth, *Growth against Development*, 123–31; Schmidt, *Social and Economic Effect of the Railroad*, 174–81. For a longer and detailed discussion of railroad ratemaking in Mexico, see Kuntz Ficker, *Empresa extranjera y mercado interno*.

103. In the case of the Mexican Central, for example, branch lines added up to a total of 350 miles, which was roughly 10 percent of the company's lines in 1907. Sandra Kuntz Ficker, "Economic Backwardness and Firm Strategy: An American Railroad Corporation in Nineteenth-Century Mexico," *Hispanic American Historical Review* 80, no. 2 (2000): 286–89.

observer put it—to carry small loads over short distances, just as the oft-quoted American railroad analyst explained would indeed be most economical.[104] Visitors noted that "the Indian and his donkey . . . and the Indians without donkeys [remain] persistent rivals of the railways," traveling by foot at times alongside the railroad trunklines themselves. These populations paid for shipping in sweat, time, and perseverance.[105] The costs of short-haul traffic, borne disproportionately by Mexican laborers, were therefore very high indeed.[106]

Overall the railroads did too little in those years to cultivate Mexican industry outside of the extractive sectors. Although certainly important for Mexican economic growth, they tended to reinforce the dominance of the export sectors.[107] Aided by favorable long-haul rates, Mexican extraction of minerals, primarily silver (and later copper, lead, and coal), skyrocketed alongside commercial agriculture and ranching, most of which traveled into the United States. Mexican imports of American mining machinery, agricultural equipment, tools, carriages, nails, and other manufactured goods similarly boomed, increasing almost tenfold in the decade after 1885. The demand for these goods thus provided little stimulus to the growth of domestic Mexican manufacturing.[108] Overall, in the 1890s domestic traffic within Mexico increased relatively slowly, even as it was leaned upon to bring in a growing portion of the revenues. In the case of the Mexican Central, for example, the tonnage of domestic cargo increased by only 8 percent between 1892 and 1898, even as revenues from this source increased by 98 percent. During the same years, international tonnage increased by 180 percent, but revenues from this traffic

104. Qtd. in Schmidt, *Social and Economic Effect of the Railroad*, 194.

105. Bernard Moses, *The Railway Revolution in Mexico* (San Francisco: Berkeley, 1895), 78.

106. Parlee, "Porfirio Diaz, Railroads, and Development in Northern Mexico," 112–14. More generally, see Alan Knight, "Export-Led Growth in Mexico, c. 1900–30," in *An Economic History of Twentieth-Century Latin America*, vol. 1, *The Export Age: The Latin American Economies in the Late Nineteenth and Early Twentieth Centuries*, ed. Enrique Cárdenas, José Antonio Ocampo, and Rosemary Thorp (London: Palgrave Macmillan, 2000), 120.

107. For more and less pessimistic assessments of the effects of export orientation on Mexican industrialization, see Stephen H. Haber, *Industry and Underdevelopment: The Industrialization of Mexico, 1890–1940* (Stanford, CA: Stanford University Press, 1989); *How Latin America Fell Behind: Essays on the Economic Histories of Brazil and Mexico, 1800–1914* (Stanford, CA: Stanford University Press, 1997); Luis A. V. Catão, "Mexico and Export-Led Growth: The Porfirian Period Revisited," *Cambridge Journal of Economics* 22, no. 1 (1998): 59–78; Knight, "Export-Led Growth in Mexico"; Edward Beatty, *Institutions and Investment: The Political Basis of Industrialization in Mexico before 1911* (Stanford, CA: Stanford University Press, 2001); Jeffrey Lawrence Bortz and Stephen H. Haber, eds., *The Mexican Economy, 1870–1930: Essays on the Economic History of Institutions, Revolution and Growth* (Stanford, CA: Stanford University press, 2002); Juan Carlos Moreno-Brid and Jaime Ros, *Development and Growth in the Mexican Economy: A Historical Perspective* (Oxford: Oxford University Press, 2009), 51–52.

108. Parlee, "Porfirio Diaz, Railroads, and Development in Northern Mexico," 177–78; Coatsworth, *Growth against Development*, 131–36.

increased by only 55 percent.[109] This was entirely in line with the initial designs of the American investors who had openly announced traffic in tropical commodities and minerals as their foremost priority while touting Mexico as a large market for US manufactures.[110] The outcome was tremendous economic growth but very little development—and increasing regional and economic disparities.

The economic landscape produced by policies such as railroad rate regulation north of the border within the United States could not be more different. Over the latter decades of the century, improved transportation gradually integrated the Midwest to the East, bringing about substantial declines in the cost of interregional shipping. However, the formation of an interregional transportation network, increasingly dominated by railroads, did not lead to regional economic specialization. Even as railroads consolidated independent lines, standardized gauges, and improved the administration and coordination of through traffic, midwestern industry continued to grow in absolute terms and relative to the nation as a whole. Manufacturing employment in the Midwest rose very fast between 1860 and 1920, increasing from roughly 125,000 to over 1.1 million between 1860 and 1900 and then to more than 2.2 million by 1920. In percentage points this was a leap from 11 to 25 percent of American manufacturing employment.[111] The increases in manufacturing were most striking in high-end producer durables such as machinery, instruments, and primary and fabricated metals but also included furniture, printing and publishing, apparel, and dozens of others sectors and subsectors, resulting in a highly diversified and highly innovative industrial base.[112] The region thus developed "a territorial production complex of great geographic breadth and internal richness" with "a vast number of mutually reinforcing activities."[113] Midwestern manufacturers became more prominent nationally, even as most manufacturing continued to target local and regional markets. In other words, the expansion of agricultural settlement and extractive sectors fueled the growth of manufacturing

109. Parlee, "Porfirio Diaz, Railroads, and Development in Northern Mexico," 89–93, 101, 123, 137.

110. Ibid., 90–91; Coatsworth, *Growth against Development*, 5, 123–30. Overall, export tonnage increased by 75 times on the Central and 60 times on the National between 1885 and 1908, while domestic freight increased little more than 10 times and 6 times, respectively.

111. The numbers do not include Pittsburgh and western Pennsylvania, which produced heavy industrial goods; see David R. Meyer, "Midwestern Industrialization and the American Manufacturing Belt in the Nineteenth Century," *Journal of Economic History* 49, no. 4 (1989): 924.

112. For the Midwest as "a hotbed of patenting activity" financed locally, see Naomi R. Lamoreaux, Margaret Levenstein, and Kenneth L. Sokoloff, "Financing Invention during the Second Industrial Revolution: Cleveland, Ohio, 1870–1920," in *Financing Innovation in the United States, 1870 to the Present*, ed. Naomi R. Lamoreaux and Kenneth L. Sokoloff (Cambridge, MA: MIT Press, 2007), 39–84.

113. Brian Page and Richard Walker, "From Settlement to Fordism: The Agro-industrial Revolution in the American Midwest," *Economic Geography* 67, no. 4 (1991): 283.

and urbanization in the Midwest rather than in the more developed and urbanized East, let alone the global core regions in western Europe.

The rise of this "agro-industrial" complex radically departed from patterns that pervaded other frontier regions, something historians and social scientists of other countries have always been more aware of than Americanists.[114] Economic geographers have nevertheless at times wondered how precisely these patterns came about. "How . . . did Midwestern firms compete in local and regional markets when transportation improvements lowered the cost of importing products from earlier established, presumably more efficient, eastern firms?" economic geographer David Meyer wondered.[115] His response, that this was a fortuitous question of timing, that the Midwest had had a sufficient window of time to develop and diversify its industrial base prior to the improvement in transportation before eastern firms could come to dominate, is at odds with patterns elsewhere around the world, where improved transportation—at times across natural trade barriers furnished by oceans and continents—forced painful processes of deindustrialization and ruralization. It is also somewhat at odds with accounts that emphasize the growing importance that eastern American producers placed on selling in western markets. These easterners clearly did not willingly relinquish these markets to newly emerging western competitors.[116] It is far more likely that midwestern producers benefited from deliberate, yet long overshadowed, government involvement—of which railroad rate regulation was an important component—that gave them opportunities not offered to producers in other peripheral economic regions. Despite corporate resistance and legal and ideological opposition, market-making government policy proved incredibly effective.

The significance of railroad regulation is further borne out by the deeper intraregional structure of industrial urbanization. Scholars of Latin America have long

114. For a sharp critique of the lack of attention to manufacturing in canonical accounts of the Midwest, see Brian Page and Richard Walker, "Nature's Metropolis: The Ghost Dance of Christaller and Von Thunen," *Antipode* 26, no. 2 (April 1994): 152–62. Comparative perspectives readily identify high-end manufacturing in places like Chicago as remarkable; see Edward L. Glaeser, Rafael Di Tella, and Lucas Llach, "Introduction to Argentine Exceptionalism," *Latin American Economic Review* 27, no. 1 (December 2018): 1–22. These patterns set the Midwest on its path toward Fordist mass production; see Link, *Forging Global Fordism*.

115. Meyer, "Midwestern Industrialization and the American Manufacturing Belt."

116. On deindustrialization on the periphery, see Williamson, *Trade and Poverty*. The notion of US industrialization as an irreversible, one-way path toward "take-off" is a remnant of American exceptionalism in the twentieth century. On the growing westward orientation of eastern cities, see Diane Lindstrom, *Economic Development in the Philadelphia Region, 1810–1850* (New York: Columbia University Press, 1978); David R. Meyer, *The Roots of American Industrialization* (Baltimore: Johns Hopkins University Press, 2003); David Schley, *Steam City: Railroads, Urban Space, and Corporate Capitalism in Nineteenth-Century Baltimore* (Chicago: University of Chicago Press, 2020).

observed the centripetal power of primary gateway cities such as Mexico City, Buenos Aires, and São Paulo as a feature of dependent economies. In these countries urban growth tended to concentrate in a single towering metropolis, or "monopolis," an "outpost of foreign politico-economic control" that absorbed a growing portion of the national economic activity, to the detriment of intermediate or small cities and their surrounding regions.[117] The proliferation and growth of cities in the Midwest defied these monopolistic patterns. In 1880 Chicago loomed large, leading some accounts to cast it as a stand-in for the Midwest as a whole. Chicago's overall manufacturing employment, however, added up to less than 24 percent of manufacturing employment in the region's top 20 manufacturing cities. More generally, between 1860 and 1880, manufacturing employment in the top 8 cities (Chicago, Cincinnati, Saint Louis, Cleveland, Milwaukee, Detroit, Louisville, and Indianapolis) grew together at a slower rate (285 percent) compared to cities ranked 9th to 20th (323 percent).[118] But the inverted pyramid of midwestern industrial growth extended much deeper, to a dense city system of dozens of small and medium cities, in places such as southern Wisconsin and Michigan, eastern Iowa and Minnesota, northern Illinois and Indiana, whose industry in fact grew faster than the largest metropolises, which by one estimate peaked in relative terms as early as 1870s.[119] Overall the region experienced no consolidation of activity in a single or even an upward drift toward a handful of urban centers but a decentralized regional cluster that Latin Americanist urbanists would associate with low urban primacy.[120] Here was a political economy that exported massive quantities of agricultural produce, minerals, and other natural resources but was nevertheless geared to harness subspecialization within a dense and decentralized network of urban agglomerations.[121]

117. Richard M. Morse, "Trends and Patterns of Latin American Urbanization, 1750–1920," *Comparative Studies in Society and History* 16, no. 4 (September 1974): 427; for the concept of the *monopolis*, see Milton Santos, *The Shared Space: Two Circuits of the Urban Economy in Underdeveloped Countries* (London: Methuen, 1979), 171. See also Andre Gunder Frank, *Capitalism and Underdevelopment in Latin America: Historical Studies of Chile and Brazil*, rev. and enl. ed. (New York: Monthly Review Press, 1969); Richard M. Morse, "The Development of Urban Systems in the Americas in the Nineteenth Century," *Journal of Interamerican Studies and World Affairs* 17, no. 1 (1975): 4–26. The structure of China's network of cities is a highly politicized policy question; see Kyle A. Jaros, *China's Urban Champions: The Politics of Spatial Development* (Princeton, NJ: Princeton University Press, 2019).

118. Meyer, "Midwestern Industrialization and the American Manufacturing Belt in the Nineteenth Century."

119. David R. Meyer, "The Rise of the Industrial Metropolis: The Myth and the Reality," *Social Forces* 68, no. 3 (1990): 731–52.

120. On the concept of urban "primacy," see Santos, *Shared Space*, 169–74.

121. Page and Walker, "From Settlement to Fordism." Latin Americanist urbanists have long critiqued the tendency of European and North American geographers to theorize urbanization in decontextual,

The effects of short-haul, long-haul provisions can also be assessed across time by looking at the consequences of the undoing of this form of regulation. Despite various legal hurdles, the authority of state regulatory agencies and the ICC generally expanded in the early twentieth century. State commissions came to oversee additional forms of infrastructure and new modes of transportation.[122] Federal legislation in 1903 (the Elkins Act), 1906 (the Hepburn Act), and 1910 (the Mann-Elkins Act) cemented the ICC's regulatory authority, including the prohibition on higher rates for short hauls than for longer ones.[123] In 1935 the Motor Carrier Act expanded the ICC's authority to bus and trucking companies, and in 1938 Congress created the Civil Aeronautics Board to regulate airlines in the same way. Finally, the National Transportation Policy Act (1940), echoing familiar nineteenth-century language, sustained the ICC's mandate over "the establishment and maintenance of reasonable charges for transportation services, without unjust discriminations." Market-shaping principles were thus legally enshrined, becoming an inseparable part of the American political economy. As late as 1971, no other than University of Chicago economist Richard Posner tackled the pervasive practice of what he called "taxation by regulation," "whereby unremunerative services are provided sometimes indefinitely, out of the profits from other services." Regulation of public utilities and common carriers, he persuasively explained, was not geared to avoid the worst excesses of monopolization or simply "approximate competitive results." It was, rather, a form of reallocative "public finance."[124] It was designed, to put it a bit differently, to privatize the costs of providing universal public transportation and socialize the rewards.

By then, however, the tide was turning in a very different direction. The Transportation Act of 1958 had empowered the ICC to sanction discontinuance of rail passenger service in unprofitable locations. In a reversal of the logic of long-haul, short-haul legislation, the ICC now allowed railroads to raise rates or eliminate local service altogether if operational costs "constitute[d] an unreasonable burden on the interstate operations of the carrier"—without considering the implications for served communities or the opposition of state legislators.[125] Economists have

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abstract, economistic terms rather than as products of particular state policies shaped by "sociopolitical and economic power"; see Morse, "Trends and Patterns of Latin American Urbanization," 433.

122. K. Sabeel Rahman, "The New Utilities: Private Power, Social Infrastructure, and the Revival of the Public Utility Concept," *Cardozo Law Review* 39 (2018): 69.

123. For a useful overview, see Theodore E. Keeler, *Railroads, Freight, and Public Policy* (Washington, DC: Brookings Institution, 1983).

124. Richard A. Posner, "Taxation by Regulation," *Bell Journal of Economics and Management Science* 2, no. 1 (1971): 22.

125. Qtd. in Paul Stephen Dempsey, "The Dark Side of Deregulation: Its Impact on Small Communities," *Administrative Law Review* 39, no. 4 (1987): 452.

since rushed to praise the wonders of "deregulation"—it indeed made the railroad industry highly profitable again—never mind the hundreds of American towns and cities that had lost service as a result. The act facilitated the near total collapse of passenger train service in the United States, which in the absence of internal cross-subsidies from profitable lines, and particularly from profitable freight business, came to rely on flimsy, and politically controversial, federal subsidies.

The Airline Deregulation Act of 1978 enacted the same logic in the airline industry, allowing airlines to discontinue service in unprofitable markets, with similar effects. Airline regulation had pushed airfares below marginal costs in short-haul markets and above marginal costs in longer-haul markets. By forcing the industry to cross-subsidize local and regional service—getting prices "wrong"—it had been able to extend and sustain affordable small market service. The new regulatory regime removed these requirements, leading air service in dozens of cities and small towns to drastically deteriorate. Larger carriers adopted their current "hub and spoke" approach, reducing the number of direct destinations from smaller communities. Passengers in these locales, including formerly prominent cities such as Saint Louis, Cincinnati, Memphis and many others, began to face higher charges and less frequent, and at times discontinued, service.[126] The economic implications for these communities proved severe as private businesses would not invest in, let alone relocate to, locales without regular air service. As initial federal subsidies that sought to ease the transition long expired, it has now become customary for some cities and towns to pay airlines to sustain air service in their communities, often with meager outcomes.[127] Overall, as contemporary observers have shrewdly pointed out, the turn away from the principles that guided railroad regulation up to the middle of the twentieth century has led to declining service in large swaths of the United States and contributed greatly to the hollowing out of once thriving urban and industrial regions.[128] For decades income

126. Phillip Longman and Lina Khan, "Terminal Sickness," *Washington Monthly* (blog), March 1, 2012, http://washingtonmonthly.com/2012/03/01/terminal-sickness/; Phillip Longman, "Why the Economic Fates of America's Cities Diverged," *Atlantic*, November 28, 2015, https://www.theatlantic.com/business/archive/2015/11/cities-economic-fates-diverge/417372/.

127. Ganesh Sitaraman, Morgan Ricks, and Christopher Serkin, "Regulation and the Geography of Inequality," *Duke Law Journal* 70 (2021): 1792; Ganesh Sitaraman, *Why Flying Is Miserable: And How to Fix It* (New York: Columbia Global Reports, 2023).

128. Dempsey, "Dark Side of Deregulation"; Ann M. Eisenberg, "Economic Regulation and Rural America," *Washington University Law Review* 98 (2021): 771–76; Keeler, *Railroads, Freight, and Public Policy*; Posner, "Taxation by Regulation"; Sitaraman, Ricks, and Serkin, "Regulation and the Geography of Inequality." There is a parallel story in the regulation and deregulation of telecommunications; see Sitaraman, Ricks, and Serkin, "Regulation and the Geography of Inequality," 1793–98; Eisenberg, "Economic Regulation and Rural America," 765–69, 776–78; John, *Spreading the News*; John, "Study on Universal Postal Service and the Postal Monopoly Appendix D."

disparities across regions had followed a persistent pattern of convergence, allowing incomes to become more and more alike over time. This trend has been decisively reversed, giving way to rapid divergence, with disastrous consequences for large parts of the country.[129]

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Overall, both the trans-geographical and trans-temporal assessments reveal freight rate regulation as a powerful and effective form of industrial policy. Rate policy compelled railroads to support local and regional development rather than extractive growth. This regional developmentalism, especially in the Midwest, sustained a highly developmental—that is, economically transformative—path for the United States as a whole. The emergence of a deep and broad urban-industrial economy was therefore not an inexorable economic process driven by unique American virtues or the foresight and efficiency of private interests. Nor was it the product of exceptionally "good" depoliticized, market-enhancing institutions. Rather this was a state-driven trajectory, nurtured by strategic (yet historically contingent and malleable and thus reversible) policies, enacted by elected representatives, and enabled through political mobilization from below, especially from politically enfranchised farmers. Examined comparatively alongside railroad regulation in Latin America, particularly in Mexico, the analysis illuminates a crucial aspect of what made the western United States similar to and different from other countries on the periphery: while all peripheral regions grew rapidly in this period based on the extraction and harvesting of natural resources, the political settlement in the United States—the balance of power within society as embodied in institutions—empowered grassroots constituencies. Those constituencies were bent not on conforming to liberal policy prescriptions, as elites elsewhere were prone to doing, but on deliberately disciplining capitalist interests, which they did to an extent previously underappreciated to great effect. When the political settlement shifted in favor of capital in the late twentieth century, so did the economic landscape, which became increasingly polarized.

More broadly the case of freight regulation inserts the United States into a longer history of developmental states that have sought to reposition their economies within the worldwide division of labor. It also expands the purview of this literature in three key ways. First, in tracing developmentalism back to its early theorists such as Alexander Hamilton, Friedrich List, and Henry Carey, traditional approaches

129. Peter Ganong and Daniel Shoag, "Why Has Regional Income Convergence in the U.S. Declined?," *Journal of Urban Economics* 102 (November 2017): 76–90; Robert J. Barro and Xavier Sala-i-Martin, "Convergence," *Journal of Political Economy* 100, no. 2 (1992): 223–51.

have associated developmentalism, especially in its nineteenth-century phase, with a fairly narrow set of top-down and indirect trade policies, primarily tariffs. Studies of the twentieth century have tended to focus on state subsidies and aid as key instruments of government promotion. The case of freight rate regulation, however, suggests the relevance of a much wider array of policy instruments that have long been deployed to generate economic development. It reveals the creativity and resourcefulness of policymakers in using areas under their jurisdiction to shape economic change, pulling on practically any policy levers they could gain control over. Second, development studies have typically focused on national institutions and the national scale. Development has seemed like the exclusive domain of nation-states, measured using aggregate economic data. The nineteenth-century United States reveals that even national trajectories can be driven by proactive policy on subnational and regional scales, which have often remained invisible and thus are assumed to be unimportant or absent. Scholars of China, India, and Brazil have already begun to disaggregate national prisms, but the United States might in fact be the pioneering case in point.[130] Finally, and most important, it seems futile to try to pin down a specific institutional setup—a national government agency, autocratic salaried bureaucracy, centralized state structures, or networked decentralized state, for example—as quintessentially developmental. Rather relative state autonomy and the ability to impose broad and long-term priorities on capital have been accomplished in different ways. Success has depended not on any set of institutions or policies to be copied and replicated but above all on the cohering of social coalitions that can overcome opposition from those benefiting from the status quo. As we urgently search for development policy today—in pursuit of sustainability, good jobs, equality, and resilience—we will be well served by this much broader and more versatile perspective.

130. Patrick Heller, K. N. Harilal, and Shubham Chaudhuri, “Building Local Democracy: Evaluating the Impact of Decentralization in Kerala, India,” *World Development* 35, no. 4 (April 2007): 626–48; Atul Kohli, *Democracy and Development in India: From Socialism to Pro-business* (New Delhi: Oxford University Press, 2009); Meg E. Rithmire, “China’s ‘New Regionalism’: Subnational Analysis in Chinese Political Economy,” *World Politics* 66, no. 1 (2014): 165–94; Tan, *Disaggregating China, Inc.*; Yuen Yuen Ang, *How China Escaped the Poverty Trap* (Ithaca, NY: Cornell University Press, 2016); Chris Carlson, “The Agrarian Roots of Divergent Development: A Case Study of Twentieth-Century Brazil,” *American Sociological Review* 87, no. 4 (August 2022): 698–722.