

NBER WORKING PAPER SERIES

RIDING THE WAVE OF TRADE:
EXPLAINING THE RISE OF LABOR REGULATION IN THE GOLDEN AGE OF GLOBALIZATION

Michael Huberman
Christopher M. Meissner

Working Paper 15374
<http://www.nber.org/papers/w15374>

NATIONAL BUREAU OF ECONOMIC RESEARCH
1050 Massachusetts Avenue
Cambridge, MA 02138
September 2009

Earlier versions of this paper were presented at the meetings of the Economic History Association (Tuscon), Cliometrics Society (Tuscon), European Historical Economics Society (Lund), and seminars at Harvard University, London School of Economics, UCLA, Universidade de Lisboa, and the University of Toronto. We would like to acknowledge the comments of discussants and participants, and three anonymous referees and the editor of the Journal of Economic History, Philip Hoffman. We are indebted to Toke Aidt, Gerald Friedman, David Jacks, Peter Lindert, Dennis Novy, and Robert Pahre for contributions to the data sections of this paper. Huberman's research was funded by SSHRCC. The views expressed herein are those of the author(s) and do not necessarily reflect the views of the National Bureau of Economic Research.

NBER working papers are circulated for discussion and comment purposes. They have not been peer-reviewed or been subject to the review by the NBER Board of Directors that accompanies official NBER publications.

© 2009 by Michael Huberman and Christopher M. Meissner. All rights reserved. Short sections of text, not to exceed two paragraphs, may be quoted without explicit permission provided that full credit, including © notice, is given to the source.

Riding the Wave of Trade: Explaining the Rise of Labor Regulation in the Golden Age of Globalization

Michael Huberman and Christopher M. Meissner

NBER Working Paper No. 15374

September 2009, Revised May 2010

JEL No. J8,N3,N40,N70

ABSTRACT

The received view pins the adoption of labor regulation before 1914 on domestic forces. Using directed dyad-year event history analysis, we find that trade was also a pathway of diffusion. Market access served as an important instrument to encourage a level playing field. The type of trade mattered as much as the volume. In the European core, states emulated the labor regulation of partners because intraindustry trade was important. The New World exported less differentiated products and pressures to imitate were weak.

Michael Huberman
Département d'Histoire
Université de Montréal
Pavillon Lionel-Groulx, local C-6105
C.P. 6128, succursale Centre-ville
Montréal, Québec H3C 3J7
Michael.Huberman@umontreal.ca

Christopher M. Meissner
Department of Economics
University of California, Davis
One Shields Avenue
Davis, CA 95616
and NBER
cmmeissner@ucdavis.edu

This paper brings a fresh coat to shopworn questions in political economy: what explains the adoption of labor legislation across a large and disparate group of countries in a brief time span before 1914, and why did the Old World see more intervention than the New, a phenomenon that has persisted into the early twenty-first century? The standard explanation situates the origins of the regulatory state in a confluence of domestic factors that included the rise of per capita incomes, the extension of the vote, and demands for social reform of labor organizations and pressure groups, even those led by employers. But rich and poor countries, and the most and least democratic states, adopted similar laws before 1914. Our explanation is that domestic and international factors jointly mattered in the diffusion of social policy.¹ While others have given priority to learning from neighbors and emulation of social norms, in this paper we identify trade flows between countries—the nuts and bolts of globalization—as pathways in the cross-border movement of social policy.²

The crux of our argument is that international integration prompted states to emulate the stricter laws of major trading partners. The type of trade mattered as much as the volume. In the European core, intraindustry trade was important. If states failed to imitate the legislation of trading partners they would have exposed themselves to embargos on exports and terms of trade shocks. In the New World, states were not compelled to adopt laws of major partners because world demand and supply determined prices of their less differentiated exports and, consequently, threats of market loss were not credible.

The complementary relation between trade and social protection stands in opposition to frequent claims, espoused in the first wave of globalization and echoed in the second, that competitive forces drive labor standards down in a race to the bottom. Our findings suggest that, even in the absence of international authorities like the World Trade Organization coordinating

¹ For a primer on the interdependence of domestic and external forces, see Simmons, Dobbin, and Garret, *Global Diffusion*.

² On learning and emulation of norms, see Rodgers, *Atlantic Crossings*; Van Daele, “Engineering Social Peace.”

strategies and responses, decentralized forces promoted convergence in worker protection. Market access served as an important instrument to encourage the diffusion of labor regulations, and farsighted policymakers recognized that emulating partners' laws would serve to bolster trade. This is not to imply that there was a race to the top in which one country leapfrogged another in the adoption of restrictive laws. Nor was it the case that states mimicked exactly the regulations of others. And states could delay emulating laws that imposed significant costs. Nonetheless, over the period, a rising tide in legislation swept countries upward and together.³

Our methodology is based on models of policy diffusion applied, most recently, to the spread of environmental protection and health care provision across jurisdictions.⁴ In contrast to standard country-year event history analysis, we focus on convergence in policy between pairs (or dyads) during particular years. This setup naturally allows for a clear demarcation of the relative weights of internal factors, like the extension of the vote, and external pressures, such as trade, for each pair of countries. To be clear, the issue of adaptation—the effect of regulation on labor market outcomes—requires a different methodology and is beyond the scope of this paper.

Our research strategy responds to our conception of social policy formation in an interdependent world. The standard approach begins with the local interests of key protagonists, firms, sectors, or factors of production, whose preferences toward policy are defined by their location relative to others in the international economy; in the next phase, domestic institutions and politicians, whose objective may be to maximize support, broker competing interests and determine policy; in the final stage, the state, as if it were a unitary actor, brings these outcomes to the international level. Our view, which is in the spirit of studies in “open economy politics,”

³ On trade as a pathway of diffusion since the 1980s, see Greenhill, Mosley and Prakash, “Trade-based Diffusion.” Vogel, *Trading Up*, defines the California effect as the capacity of importing jurisdictions to determine the environmental laws of exporters.

⁴ For an example, see Volden, “States.”

captures the likelihood that causality also runs in the other direction, from international institutions and pressures to domestic interests.⁵ In this case, states do not take domestic and foreign interests as given, because the international context structures bargaining and affects outcomes relevant to constituents. Since states must contend with a complex and shifting amalgam of interests, they are anything but unitary actors. Robert Putnam put the problem simply: “Domestic politics and international relations are somehow often entangled. It is fruitless to debate whether domestic politics really determine international relations or the reverse. The answer to that question is clearly both sometimes.”⁶

LABOR REGULATION: RECEIVED VIEWS AND BASIC DATA

At the most basic level, the widely accepted view is that labor laws were the stepchild of development, “the consequences,” Stanley Engerman wrote, “of higher national income, with accompanying changing preferences regarding work time and work arrangements as income rose.”⁷ In the popular power resources model, the leading protagonists are the spread of the franchise and the rise of organized labor. Comparative approaches have built on national histories, juxtaposing domestic factors of one country against another.⁸ The common denominator in this body of research is that regulation was a closed economy affair.

Curiously, the basic data reveal only a weak correspondence between income and voice and the adoption of labor laws. Table 1 gives dates of introduction of five major pieces of legislation for a broad sample of Old and New World countries. Putting aside issues of data availability, we have selected these regulations as representative of contemporary demands to

⁵ Summarizing the “emerging paradigm” of open economy politics, Lake (“Open Economy,” p. 238) wrote: “[I]nternational institutions may actually create an important endogenous dynamic with important effects on [domestic] politics.” For an example, Davis, *Food Fights*.

⁶ Putnam, “Diplomacy,” p. 427.

⁷ Engerman, “History and Political Economy,” p. 60.

⁸ For examples of studies of social spending, see Lindert, *Growing Public*; Aidt, Dutta, and Loukoianova, “Democracy.”

protect children and women, improve factory conditions, and provide some form of compensation in case of workplace accidents.⁹ The last two columns give GDP per capita in 1900 and average voter turnout in 1890-1900. Among Old World countries, the dispersion of income was large, as was voter turnout, but even the poorest and least democratic countries, Bulgaria, Italy, Portugal, Russia, and Spain, had several laws on the books. In the New World, Canada was relatively wealthy and had a large male electorate, but it was a laggard compared to Europe; Mexico after the revolution had pretty much the same level of regulation.¹⁰ The calendar of adoption was also inconsistent with the income and voice model. Germany, Switzerland, and the United Kingdom were early movers, but beginning in the 1880s any systematic ordering is difficult to detect.¹¹

Figure 1 presents a competing perspective on the spread of labor laws showcasing their diffusion over a narrow time frame. The adoption of minimum age legislation of 12 years traces a classic S-shaped logistic curve, a pattern representative of other laws in Table 1, and similar to that which has been documented for the diffusion of democracy and economic and social policies, from Keynesianism to neo-liberalism, across a range of countries in the late twentieth century.¹² The first movers behind age limits, Germany and Switzerland, were decidedly early. For this precocious club, regulation may have had different origins than for countries in the middle years. This phase, which had no obvious leader, saw the bulk of adoptions in small and large, and poor and rich countries alike— even the U.K. in 1901. In the last period, adoptions leveled off and were restricted chiefly to latecomers in the periphery. The pattern of diffusion gives us pause to reconsider the widely held view that situates the rise of labor regulation as a chapter of national history only.

⁹ These were core demands of the international movement to harmonize labor standards. Fallows, *Antecedents*; Lowe, *International Protection*; Shotwell, *Origins*. An appendix to the longer version of this paper gives full details of the sources and methods used in constructing the table.

¹⁰ Bortz, "Revolution," pp. 674-83.

¹¹ For the five pieces of legislation in Table 1, the null hypothesis of zero rank correlation cannot be rejected.

¹² For case studies, see Simmons, Dobbin, and Garret, *Global Diffusion*.

To be sure, historians have not ruled out the interdependence of domestic and international factors. Learning from neighbors—and rivals—and emulation of norms regarding women’s and children’s employment precipitated a “transfer in social technology.”¹³ In the classic example of the demonstration effect, Lloyd George was full of praise for Germany’s social programs after his visit to the continent in 1908, the year before he introduced unemployment insurance legislation in London.¹⁴ Apart from these exchanges, transnational epistemic communities emerged late in the century. Founded in 1900, the International Association of Labour Legislation (IALL) coordinated research on working conditions and evolved into a well-organized pressure group for the harmonization of labor standards.¹⁵ According to its historian, Daniel Rodgers, blueprints flowed across the Atlantic, and in both directions, the reform ideals of Henry George outpopularized those of the Webbs, let alone Marx.¹⁶ The trouble with this line of argument is that the establishment of information channels does not explain how beliefs were translated into policy, the presumption being that regulation was adopted because of ideas in the ‘air’.¹⁷ It remains unclear which ideas were persuasive and under what circumstances the new body of legislation was adopted, especially in countries where membership in communities in support of legislation was small.¹⁸

A Closer Look at the Data

It may well be that the data in Table 1 cannot bear the weight of our argument. Any international comparison is flawed because the laws by their very nature were not identical across jurisdictions, owing to differences in coverage, application, and compliance. To minimize differences, we chose standards established at the international conference on labor legislation

¹³ The term is from Hennock, *British Social Reform*, pp. 1-36. In the diffusion literature, learning refers to the adoption of successful policies elsewhere; emulation describes the adoption of policy whether it has proven to be effective or not.

¹⁴ *Ibid.*, pp. 149-51.

¹⁵ Follows, *Antecedents*, pp. 120-43. We evaluate the role of the IALL below.

¹⁶ Rodgers, *Atlantic Crossings*, p. 70.

¹⁷ See Hall, “Role of Interests”, for interest and idea based approaches to political economy.

¹⁸ Denmark, Italy, the Netherlands, Portugal, and Spain were underrepresented in the IALL. For membership statistics, see Métin, *Traité des ouvriers*, p. 43.

held in Berlin in 1890, the midpoint in our period of study.¹⁹ The federal structures of the New World and Germany and Switzerland complicate issues of comparability because sub-national authorities held responsibility for labor legislation. While Canadian provinces and Australian colonies and states passed legislation within short delays of neighbors, there were substantial differences in dates of adoption and in the heterogeneity of laws across U.S. jurisdictions.²⁰ To adjust for this, the table gives two dates for the introduction of each piece of legislation in the U.S. The first when ten states achieved the level set at Berlin, and a second, in parentheses, when the ten most populated states achieved this norm.

Notwithstanding these drawbacks, Table 1 is a meaningful point of departure to study adoption across countries. At the most practical level, when the U.S., the most troublesome country in our sample, is omitted in the analysis that follows all our results go through.²¹ Across national and sub-national units, many dimensions of the laws tended to converge after their passage. The same pressures promoting international diffusion of the basic laws would have also affected the various dimensions of these laws. Table 2 reports the number of factory inspectors per establishment, some specifics of restrictions on women's night work, age limits for children, and the actual contributions employers paid out for accident compensation (measured as a percentage of the wage bill). Even before pressures to harmonize labor regulations that can be traced to the establishment of the International Labor Organization in 1919, dispersion across these dimensions was remarkably small—a testament to the forces of convergence in policy that we will describe below. There is only one obvious outlier in the table: the factory inspectorate in Italy was poorly

¹⁹ Sources on the Berlin standards are: Fallows, *Antecedents*; Shotwell, *Origins*. In the case of child labor, the minimum was fixed at 12 years of age. See appendix for details.

²⁰ On centralization of Swiss and German labor law, see Hennock, *Origin of the Welfare State*; on the dispersion of U.S. laws, see Fishback, Holmes, and Allen, "Lifting the Curse."

²¹ In the remainder of the text and in the regression analysis, we refer to dates of adoption of the first ten U.S. jurisdictions.

staffed, a finding entirely consistent with contemporary observation and gives credence to the other values in the Table 2.

Finally, we restrict our use of Table 1 to study international diffusion. How workers and firms responded to labor regulation is a different question that requires another methodology and other types of information.²² Consider the interdependent world of 1914 facing support-maximizing politicians. Their objective was to supply benefits to concentrated constituencies while diffusing costs as much as possible. To reduce the burden on their own constituents, policymakers would have prevailed upon partners to level the playing field. Under certain circumstances—and we consider this possibility below—countries may have had legislation imposed on them, regardless of local labor market conditions and how domestic forces lined up in support of or in opposition to regulation. The upshot is that domestic and foreign reform agendas were entangled. At some level, adoption and adaptation were related, but Table 1 serves as a starting point because it provides the timetable we need to study policy diffusion in an interconnected world.

INTERNATIONAL TRADE AND THE RISE OF LABOR REGULATION

In today's global economy, the claim is, national authorities care what social and economic policies get adopted elsewhere because they want to keep their exports competitive, contain imports, and keep their home markets open to foreign investment. Of course, in the long term, certain regulations may increase the capabilities of local workforces, but policymakers are driven by short-run considerations, and assume rivals vie for a fixed quantity of trade or investment. Policies adopted to harmonize markets across jurisdictions have tended to weaken local controls. Everywhere, the argument goes, global competition has unleashed a race to the bottom in all types and dimensions of regulation.

²² For the U.S., see Fishback, "Progressive Era."

The late nineteenth century, the heyday of globalization, saw comparable competitive pressures. Bismarck, for one, asserted that “[a] normal workday could be established for Germany alone, if Germany were surrounded by a Chinese wall and were economically self-sufficient.”²³ The Chancellor rejected demands to incorporate labor legislation in Germany’s advanced program of social entitlements. Exploiting similar reasoning, the Swiss National Council, despite the early leadership of several cantons in policy adoption, delayed passage of the first set of federal labor laws in the early 1870s. The association of cotton textile employers had lobbied against proposals for limits on hours in order to preserve foreign and domestic markets.²⁴ Bending to employers, the Swiss government did not move ahead with protective legislation. Others have found direct evidence of a downward spiral in labor regulation. In 1891, Finland extended the length of the work day of minors (aged 12-14 years) to 8.5 hours from the level of 6.5 fixed in 1889, after its export firms found they had lost their competitive edge to rivals. Following the decision of its neighbor to loosen standards, Sweden reciprocated and lengthened the working day of 13 year olds from 6 to 10 hours²⁵ For the U.S., Jacob Hacker and Paul Pierson claimed that capital’s threat to divest locally and move their enterprises across state borders stunted, if not delayed, the development of the welfare state.²⁶ Canada, in turn, postponed legislation to limit women’s work to meet the competitive North American environment.²⁷

There is an opposing way to conceptualize the role of competition. Countries imported and exported labor standards as they did goods. Globalization, in this view, was an effective deterrent and not the cause of a race to the bottom. Kyle Bagwell and Robert Staiger developed a model in which countries are motivated to preserve market access, the combined shares of exports they

²³ Cited in Fallows, *Antecedents*, p. 91.

²⁴ Humair, *Développement économique*, pp. 364-69.

²⁵ Rahikainen, “Child Labour,” pp. 55-57.

²⁶ Hacker and Pierson, “Business Power.”

²⁷ Drummond, *Progress Without Planning*, pp. 234-37.

have acquired in foreign markets and of imports they have come to accept.²⁸ A country that unilaterally raises its labor standards will find its domestic market more vulnerable to imports and its exports less competitive, since adopting stricter laws is the equivalent of reducing trade barriers. Bagwell and Staiger empower any country in the WTO, as set in GATT Article XXIII, to impose sanctions on trading partners that fail to reciprocate because they have reneged on raising labor standards or lowering tariffs. There is no presumption labor standards will be harmonized internationally, only that the newly established level of regulation will preserve market access, thus giving politicians' discretion to raise standards as they see fit.

In the absence of international oversight before 1914, states had other options to level the playing field. They could threaten import restrictions on selected products of trading partners; fail to renew or abrogate commercial treaties and most-favored-nation clauses; or, in extreme cases, initiate trade wars to cut off competitors' entry into their markets.²⁹ The threat of market loss was credible in established and thick trading networks, like the bulk of countries grouped in the middle period of Figure 1. Conversely, low degrees of integration reduced the ability to enforce labor standards, and there were also latecomers at the tail of the logistic curve, the handful of countries that did not play by the rules or did not know them, and which were more likely to defect. International associations used soft coercion or moral suasion on these countries, but in the absence of sanctions the incentive to cooperate was weak.

The distinction between intersectoral and intraindustry trade is relevant to the history of labor regulation because countries that sold differentiated goods were more susceptible to retaliation if they did not adopt the standards of their chief markets. While the hallmark trade in the period was exchange between the resource-abundant New World and labor-abundant Old,

²⁸ Bagwell and Staiger, "WTO."

²⁹ Conybeare, *Trade Wars*; Lazer, "Free Trade Epidemic"; Pahre, *Politics and Trade*.

trade in manufacturing was sizeable within the European core.³⁰ In the iconic world industry, cotton textiles, Europe was the foremost producer and largest consumer. Differentiation was based on type of machinery used, ring or mule spindles, quality and treatment of cotton fibers, and the final dressing and preparation of goods.³¹ Many producers were dependent on restricted outlets, for instance Belgium on France, and Italy on France and Germany, and found themselves exposed to threats of market loss. Certainly, manufacturers could have modified or upgraded products to find new customers, but, in the short run, if states did not acquiesce to demands for a level playing field, they would have had to dump their goods at steep discounts.³²

Table 3 presents a snapshot of trading networks in cotton and woolen textiles, and silk and lace manufacture, for several European countries in 1913.³³ Column 12 gives the share of each country's exports of manufactured items sold in Europe; 65 percent of the total value of production had European outlets. The last column gives country shares of all items exported to other European destinations, while the bottom row gives the share of imports. The U.K., Germany, the Netherlands, and, by this date, Switzerland had developed commercial networks to sell goods abroad, but for all exporters destinations in Europe retained importance. Many producers were dependent on restricted outlets, for instance Belgium on France, and Italy on France and Germany, and found themselves exposed to threats of market loss.

Again the Swiss experience is illustrative. Recall it was reluctant to adopt limits on hours, fearing the loss of export markets if it introduced legislation ahead of major partners. Germany

³⁰ The shares of inter- and intraindustry exchanges in world trade remained roughly stable between 1870 and 1914. Primary product trade comprised 60-65 percent of world trade. See Findlay and O'Rourke, *Power*, pp. 411-14. For Germany, see Brown, "Imperfect Competition"; for France, Messerlin and Becuwe, "Intra-industry Trade."

³¹ Saxonhouse and Wright, "Technological Evolution."

³² Big countries had the advantage of discriminating between home and foreign markets. Providing a textbook study of unfair trade practices, Belgian woolen manufacturers accused German firms of pricing exports lower than identical goods sold in their home market—a practice contemporaries called '*le dumping*'. Since their domestic market was small, the Belgians were unable to reciprocate (Mahaim, "La conference de Berne").

³³ We thank John Brown for suggesting Kertesz's (*Textilindustrie*) study of intra-industry trade in 1913.

and France did introduce limits on women's work in 1891 and 1892. As it happens, the French National Assembly had initiated an inquiry into compulsory accident compensation in 1893, and opponents claimed that exporters and import-competing industries would not be able to pass on the increased costs.³⁴ The timing of the reform debate was propitious. Rejecting France's offer of the minimum rates in the Méline tariff schedule, in exchange for import concessions, Switzerland initiated a trade war.³⁵ French exports fell, but the conflict was relatively more costly for Switzerland.³⁶ It could not find alternative outlets for its major exports to France, high-end cotton textiles and silks, clocks, and specialty cheeses. The French had an incentive to prolong the conflict since it provided the import-competing sector a respite to adjust to the new reforms. It was the Swiss who backed down first. Even before the end of the trade war in 1894, Switzerland agreed to restrictions on night work and an 11-hour working day for women.

Trade wars were costly for all parties. By the early 1900s, states put aside the stick of retaliation for the carrot of conciliation. Policymakers realized that attempts to level the playing field did not have to come at the expense of trade between partners. The vehicle was bilateral labor accords, early versions of labor and environmental clauses in late twentieth-century trade agreements. Table 4 gives some examples of labor treaties negotiated from 1880 until 1914. Initially, states discriminated in the delivery of social protection; for instance, foreign or guest-workers, were not eligible to receive accident compensation, which inevitably gave rise to an incentive to reduce benefits for nationals. The early bilateral accords, which assured the reciprocal treatment of native and foreign workers, were conceived as backstops against a potential unraveling in labor standards. These accords served to standardize the coverage and

³⁴ Fuchs, "Institutions, Values," p. 321; Jay, *Protection légale*, pp. 315-18.

³⁵ Conybeare, *Trade Wars*, pp. 179-203; Humair, *Développement économique*, pp. 595-618.

³⁶ In 1891, France took 18.6 percent of all Swiss exports, and Switzerland 6.0 percent of French exports. Between 1892 and 1894, Switzerland's shipments to France fell by about 30 percent; French exports fell by 6.9 percent. Trade data from Mitchell, *Statistics*, pp. 545, 595; Conybeare, *Trade Wars*, p. 191.

application of labor laws as reported in Table 2, and although they often revolved around single items, the expectation was, as stated clearly in the Germany and Austria-Hungary accord of 1905, that a “broader” harmonization of legislation would follow.³⁷

There was also a commercial dimension. Belgian authorities were persuaded that its 1897 accord with France dealing with workers’ savings would strengthen commercial relations and preempt retaliatory trade practices.³⁸ Beginning with the Franco-Italian labor accord of 1904, which we examine in a later section, agreements were explicitly designed to strengthen bilateral trade. Many of the signatories had previously negotiated most favored nation treaties as indicated in the last column of the table.³⁹ The spike in labor accords in the years after 1904 coincided with the clustering of MFN treaties and the decline in tariffs in the subsequent decade. Germany initiated accords with its partners, exploiting strategically its high tariffs to negotiate increased access to its markets in exchange for better foreign labor protection.⁴⁰ The link between labor and commercial treaties reinforced the stepwise movement in adoption traced in Figure 1. Countries would raise levels of regulation because their trading partners had done so. But the added incentive was that as it raised its labor regulation to the level of its partner, it gained market access in countries that had MFN arrangements with the latter.

Both episodes of retaliation and negotiation were infrequent in the New World since domestic concerns trumped external pressures. Regions of recent settlement mainly exported foods and raw materials whose prices were fixed in world markets. The pressure to comply with

³⁷ Lowe, *International Protection*, pp. 143-44.

³⁸ Métin, *Traités ouvriers*, pp. 25-36.

³⁹ We are grateful to Robert Pahre for providing us access to his commercial treaty data set. Many of the accords were unconditional MFNs. See Pahre, *Politics and Trade*, pp. 157-76. Irwin, (“Multilateral and Bilateral Trade,” p. 454), referred to MFN agreements as “progressive bilateralism” because they promoted multi-party accords and did not divert trade. The clustering of bilateral labor accords fits this model.

⁴⁰ France and Germany, high-tariff countries, actively negotiated bilateral agreements. Lampe, (“Nineteenth Century Bilateralism”), found that high-tariff states were more prone than low-tariff countries to cooperate in the Cobden-Chevalier era. Later in the century, Pahre, (*Politics and Trade*, pp. 204-46), reported that smaller countries were less likely to cooperate, and tariff treaties more likely to be stable if foreign tariffs were initially high.

standards of major trading partners was less keen, because exporters could shift outlets without severe loss. Canada's wheat exports did not contract when Germany launched a trade war between 1903 and 1910 to protest Ottawa's preferential agreement with London; in fact, it was the U.K. that feared collateral damage.⁴¹ Exceptionally, by 1914 the U.S. exported manufactured goods, although these were mainly standardized items.⁴² Anyway, international trade played a small role in total production in the U.S. Overall, the New World was insulated from external pressures to emulate the European model. Trade patterns reinforced the primacy of domestic factors in areas of recent settlement. There was a structural disconnect in the New World between commercial access negotiated at the national level and labor laws passed by sub-national jurisdictions. In some regions, like Australia, labor power in key states was strong enough to use the ballot box to see through legislation, but it was difficult to mount the same force in North America. The aphorism that all politics is local was appropriate to the New World.

THE DECISION TO ADOPT: TESTING FOR DOMESTIC AND EXTERNAL FORCES

To study policy convergence we implement a directed dyad-year event history analysis. The unit of analysis is the country-pair-year (or dyad-year). We seek to explain why country "A" converges to the labor standards already adopted by another country "B". Convergence does not imply that policymakers emulate exactly the other country in the dyad. The dichotomous dependent variable takes on the value one if country A adopts *at least one* out the five labor standards (Table 1), given that B had already adopted that (those) particular standard(s) prior to

⁴¹ On the Canadian-German trade war, see Trentmann, *Free Trade Nation*, pp. 137-40; Conybeare, *Trade Wars*, p. 182. There was no deviation in the trend of Canadian wheat exports. The U.K. feared losing access to countries having MFN agreements with Germany.

⁴² Sabel and Zeitlin, "Historical Alternatives."

the current year, and zero otherwise.⁴³ When A converges to *all* standards in B, this particular dyad is dropped from the sample, since no further convergence is possible.

A pair of countries can be present up to two times in each year since the order of adoption for each country adopted may not have been the same across labor laws. We found that just over 50 percent of the ‘emulations’ in the data are associated with convergence to a standard previously adopted by five or fewer countries. The number of leaders in our sample period is restricted by definition, and as a result most countries were followers in the diffusion process. To be clear, our procedure is inappropriate to explain fully why country B was in fact the first mover. Our primary interest is the transmission of policy between trade partners.

The directed dyad approach improves on the standard country-year event history model because it includes information on interaction effects between neighbors or trading partners and common features of the country pairs. In event history models, external factors are usually weighted-averages of arbitrarily defined ‘neighbors’, or other countries comprising the reference group. Our approach also permits countries to be leaders and followers over different policies and in different country pairs. To be sure, some degree of sample selection is unavoidable because B only appears when it has adopted at least one of the five pieces of legislation. For sample selection to force a change in the sign of a marginal effect, A’s “error term” would have to be strongly correlated with B’s. The selection problem increases in severity as the correlation between the included explanatory variables and B’s error term becomes greater. We return to these issues below.

Our control variables consist of external and internal determinants of labor standards. For trade integration, we use the measure of trade costs developed by David Jacks, Christopher

⁴³ This procedure avoids jointly estimating the probability that country A imitates B *and* the probability of B adopting a labor standard. Boehmke, “Policy Evaluation.” There are no cases where a country adopts and then gives up a particular standard.

Meissner, and David Novy. The measure is related to the (geometric average of) bilateral trade shares of GDP, but it is derived explicitly from trade theory and is more precisely evaluated.⁴⁴

We invert the trade shares to obtain the tariff equivalent. In effect, the term measures the wedge between observed bilateral trade and that predicted by size alone, which would be the key driver in a world without barriers to trade. The variable is strongly related to observable proxies for barriers to trade including tariffs, transportation networks, exchange rate variability, and language differences. The measure for year t is calculated as

$$\tau_{ABt} = \left(\frac{x_{AA}x_{BBt}}{x_{ABt}x_{BA}} \right)^{\frac{1}{2(\sigma-1)}} - 1$$

The variables x_{AA} and x_{BB} are proxies for *intra*-national trade, or domestic absorption, and x_{AB} and x_{BA} represent total exports from country A to country B and exports from B to A. The parameter σ is the elasticity of substitution between all goods, domestic and foreign (and foreign vs foreign), and is assumed to be equal to 11.⁴⁵ The term can be interpreted as the extent to which foreign trade is more costly than domestic trade; it falls as countries trade more together. The estimated coefficient will have a negative sign if increased trade encourages A to adopt B's policy.

The baseline model includes the share of the labor force in agriculture of country A to control for the level of development, and also wealth and size (the logarithms of GDP and population) of each country in a pair. Central to Engerman's claim, A's demand for labor

⁴⁴ Jacks, Meissner, and Novy, "Trade Costs, 1870–2000." Between 1870 and 1913, the average decline in international trade costs was 23 percent. See also Jacks, Meissner, and Novy, "Trade Costs in the First Wave."

⁴⁵ The level of trade costs depends on the elasticity of substitution. There is no evidence to that the elasticity varied across countries in the aggregate and evidence for more recent periods suggests preference parameters are constant over time. The parameter is a scaling factor, with a consensus estimate of eight. Arguably, during the nineteenth century goods were less differentiated and, hence, more substitutable. Our assumption is equivalent to a factory gate markup of 10 percent over the marginal cost of production.

regulation would have risen with income per capita (a positive marginal effect of GDP for a fixed level of population). But larger countries faced weaker external pressures. They may have been less prone to imitate neighbors because they naturally traded less internationally and were more shielded from foreign competition. A proportional increase in GDP and population (an increase in size) would have lowered the likelihood of adoption. We include real GDP and population of country B to identify the roles of wealth and size in policy diffusion and emulation: was A more willing to adopt if B was big or rich?

The other determinants follow from previous discussion. Union density and voter turnout, the ratio of persons actually voting to the adult population (of the relevant enfranchised gender), stand in for the key determinants of the power resources model. Since convergence may have differed across regions, a dummy variable indicates whether country A is in the New World or not. We have also included an interaction variable between the presence of a New World country and voter turnout. This variable disentangles the roles of resources and political economy factors behind regulation. The decision to adopt might have also been dependent on the number of standards already in place, measured by the total number of laws (out of the five considered) A and B shared in the prior year.

The sample in the baseline regression consists of information on the adoption of five standards in 17 countries, across a maximum of 16 partners, and for the 33 years from 1881 to 1913. The exact number of observations per country depends on the length of time required to converge on a partner's law, and the number of standards and dates of adoption of each partner. Countries in the baseline sample (and occasions they initially appear as a follower/leader) are: Argentina (14/0), Australia (5/6), Austria (5/12), Belgium (14/13), Canada (12/10), Denmark (11/9), France (6/15), Germany (2/15), Italy (10/8), the Netherlands (10/14), Norway (13/14), Portugal (15/2), Spain (15/7), Sweden (11/11), Switzerland (10/10), United Kingdom (11/16),

and the United States (14/14). All countries behaved as followers and leaders which underscores the basic problem we explore: what drove pairs of countries to converge on labor laws?⁴⁶

Table 5 gives results of a series of logit regressions for the policy convergence model. We report average marginal effects. Standard errors are clustered at the country pair level (regardless of whether a country is located in position A or B) to correct for potential bias in the errors arising from arbitrary forms of serial correlation over time.⁴⁷ In the baseline specification of column 1, which includes all relevant independent variables, the trade cost marginal effect is negative and significant. Trade was a conduit of convergence. Contrary to claims, international competition did not lead to a downward cascade in social and labor policy. Wealthier, larger, or more democratic countries were not more likely to play leadership roles. It would appear that the impact of Germany's advanced legislation on British policy had as much to do with Lloyd's George storied visit to a large country as with the fact that the two were major trading partners.

In the baseline regression, domestic factors in A, with the exception of union density, have the expected signs, though their impact was not significant. The positive marginal effects of A's GDP (p-value 0.40) and population (p-value 0.94) are insignificant. The natural logarithm of GDP per capita (entered as a single variable in a separate unreported specification) has a positive but statistically insignificant marginal effect (p-value 0.32). The overall size of A was unimportant. Proportionally increasing GDP and population did not lead to a change in the probability of convergence. If we cannot detect that large and democratic countries were leaders, neither were small countries followers.

⁴⁶ Excluding Germany from our sample does not affect the estimated results.

⁴⁷ In unreported regressions, we clustered standard errors over all country A observations in a particular year to account for correlation within years across a country's decision to adopt its partners standards. Results do not differ from those of the baselines in columns 1 and 2.

The salience of domestic and international factors varied across regions. In the Old World, voter turnout, while positive, is not significant. Our interpretation is that domestic voice was not sufficient to achieve the goals of social activists, although it may have interacted with other internal or external forces to advance the reform agenda. In one scenario, capital in B would have sought to form cross-border and cross-class coalitions with labor and reformers in A to level the playing field. These types of pressures may be captured in the trade costs term itself. Putting aside this explanation, the dynamic was different in the New World. Countries were less prone to converge, but sufficiently high levels of voter turnout offset the obstacles to regulation posed by the region's specialization in primary products and other idiosyncrasies.

The sign of union density may appear to be counterintuitive, but worker organization was strongly correlated with the presence of a New World country.⁴⁸ Other studies have reported a positive relation between the share of population above 65 and social spending, a finding repeated in column 1, although the marginal effect is statistically insignificant. Older workers were less mobile than younger ones and more dependent on social entitlements. Populations were younger in the New World thus deepening the divergence between regions.

Countries with relatively weaker sets of labor laws were more prone to adopt. The negative sign on the lagged number of shared standards has, at least, two interpretations. Stragglers may have wanted to signal to residents and foreigners their willingness to move toward the new international norm of greater regulation, albeit at a slower pace; alternatively, they may have adopted legislation later than others because the cost of doing so was less.⁴⁹

⁴⁸ The New World indicator actually rises in absolute value in the short baseline in column 2 which omits unionization rates.

⁴⁹ According to Von Laue ("Factory Inspection," p. 348), Russia "stood ahead of public opinion of employers and workers," upgrading labor standards to attract more foreign investment and in the anticipation of securing new export markets. By the late 1890s, Von Laue added, Russia "had a set of laws more enlightened than those of France or the United States."

Did countries with common features have the same regulatory outcomes? Neither differences in GDP nor turnout had a perceptible effect. We cannot conclude, as did Markus Lampe and Robert Pahre in separate studies of MFNs, that democracies were any more prone to emulate each other than autocracies.⁵⁰ We also consider in the baseline whether close neighbors were more likely to copy each other. The answer is mixed. A common border actually exerted pressure to diverge, but a smaller distance between capitals implied a greater chance in adopting a similar labor standard. Emulation effects, derived from culture—common language and legal origins, and shared histories—cannot be excluded even after controlling for trade relations.

In the remaining columns, we explore the robustness of these findings. We exclude unionization, agricultural share of the labor force, age distribution, differences in turnout and income per capita, and geographical variables. These variables did not prove to be robust determinants, and, in the short baseline of column 2, the trade cost coefficient actually increases in significance. The geographical variables are highly collinear with trade costs as the literature on trade and gravity models shows. The income and turnout differences are essentially controlled for already since A and B's respective levels are entered separately. The other structural variables are poorly measured across the sample and we are hesitant to rely on them further.

Columns 3 and 4 compare estimates of an Old World only sample and another which restricts country A to being in the New World. For European pairs, the results are in line with column 1. The dynamic was different in the New World: the trade cost term is positive but not significant, and the marginal effect of voter turnout is statistically significant. Recall Rodgers' claim that reform blueprints flowed between continents; trade, however, does not appear to have been the conduit of transmission to the Americas and Australia. Voice was the main channel of

⁵⁰ Lampe, "Nineteenth Century Bilateralism," p. 31; Pahre, *Politics and Trade*, pp. 247-79.

policy diffusion in the region. In line with our previous discussion, local forces trumped global pressures in regions of new settlement.

Column 5 controls for (time-invariant) unobservable heterogeneity at the level of country A with a conditional logit model. GDP and population of B are now significant. GDP of A, which is strongly persistent and presumably highly correlated with country fixed effects, is estimated to have no statistically significant impact on convergence. The high correlation between fixed factors and GDP shows up in the sign on the coefficient which is opposite to that in column 1. Regardless of specification, the effect of trade costs is robust, confirming the rising tide in labor standards as nations sought to keep up with levels of regulation provided by trading partners. Figure 2 summarizes the baseline result. For each year we give the total number of labor laws adopted. The maximum for the 18 countries in the sample is 90. We also track the decline in trade costs. The decline in trade costs was steep beginning in the 1880s, as was the rise in the number of adoptions rapid. Greater trade integration went hand in hand with convergence in social protection.

Alternative Models of Labor Standards

Our model and empirical evidence have several potential problems. The procedure we have exploited may be restricted to policy adjustments, for instance the tweaking of current minimum age law in A to meet levels in B, as opposed to converging on new policies having no history between the pair. But states in our sample had previous interactions on immigration, commercial, and foreign policies, and in other ways like legal systems they were not far apart. In light of broader historical and political interconnections, countries can be seen to be fine-tuning along an existing dimension of contact. We may have omitted some key determinants of convergence or measured incorrectly other variables. In the appendix, we report results using an alternate

measure of political competition that substantiates the baseline results. But the inclusion of other indicators, like a new measure of political competition, substantiates the baseline results.

Our procedure may be flawed if we have not properly controlled for the sample selection problem because only pairs where B has already adopted one or more standards are included, thereby leaving out information for a number of dyads. The loss of information is attenuated since a country not appearing as B will likely show up as A; that said, a fraction of observations remains ineligible to converge and, hence, excluded from the estimation sample.⁵¹ Bias in the marginal effects of the convergence equation depends on whether or not unobservables in country A that may have helped determine its decision to follow B were correlated with the latter's unobservables, and the extent to which included covariates in the convergence equation determine the probability of B adopting. The impact of the selection bias depends on the degree of correlation that is, arguably, not too great in our large sample. Concretely, the wave of adoptions in the short-time frame beginning in the 1880s created a large number of countries with the potential of being emulated. Finally, to address the problem of correlation in error terms, we control for as many observables as possible for A and B.

In the appendix, we report results for two tests of the effects of missing pairs and of correlation in error terms. First, we estimate a country-year event history analysis which performs poorly both in terms of domestic and international forces. Second, a Heckman selection correction for a probit model of convergence cannot reject the null that there is no correlation between the error terms of the convergence equation and the determinants of B adopting one or more standards, and hence eligible to be included in the sample or not. Overall, it appears there is

⁵¹ In the entire sample of 11,286 dyads, 21 percent of the cases are eliminated because country B has no standard to be emulated.

little evidence that missing information and sample selection issues are driving the baseline findings on convergence.

BRINGING UP THE LATECOMERS

The pressure to emulate at the tail of the logistic curve in Figure 1 was weak because countries were not well integrated in trade networks, or, because as latecomers in development, domestic forces in support of reform had not yet coalesced. The IALL spearheaded the transnational movement to level the playing field. The Belgians and Swiss were key players in founding the IALL in Paris in 1900, since, by themselves, small states had less leverage to coerce trading rivals than larger ones. The powers of the IALL were limited, however, to soft coercion and no procedure was put in place to ensure ratification. Still, attendance at the occasional conferences grew in the decade before the outbreak of war.⁵² Most European governments in our sample sent delegates—the U.S. sent an observer to the first meeting—and although they were not completely persuaded by reformers, states became attuned to new social norms of worker protection that were being circulated. In the decade after the creation of the IALL, Italy, Portugal, Spain, and Sweden, all latecomers to the reform movement, prohibited night work of women.

There is modest statistical support for the role of the IALL as a purveyor of ideas. The quinquennial controls in the baseline estimations suggest a higher propensity of emulation later in the period, a change in trend coinciding with the emergence of a vocal and organized movement for international harmonization. Column 6 in Table 3 tests for the role of international coercion more directly. We include dummy variables if both countries A and B attended IALL conferences in 1901 (Basel), 1905 (Berne), and 1913 (Zurich and Berne).⁵³ We find attendance at all three

⁵² Number of countries: Basle 1901, 8; Berne 1905, 14; Zurich and Berne 1913, 16. Follows, *Antecedents*; Chatelain, *Protection internationale*; Métin, *Traité des ouvriers*.

⁵³ French was the predominant language at IALL meetings. The IALL indicator in column 6 can be considered a proxy for shared cultural values.

meetings is related to a higher likelihood of adoption, although only for 1901 was it significant. The effects of the 1905 and 1913 conferences may be poorly estimated because the primary objective of the later meetings was to harmonize the dimensions of existing labor regulation, as most countries had some laws on the books by this period.

There were substantial costs involved in negotiating multiparty agreements and all states, even those which could easily meet the criteria set out, were wary of the diktats of a transnational body. States had little reason to ratify IALL conventions because the penalty or reward for doing so was small. After 1900, states negotiated bilateral labor accords which, as we previously described, ensured reciprocal commitments to level the playing field. The accords gave policymakers greater control over the reform agenda. Moreover, because accords were linked to market access, states had a motive to promote and abide by them. The intuition was clearly laid out by the German Minister of the Interior in parliamentary discussion on Imperial commercial social and policy in 1902. Since import tariffs had reduced the purchasing power of workers, the degree of further commercial protection available to manufacturers was limited. Better to persuade commercial rivals to raise levels of social protection. “If we and our neighbors agree to common charges for worker protection, we will be able to lower our commercial duties. We should consider rivals which raise their levels of protection favorably.”⁵⁴ Exploiting strategically its higher tariffs, Germany exchanged increased access in its own market for greater labor protection abroad.⁵⁵ Germany had come to reject Bismarck’s formulation of a “Chinese wall” in defense of social policy; instead, labor regulations and economic integration were now perceived

⁵⁴ Our translation. Cited in Métin, *Traités ouvriers*, pp. 152-53.

⁵⁵ In the Cobden-Chevalier era, Lampe (“Nineteenth Century Bilateralism”) found that high-tariff states were more likely to cooperate than low-tariff jurisdictions. Pahre (*Politics and Trade*, pp. 204-46) reported that smaller countries in the decades before 1914 were less cooperative and MFN treaties more stable if foreign tariffs were initially high.

as complements. In terms of the baseline model, the reduction in tariffs would lead to lower trade costs and higher likelihood of convergence.

The French-Italian labor treaty of 1904 represented an attempt by one trading partner to persuade a laggard to level the playing field in exchange for greater market access.⁵⁶ France and Italy had engaged in a trade war that began in 1886 and effectively lasted into the early 1900s. The war was especially hard on Italy because of its dependence on France for its exports of specialty goods.⁵⁷ While Italian silk was a relatively standardized item and producers readily found markets in Switzerland, its specialty wine producers were less fortunate and they had to dump their stock.⁵⁸ As part of the agreement ending the trade war, France demanded that Italy raise its labor standards to international norms, thus guaranteeing its producers greater market access. In exchange, France agreed to give Italian migrant workers the same level of benefits French workers received. It also enticed its trading partner by removing some commercial duties on Italian imports. Italy was not opposed to the French initiative. Its history of labor legislation was recent and, because the percentage of the population eligible to vote was low, the liberal government could exploit the French initiative to go around vested interests opposing reform.⁵⁹ The net result was that labor costs increased relatively more in Italy. After the accord, French exports to Italy rose by 61 percent; Italian exports to France by about 20 percent.⁶⁰

The strategy of linking regulation and market access was generalized across Europe. The French-Italian arrangement, which even dispassionate observers like the U.S. Department of

⁵⁶ On the French-Italian labor accord, see Fontaine, "Review"; Lowe, *International Protection*, pp. 180-84; Métin, *Traités ouvriers*, pp. 49-59. The agreement is reprinted in Chatelain, *Protection internationale*, pp. 176-92.

⁵⁷ In 1887, Italian exports to France were 40 percent of its total exports; French exports to Italy were less than 6 percent of its total. In the ten-year period after 1887, Italian exports to France fell by 57 percent, and those of France to Italy by 21 percent. Connybeare, *Trade Wars*, p. 185.

⁵⁸ Lazer, "Free Trade," p. 453.

⁵⁹ Earlier in the decade, the Italian (liberal) Prime Minister Giovanni Giolitti had invited socialists into his cabinet. In the years before the accord, the minimum working age was raised to 12 years, and the employment of women on night shifts was restricted to 12 hours, but Giolitti hesitated against making further improvements. Workers were underrepresented in Parliament, universal suffrage being granted only in 1911 (Coppa, *Planning in Italy*, pp. 162-65).

⁶⁰ Trade statistics from *Annuaire statistique*, various years.

Labor viewed as groundbreaking, served as a model for the French-Belgian (1906) accord, and Germany's treaties with Italy (1904) and Austria-Hungary (1905).⁶¹ For the time period 1902-1913 we estimate the short and long run effects of the bilateral treaties (from Table 4) on trade between pairs of European countries (a and b) with the regression:

$$\text{Trade costs}_{ab} = 0.0008 + 0.9248\text{trade costs}_{ab(t-1)} - 0.0066\text{labor treaty}_{ab}$$

(0.0138) (0.0182)** (0.0029)*

+ controls (tariffs, common border, distance between capitals, year dummies),

N = 1868 F(18, 179) = 2265.4 R-squared = 0.96.⁶²

The short run effect is the coefficient on labor treaty, -0.0066, significant at the 2 percent level. The long run effect is calculated as $-0.0066/(1-0.9248) = -0.089$, or a 9 percent decline in trade costs (p-value 0.02). With an elasticity of substitution between foreign and home goods of 11, the point estimate amounts to a rise of bilateral exports of 35 percent for each partner.⁶³ Lampe's observation that the interaction of "trade-creation considerations and strategically oriented political economy forces" lay behind the diffusion of MFN agreements appears applicable to the spread of labor accords. Countries had an incentive to consent to converge on labor standards, because they did not wish to forsake the gains from trade.

In unreported regressions, we estimate that the negotiation of a labor treaty after 1900 reduced trade costs by nine percent. Countries had an incentive to converge on labor standards because they did not wish to forsake the gains from trade.

⁶¹ U.S. Commissioner of Labor, *Twenty-fourth Report*, pp. 24-27; Lowe, *International Protection*, pp. 195, 200; Chatelain, *Protection internationale*, pp. 194-200, 213-15.

⁶² OLS regression; robust standard errors clustered at the country pair level are in parentheses; * indicates significance at the 5 percent level; ** significance at the 1 percent level. Tariffs and distance between capitals are positive and significant; common border and year dummies are negative and significant.

⁶³ Calculated as $(1-\rho)\{\ln(1+0.91\tau^{\rho})-\ln(1+\tau^{\rho})\}$, where τ^{ρ} , the average trade cost in the sample in the year before a trade treaty was signed, equals 0.52, and ρ , the elasticity of substitution, equals 11. The expression is derived from a gravity model of trade. See Jacks, Meissner, and Novy "Trade Booms, Trade Busts and Trade Costs."

WERE ALL LABOR STANDARDS EQUAL?

In this section, we extend our analysis and examine the type of legislation countries adopted in response to the entanglement of domestic and foreign pressures. Consider the likelihood that country A had the choice between high and low-cost standards, defined by the relative incidence of legislation on firms' bottom line. On the domestic front, high-cost standards may have gained politicians a large and loyal constituency, but could have been perceived to do damage to the competitiveness of the economy. An alternative was to adopt policies having more symbolic than real effects. Now consider the 'open political economy' aspects of the decision. Country B might demand that A adopt a high-cost standard like its own. Could A have gotten away with regulation imposing lower costs? It might have if it could have convinced its partner that adoption of low-cost standards, appropriate to its own level of development and size and wealth, was a prelude of tougher regulation. Country B may have not been entirely satisfied, but it at least had something to show its own constituents who may have been behind targeting A in the first place. In this way, even piecemeal regulation could have acted as gateway standards.⁶⁴

The Berne meeting of the IALL in 1905 distinguished between types of labor standards.⁶⁵ Delegates considered limits on the working hours of women and children as high cost. According to one observer, 1.4 million women in Europe would be affected by a curb on night work, benefiting, on average, from a shorter workday of 2.5 hours.⁶⁶ Factory inspection laws were deemed low cost, as determined by the number of inspectors states had actually hired, and so was accident compensation whose burden was shared by workers, firms, and governments (Table 2).

⁶⁴ Rodrik (*One Economics*, p. 228) claimed a similar process was behind the rise in labor regulation after 1945.

⁶⁵ For a summary, see Mahaim, "La conference de Berne," pp. 14-15.

⁶⁶ Assuming women comprised 60 percent of the labor force in textiles, the reduction of labor input in the industry would have been in the order of about 10 percent. This is a lower bound estimate. Men may have reduced their hours alongside women since their work was complementary. The 60 percent figure is for the U.K. from Boot and MainDonald, "New Estimates"; hours from Huberman, "Working Hours."

We employ a multinomial logit approach to study the possibility that the determinants of convergence varied with the type of labor standard adopted (Table 6). We create three categories to capture country A's potential responses. Category 0 represents the outcome where there was no convergence between countries A and B. Category 1 designates that country A adopted limits on women and children's work (restrictions on women's maximum hours and prohibition of night work, and minimum age laws for children) to emulate B's corresponding legislation. The third category (effectively category 2) indicates that country A adopted factory inspection or accident compensation when B had these policies in place. For this purpose, our sample of 2,884 country-pair years, contains 90 instances of emulation in category 1, and 151 in category 2. The list of explanatory variables is identical to the short baseline in Table 5, but we now include two indicators for lagged values of convergence. The first indicates the number of category 1 standards shared in the previous year; the other indicates the number of category 2 standards shared.

For category 1, the key determinants of policy convergence in Table 6, column 1, are similar, but not identical, to previous results. Domestic forces trumped external pressures in the adoption of costly regulation. As per capita GDP of country A rose, it was more likely to implement limits on women's and children's work and converge to country B. Size did not matter in the adoption of category 1 standards. Adoption was less likely the greater the degree of convergence already achieved. The lagged values of convergence in each category reveal evidence consistent with the dynamic proposed above. Countries may have acted sequentially, adopting one category of legislation before moving on to the other set as conditions became more

opportune. Emulation was more likely the higher the level of convergence in the opposite group of standards.⁶⁷

Strikingly, and in contrast to Table 5, the partial effect of trade integration for category 1 standards is not statistically significant. Trade pressures were less important for these types of standards. And there was no difference between Old and New Worlds. In a separate, but unreported multinomial estimation that included bilateral distance and a border dummy, these variables were also not statistically significant. Again, domestic forces overwhelmed external pressures in the adoption of costly regulation.

All standards were not alike. We find opposite results for policies that we perceive to have imposed a smaller shock on an economy's cost structure. There are significant differences in the determinants of convergence between high and low cost standards. Country A's GDP per capita (an increase in GDP for a fixed population) has the opposite sign from that for high cost standards in column 1. Richer countries were *less* likely to emulate less costly standards. Alternatively, poorer countries were *more* prone to emulate less costly standards. Proportional rises in GDP and population (or size) had no relation to convergence. Turnout in country A is no longer statistically significant. Similar to previous findings, the process of emulation was slower in the New World, although a higher voter turnout ratio accelerated the process. Regarding the time path in the diffusion of standards, the (unreported) period dummies for category 2 variables grow larger over time and are statistically significant, while none of the period dummies for category 1 are statistically important, though the point estimates of the average partial effects on the time dummies appear to fall over time.

Conspicuously, trade was a pathway of diffusion for less costly labor standards only. States did not mimic *holis bolis* the policy agenda of neighbors or trading partners, but were selective in

⁶⁷ In other (unreported) regressions, emulation was more likely if the country pair had similar per capita incomes.

their choice of policy based on internal and external constraints. Domestic and external forces were entangled. Countries more exposed to trade were predisposed to emulate, but only on low cost standards. The adoption of factory inspection and accident compensation satisfied the demands of the domestic reform movement, and of trading partners and their constituents, because they were the first step to more stringent and comprehensive legislation. Still, while states appeared to have been more cautious in adopting costly standards in the face of international competition, there is no evidence of a race to the bottom. If undercutting international competition mattered, then the partial effect on the trade cost variable should have been positive and statistically significant. Countries facing the stiffest international competition—where trade costs were low—would have been the least likely to emulate. However, greater integration did not lead to a lower likelihood of adopting labor standards present elsewhere, and European countries, in particular, raised levels of labor regulation in line with key trading partners while preserving some domestic independence in the sequence of policies adopted.

CONCLUSION AND IMPLICATIONS

Everywhere labor regulation was on the rise in the decades before 1914. The prevailing narrative views this episode as a chapter in national history. Since countries developed economically and politically on parallel trajectories, they consequently adopted comparable policies. But globalization mattered too. Countries were under strong pressure to emulate the labor standards of major trading partners, although this did not mean adopting identical laws. And since the process was uncoordinated, trade flows actually strengthened nationally regulatory standards.

Our findings lead to a neglected but straightforward explanation of the origins of social Europe and liberal America—and possibly why the divergence between the two has persisted over the last century. Intraindustry trade was greater in the Old World. The threat of market loss

was credible and enforceable against countries that failed to emulate the standards of partners. To avoid costly trade wars, policymakers negotiated bilateral labor treaties that exchanged market access for a level playing field. The New World exported undifferentiated products and countries were under no compulsion to adopt regulation of trading partners, the rise of labor legislation being predominately a local affair.

We have made a point of separating the determinants of adoption from the effects of regulation, studies of which have tended to find that new legal norms codified existing practice.⁶⁸ Why then did states feel compelled to adopt legislation? Politicians may have wished to demonstrate a concern for working people; social reformers may have wanted to curtail backsliding; employers may have thought otherwise. This paper points to an alternative explanation of the persistent and loud demands for legislation, despite its null effects. Foreign intervention, in conjunction with or in opposition to domestic interests, had a voice in the timetable of reform. But since the adoption of new laws was conditional on guarantees of market access, trade and labor regulation rose together. As incomes and employment expanded along with trade, a self-adjusting mechanism ensured that the effects of legislation were neutralized.

⁶⁸ See Fishback, "Progressive Era"; Moehling, "State Child."

APPENDIX

Labor Legislation

Table 1 gives the years countries adopted legislation, as opposed to when it came into effect. Wherever possible, we selected dates of introduction of laws or amendments to laws that came close to meeting standards of the Final Protocol of the International Conference on Labour in Factories and Mines held in Berlin in 1890. The Berlin meeting outlined a model labor code that was intended to be the basis of a late nineteenth century European social charter. The final Protocol recommended that children under 12 years of age be prohibited from factory work; the elimination of night work for young women; and a working day for women of 11 hours. In an attempt to be consistent, we relied on dates given in the proceedings of the International Association of Labour Legislation that gave detailed information for many of the countries in our sample. The IALL distinguished between dates of adoption and dates when the legislation came into effect.⁶⁹ Where the IALL did not provide information, we relied on official publications; when official reports gave conflicting years, we assumed that change occurred mid-way between the last two dates identified. In the case of accident compensation, we took dates from the comprehensive international *Report* prepared by the U.S. Commissioner of Labor. We have followed the *Report* and record that Russia adopted accident compensation in 1903.⁷⁰

For the Old World, we assume that legislation was standardized within national borders, although after the Franco-Prussian War, German manufacturers maintained that Alsatian firms had a competitive advantage because they were exempted from the stricter German labor code.⁷¹ For Switzerland, we take federal legislation. For Australia, we use the date the first state passed legislation meeting the Berlin standard; for Canada, when Quebec and Ontario achieved this level; for the U.S., we give two values: the first, when ten states passed comparable legislation, and the second in parenthesis, when the ten most populated states adopted comparable laws. In the case of Mexico, new labor law was passed in the wake of the revolution; we have followed labor historians and record adoption in 1913.⁷²

To be sure, other laws governing women's and children's work, and factory conditions could be included in Table 1. For other measures for which we have information there was correlation in the years of adoption with those in the table.⁷³ But some of the details of these measures (for instance, night work of children) varied greatly across countries. As Table 2 reports, we selected laws that had less dispersion in their various dimensions, although heterogeneity across countries cannot be ruled out.

The choice of dates for the U.S. merits discussion because of different histories of regulation at the state level. Despite its federal structure, Fishback claimed that the "geography of adoption showed that neighboring states were likely to adopt legislation with similar features within the same time frame."⁷⁴ Twenty-two states adopted accident compensation between 1911

⁶⁹ For instance, following the 1905 Berne conference Belgium agreed to restrict women's work to 11 hours, but delayed passage until 1909. Certain aspects of the law were only implemented in 1911. Lowe, *International Protection*, p. 126.

⁷⁰ U.S. Commissioner of Labor, *Twenty-fourth Report*, p. 4.

⁷¹ Hagemann, "Verien," p. 159.

⁷² Bortz, "Revolution," pp. 674-83.

⁷³ Huberman and Lewchuk, "European Integration"; for correlation across U.S. jurisdictions, see Fishback, Holmes, and Allen, "Lifting the Curse."

⁷⁴ Fishback, "Progressive Era," p. 302.

and 1914 alone.⁷⁵ For other regulations, legislation was most common in industrial northern states with the largest share of workers in manufacturing and import competing activities—key sectors in our analysis. As for dates of introduction, years recorded in Tables 1 approximate those reported by Commons and Andrews. For women’s hours, Common and Andrews gave 1908, the year when the Oregon ten-hour law for women was upheld, to mark the beginning of “enforceable hour limitation laws for women.”⁷⁶ Based on our procedure, we estimated that night work of women was introduced in 1913.

The list below gives sources consulted for Tables 1 and 2. To avoid duplication, other sources consulted in preparation of the tables and cited in the text appear in the full list of references to this paper.

Old World

- Bellom, M. *État actuel de la question des accidents du travail dans les différents pays*. Congrès International des Accidents du Travail, Rapports. Brussels: P. Weissenbruch, 1897.
- Brooke, Emma. 1898. *Factory Laws of European Countries*. London: Grant Richards, 1898.
- Droz, N. *État de la question des accidents du travail*. Congrès International des Accidents du Travail, Rapports, vol. 1. Paris, 1889.
- Fraser, Derek. *The Evolution of the British Welfare State*. Second edition. London: Macmillan, 1984.
- Goulart, Pedro and Arjun S. Bedi. “A History of Child Labour in Portugal.” Institute of Social Studies, working paper no. 448, 2007.
- International Association for Labour Legislation (IALL). *Report of the 4th General Meeting of the Committee of the IALL*. Geneva, September 26-29, 1906. London; Labour Representative Printing & Publishing, 1907.
- IALL. *First Comparative Report on the Administration of Labour Laws: Inspection in Europe*. London: P. S. King & Son, 1911.
- International Labour Office. ILO. *Factory Inspection: Historical Development and Present Organization in Certain Countries*. Geneva: ILO, 1923.
- ILO. “Some Problems of Factory Inspection.” *International Labor Review* 8 (December 1923): 789-810.
- ILO. *The Organisation of Labour Inspection in Industrial and Commercial Undertakings*. Geneva: ILO, 1939.
- Keeling, Frederick. *Child Labour in the United Kingdom*. London: P.S. King & Son, 1914.
- Price, George M. “Administration of Labor Laws and Factory Inspection in Certain European Countries.” *Monthly Labor Review* 16, no. 6 (1923): 1153-71.
- Rimlinger, Gaston. V. *Welfare Policy and Industrialization in Europe, America and Russia*. New York: Wiley, 1971.
- Silvestre, Javier. “Workplace Accidents and Early Safety Policies in Spain, 1900-32.” *Social History of Medicine* 21, no. 1 (2008): 67-86.
- United Kingdom. Parliamentary Papers. *International Conference on Labour*, vol. LXXIII, 1905.
- United States. Department of Labor. *Workmen’s Compensation Laws of the United States and Foreign Countries*. Bulletin of the U.S. Bureau of Labor Statistics, Department of Labor, no. 126, 1914.

⁷⁵ Fishback and Kantor, *Prelude*, p 58.

⁷⁶ Commons and Andrews, *Principles*, pp. 97-102. The citations are from pages 100, 102.

Villard, H.G. *Workmen's Accident Compensation and Insurance in Belgium, Norway, Sweden, Denmark and Italy*. New York, 1913.

New World

Argentina

Bonaudo, Marta and Elida Sonzogni. "To Populate and to Discipline: Labor Market Construction in the Province of Sante Fe, Argentina 1859-1890." *Latin America Perspectives* 26, no. 1 (1999): 65-91.

Guy, Donna J. 1981. "Women, Peonage, and Industrialization: Argentina 1810-1914." *Latin America Research Review* 16, no. 3 (1981): 65-89.

Pichetto, Juan Raul. "The Present State of Social Legislation in the Argentine Republic." *International Labour Review* 46 (1942): 385-99.

Australia

Castles, Francis G. *The Comparative History of Public Policy*. New York: Oxford University Press, 1989.

Clark, Victor. *The Labour Movement in Australasia; A Study in Social Democracy*. London, 1907.

Jones, Michael. *The Australian Welfare State: Evaluating Social Policy*. Sydney: Allen and Unwin, 1980.

Kewley, Thomas H. *Australia's Welfare State: The Development of Social Security Benefits*. Melbourne: Macmillan, 1969.

Platt, Desmond C. *Social Welfare, 1850-1950: Australia, Argentina, and Canada Compared*. Basingstoke, Hampshire: Macmillan, 1989.

Smith, Yvonne. *Taking Time: A Women's Historical Data Kit*. Melbourne: Union of Australian Women, 1988.

Canada

Government of Canada, Department of Labour. *Labour Legislation in Canada*. Ottawa, 1918.

MacDowell, Laurel Sefton, and Ian Radforth, eds. *Canadian Working Class History-Selected Readings*. Toronto: Canadian Scholars Press, 1992.

Rouillard, Jacques. *Les Travailleurs du Coton au Québec, 1900-1915*. Montréal: Les Presses de l'Université du Québec, 1974.

Mexico

Freer, Aurora Gómez-Galvarriato. *The Impact of the Revolution: Business and Labor in the Mexican Textile Industry, Orizaba, Veracruz 1900-1930*. Ph.D. diss., Harvard University, 2000.

United States

Abbott, Edith. *Women in Industry: A Study in American Economic History*. New York: D. Appleton, 1910.

Baker, Elizabeth Faulkner. *Protective Labour Legislation*. New York: Longmans, Green, 1925.

Commons, John R. *History of Labor in the United States*. New York: Macmillan, 1935.

Commons, John R., and John B. Andrews. *Principles of Labor Legislation*. Fourth edition. New York: Harper and Brothers Publishers, 1936

- Goldin, Claudia. *Understanding the Gender Gap: An Economic History of American Women*. New York: Oxford University Press, 1990.
- Jones, Ethel B. "State Legislation and Hours of Work in Manufacturing." *Southern Economic Journal* 41, no. 2 (1975): 602-12.
- United States. Department of Commerce. *Historical Statistics of the United States*. Washington D.C.: Government Printing Office, 1975.

Model and Robustness Checks

In Table A1 we present additional robustness checks of the baseline directed dyad event history analysis. In column 1 we use the Polity IV measure of competition of political participation (PARCOMP in the Polity IV manual) as an alternative to voter turnout.⁷⁷ This variable takes the values 0,1,2,3,4, or 5. A value of 0 implies no oppositional activity; 5 is associated with regular voluntary changes in power at the national level, without coercion or disruption. The results are in line with our previous findings. Political competition matters in the New, but not in the Old World.

Column 2 substitutes the ratio of bilateral trade (exports and imports) to GDP for the trade cost variable. Greater trade is positively associated with convergence. The point estimate is statistically significant at the 11 percent level. In this model the marginal effect of A's GDP becomes significant at the better than the 10 percent level, while the point estimate is close to that in other specifications.

To deal with the issue of missing pairs, we tested probit models using the country-year as the unit of observation, thereby allowing countries which had not already adopted a particular standard to be included.⁷⁸ To account for international effects, we added the standards of all trading partners divided by bilateral trade costs, summed across all countries in the sample. Most likely, this variable is plagued with measurement error since the functional form is arbitrary, a problem which underscores our choice of the directed dyad approach. It is not surprising that the probits give a small marginal impact of trading partners' labor standards, and whose sign is indefinite and with large standard errors. We find no consistent evidence on the impact of the turnout variable or GDP per capita which was only statistically significant for the probability of adoption of limits on women's working hours and night work. Levels of voter turnout (not interacted) are statistically significant for accident insurance and limits on women's night work. Like the convergence equation, the country-year event analysis has potential problems related to the spatial-correlation of error terms and endogeneity between a country's explanatory variables and neighbors' error terms.

We also estimated a Heckman selection model which allows for correlation between the error term in the convergence equation (converted from a logit to a probit) and the probability B had one or more standards and, hence, eligible to be included in the sample or not. We use the full list of variables from the baseline model, plus union density and agricultural share of country B, and the share of the population in country B over 65 as excluded determinants of the selection process.⁷⁹ The selection model cannot reject the null that there is no correlation between the error terms of the two equations (p-value 0.16). Results in the outcome equation are qualitatively in line with our baseline findings. Trade costs are still highly significant and country A's variables matter in the same way. However, the standard errors on country B's per capita income are larger than the baseline, making this variable not statistically significant. In other words, after controlling for sample selection, A's decision to converge is not based on the income per capita of B.

⁷⁷ Marshall and Jagers, *Polity IV Project*.

⁷⁸ Results for unreported regressions available upon request.

⁷⁹ In the bivariate probit model (N = 4,241) for which we have all the necessary covariates, 46.4 percent of countries had no standards to emulate.

REFERENCES

- Aidt, Toke S., Jaysari Dutta, and Elena Loukoianova. "Democracy Comes to Europe: Franchise Extension and Fiscal Outcomes 1830-1938." *European Economic Review*, no. 2 (2006): 249-83.
- Annuaire Statistique*. Various years. Paris.
- Bagwell, Kyle and Robert W. Staiger. "The WTO as a Mechanism for Securing Market Access Property Rights." *Journal of Economic Perspectives* 15, no. 3 (2001): 69-88.
- Boehmke, Frederick J. "Policy Emulation or Policy Convergence? Potential Ambiguities in the Dyadic Event History Approach to State Policy Emulation." Unpublished manuscript. University of Iowa, Department of Political Science, 2008.
- Boot, H.M., and J.H. MainDonald. "New Estimates of Age- and Sex-Specific Earnings and the Male-Female Earnings in the British Cotton Industry, 1833-1906." *Economic History Review* 61, no. 2 (2008): 380-408.
- Bortz, Jeffrey. "The Revolution, the Labor Regime and Conditions of Work in the Cotton Textile Industry in Mexico." *Journal of Latin American Studies* 32, no. 3 (2000): 671-703.
- Brown, Drusilla K. "Labor Standards: Where Do They Belong on the International Trade Agenda?" *Journal of Economic Perspectives* 15, no. 3 (2001): 89-112.
- Brown, John C. "Imperfect Competition and Anglo-German Trade Rivalry: Markets for Cotton textiles Before 1914." *Journal of Economic History* 55, no. 3 (1995): 494-527.
- Chatelain, L. *La protection internationale ouvrière*. Paris: Arthur Rousseau, 1908.
- Conybeare, John A.C. *Trade Wars: The Theory and Practice of International Commercial Rivalry*. New York: Columbia University Press, 1987.
- Coppa, Frank J. *Planning, Protectionism, and Politics in Liberal Italy: Economics and Politics in the Giolittian Age*. Washington, D.C.: Catholic University of America Press, 1971.
- Davis, Christina L. *Food Fights Over Free Trade: How International Institutions Promote Agricultural Trade Liberalization*. Princeton: Princeton University Press, 2005.
- Drummond, Ian M. *Progress Without Planning: The Economic History of Ontario from Confederation to the Second World War*. Toronto: University of Toronto Press, 1987.
- Engerman, Stanley J. "The History and Political Economy of International Labor Standards." In *International Labor Standards: History, Theory, and Policy Options*, edited by Kasushik Basu, Henrik Horn, Lisa Roman, and Judith Shapiro, 9-83. Oxford: Blackwell, 2003.

- Findlay, Ronald and Kevin H. O'Rourke. *Power and Plenty: Trade, War, and the World Economy in the Second Millennium*. Princeton: Princeton University Press, 2007.
- Fishback, Price. "The Progressive Era." In *Government and the American Economy: A New History*, edited by Price Fishback et al., 288-322. Chicago: University of Chicago Press, 2007.
- Fishback, Price, Rebecca Holmes, and Samuel Allen. "Lifting the Curse of Dimensionality Measures of the States' Labor Legislation Climate in the United States During the Progressive Era." *Labor History* 50, no. 3 (2009): 313-46.
- Fishback, Price and Shawn Kantor. *A Prelude to the Welfare State: The Origins of Workers' Compensation*. Chicago: University of Chicago Press, 2000. À
- Follows, J.W. *Antecedents of the International Labour Organization*. Oxford: Oxford University Press, 1951.
- Fontaine, Arthur. "A Review of International Labour Legislation." In *Labour as an International Problem*, edited by E. John Solano, 161-97. London: Macmillan, 1920.
- Fuchs, Frieda. "Institutions, Values and Leadership in the Creation of the Welfare States: A Comparison of Protective Labor Legislation in Britain and France." Ph.D. diss., Harvard University, 2001.
- Greenhill, Brian, Layna Mosley, and Aseem Prakash. "Trade-based Diffusion of Labor Rights: A Panel Study, 1986-2002." *American Political Science Review* 103, no. 4 (2009): 669-90.
- Hacker, Jacob S., and Paul Pierson. "Business Power and Social Policy: Employers and the Formation of the American Welfare State." *Politics and Society* 30, no. 2 (2002): 277-325.
- Hagemann, Harold. "The Verein für Sozialpolitik: From Its Foundation Until World War I." In *The Spread of Political Economy and the Professionalisation of Economists*, edited by M. M. Augello and M. E. L. Guidi, 152-75. London: Routledge, 2001.
- Hall, Peter. "The Role of Interests, Institutions, and Ideas in the Comparative Political Economy of the Industrialized Nations." In *Comparative Politics: Rationality, Culture, and Structure*, edited by Mark Lichbach and Alan S. Zuckerman, 175-207. New York: Cambridge University Press, 1997.
- Hennock, E.P. *British Social Reform and German Precedents: The Case of Social Insurance 1880-1914*. Oxford: Oxford University Press, 1987.
- Hennock, E.P. *The Origin of the Welfare State in England and Germany, 1850-1914: Social Policies Compared*. Cambridge: Cambridge University Press, 2007.
- Huberman, Michael. "Working Hours of the World Unite? New International Evidence of Worktime, 1870-1913." *Journal of Economic History* 64, no. 4 (2004): 964-1001.

- Huberman, Michael and Wayne Lewchuk. "European Economic Integration and the Labour Compact, 1850-1913." *European Review of Economic History* 7, no. 1 (2003): 3-41.
- Humair, Cédric. *Développement économique et État central (1815-1914). Un siècle de politique douanière suisse au service des élites*. Bern: Lang, 2004.
- Irwin, Douglas A. "Multilateral and Bilateral Trade Policies in the World Trading System: An Historical Perspective. In *New Dimensions in Regional Integration*, edited by J. de Melo and A. Panagariya, 90-127. New York: Cambridge University Press, 1993.
- Jacks, David S., Christopher M. Meissner, and Dennis Novy. "Trade Costs, 1870–2000." *American Economic Review* 98, no. 2 (2008): 529-34.
- Jacks, David S., Christopher M. Meissner, and Dennis Novy. "Trade Costs in the First Wave of Globalization." *Explorations in Economic History* 47, no. x (2010):
- Jacks, David S., Christopher M. Meissner, and Dennis Novy. "Trade Booms, Trade Busts and Trade Costs." NBER Working Paper No. 15267, 2009.
- Jay, Raoul. *La limitation légale de la journée de travail en Suisse*. Paris: Larose, 1891.
- Jay, Raoul. *La protection légale des travailleurs. Premiers éléments de la législation ouvrière*. 2nd edition. Paris, Larose, 1910.
- Kertesz, Adolf. *Die Textilindustrie sämtlicher Staaten*. Braunschweig: F. Vieweg, 1917.
- Lake, David A. "Open Economy Politics: A Critical Review." *Review of International Organization* 4, no. 3 (2009): 219-44.
- Lampe, Markus. "Effects of Bilateralism and the MFN Clause on International Trade: Evidence for the Cobden-Chevalier Network." *Journal of Economic History* 69, no. 4 (2009): 1012-40.
- Lazer, David. "The Free Trade Epidemic of the 1860s and Other Outbreaks of Economic Discrimination." *World Politics* 51, no. 4 (1999): 447-83.
- Lindert, Peter H. *Growing Public: Social Spending and Economic Growth Since the Eighteenth Century*. New York: Cambridge University Press, 2004.
- Lowe, Boutelle E. *The International Protection of Labor: International Labor Organization, History and Law*. New York: Macmillan, 1935.
- Maddison, Angus. *The World Economy: A Millennial Perspective*. Paris: OECD, 2001.
- Mahaim, Ernest. "La conférence de Berne concernant la protection ouvrière." *Revue économique internationale*, no. 1 (1905): 1-29.

- Marshall, Monty G. and Keith Jagers. *Polity IV Project: Political Regime Characteristics and Transitions, 1800-1999. Dataset Users' Manual*. Integrated Network for Societal Conflict Research (INSCR) and Center for International Development and Conflict Management (CIDCM). University of Maryland, College Park, Maryland, 1999.
- Messerlin, Patrick and Stephane Becuwe, "Intra-Industry Trade in the Long Run: The French Case, 1850-1913." In *Imperfect Competition and International Trade*, edited by David Greenway and P.K.M. Tharakan, 191-215. Atlantic Highlands, NJ: Humanities Press, 1986.
- Métin, Alfred. *Les traités ouvriers: Accords internationaux de prévoyance et de travail*. Paris: Armand Colin, 1908.
- Mitchell, Brian. *International Historical Statistics*. Fourth Edition. New York: Palgrave Macmillan, 2003.
- Moehling, Carolyn. "State Child Labor Laws and the Decline of Child Labor Law." *Explorations in Economic History* 36, no. 1 (1999): 72-106.
- Pahre, Robert. *Politics and Trade Cooperation in the Nineteenth Century. The 'Agreeable Customs' of 1815-1914*. Cambridge: Cambridge University Press, 2007.
- Putnam, Robert D. "Diplomacy and Domestic Politics: The Logic of Two-Level Games." *International Organization* 42, no. 3 (1988): 427-60.
- Rahikainen, Marjatta. "Child Labour Legislation in Nineteenth Century Finland." *Scandinavian Economic History Review* 49, no.1 (2001): 41-62.
- Rodgers, Daniel T. *Atlantic Crossings: Social Politics in a Progressive Age*. Cambridge, MA: Harvard University Press, 1998.
- Rodrik, Dani. *One Economics, Many Recipes: Globalization, Institutions, and Economic Growth*. Princeton: Princeton University Press, 2007.
- Sabel, Charles and Jonathan Zeitlin. "Historical Alternatives to Mass Production: Politics, Markets and Technology in Nineteenth-century Industrialization." *Past & Present* 108 (1985): 133-76.
- Saxonhouse, Gary and Gavin Wright. "Technological Evolution in Cotton Spinning, 1878-1933." In *The Fibre That Changed the World: The Cotton Industry in International Perspective, 1600-1990s*, edited by Douglas A. Farnie and David J. Jeremy, 129-52. Oxford: Oxford University Press, 2004.
- Shotwell, James T., ed. *The Origins of the International Labour Organization*. New York: Columbia University Press, 1934.
- Simmons, Beth A., Frank Dobbin, and Geoffrey Garrett, eds. *The Global Diffusion of Markets and Democracy*. New York: Cambridge University Press, 2008.

Trentmann, Frank. *Free Trade Nation: Commerce, Consumption, and Civil Society in Modern Britain*. Oxford: Oxford University Press, 2008.

U.S. Commissioner of Labor. *Twenty-fourth Annual Report of the Commissioner of Labor. Workmen's Insurance and Compensation Systems in Europe*. Vol.1 Washington, D.C.: GPO, 1911.

Van Daele, Jasmien. "Engineering Social Peace: Networks, Ideas, and the Founding of the International Labour Organization." *International Review of Social History* 50, no. 4 (2005): 435-66.

Vogel, David. *Trading Up: Consumer and Environmental Regulation in a Global Economy*. Cambridge, MA: Harvard University Press, 1995.

Volden, Craig. "States as Policy Laboratories: Emulating Success in the Children's Health Insurance Program." *American Journal of Political Science* 50, no. 2 (2006): 294-312.

Von Laue, Theodore H. "Factory Inspection Under the 'Witte System': 1892-1903." *American Slavic and East European Review* 19, no. 3 (1960): 347-62.

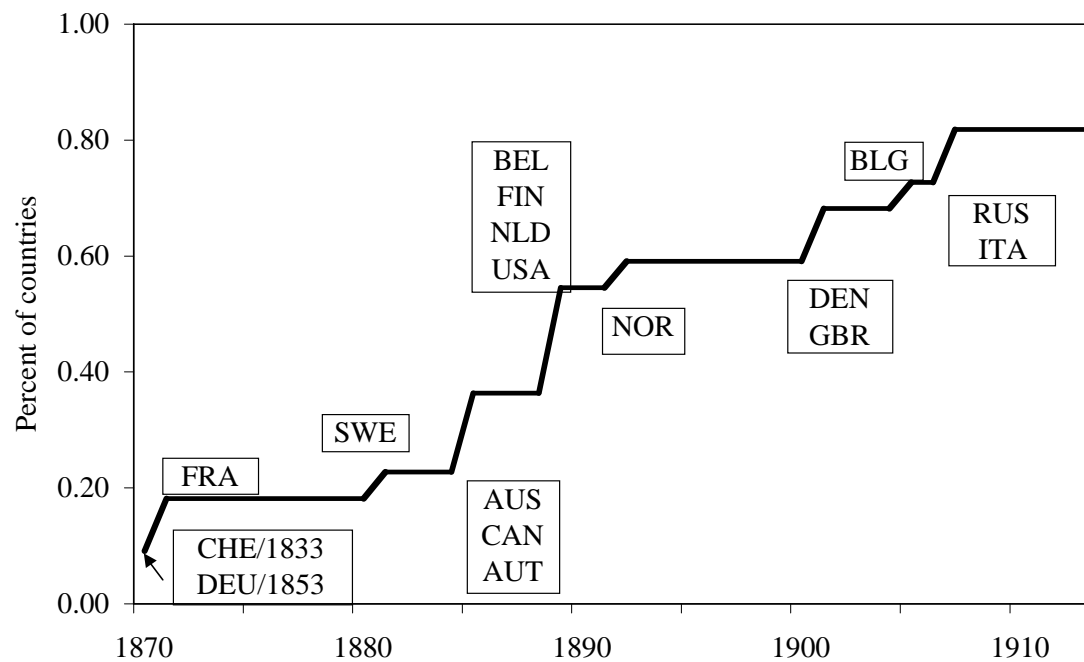


FIGURE 1
INTERNATIONAL DIFFUSION OF MINIMUM AGE LAW

Source: Years from Table 1.

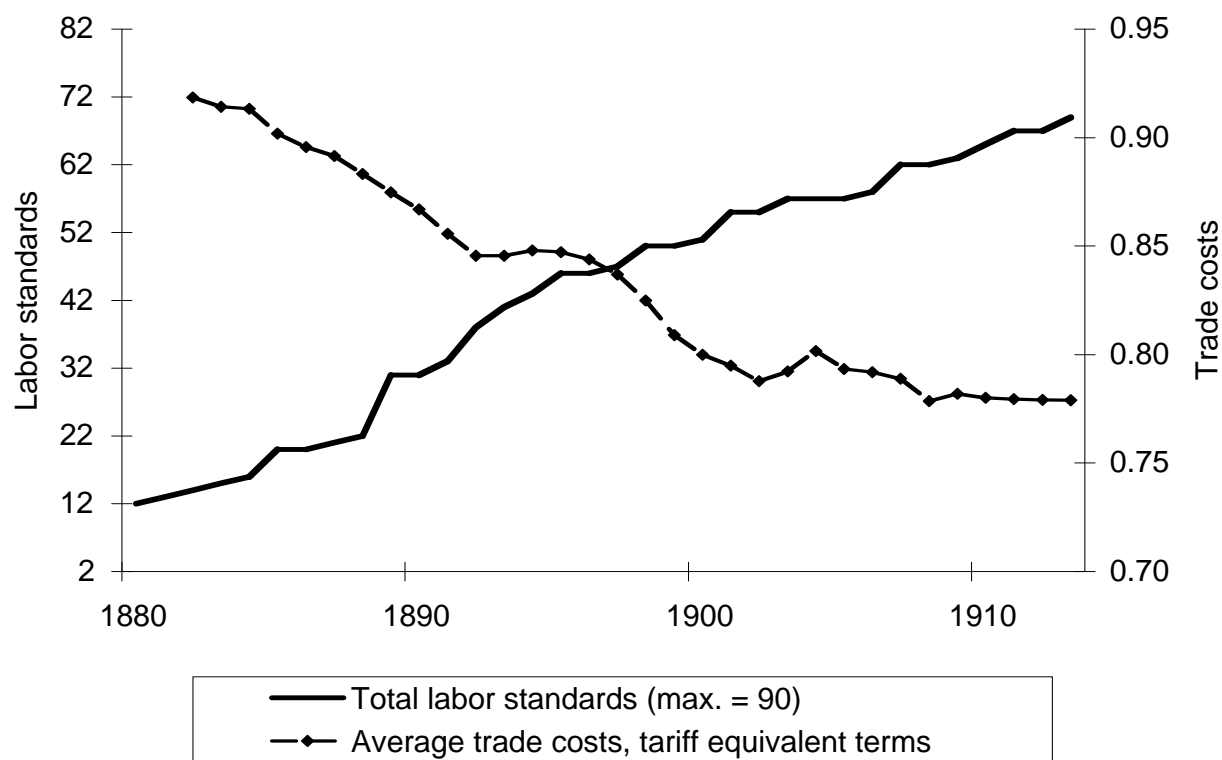


FIGURE 2
INTERNATIONAL DIFFUSION OF MINIMUM AGE LAW

Sources: Trade costs from Jacks, Meissner, and Novy, “Trade Costs, 1870–2000.” Labor standards from Table 1.

TABLE 1
LABOR MARKET REGULATION, GDP PER CAPITA, AND VOTER TURNOUT

	Introduction of Factory Inspection	Minimum Age 12	Night Work Women Prohibited	11 Hour Working Day Women	Accident Compen- sation	GDP Per Capita 1900	Voter Turnout 1890- 1900
Austria	1883	1885	1895	1895	1887	2882	0
Belgium	1889	1889	1909	*	1903	3731	.50
Bulgaria	1905	1905	1909	1913	1908	1223	0
Denmark	1873	1901	*	*	1898	3017	.33
Finland	1889	1889	*	*	1893	1668	0
France	1874	1871	1892	1892	1898	2876	.65
Germany	1853	1853	1891	1891	1884	2985	.80
Hungary	1893	1884	1909	*	1907	1682	-
Italy	1906	1907	1907	*	1898	1785	0
Netherlands	1895	1889	1889	1889	1901	3424	.25
Norway	1892	1892	1909	*	1894	1877	.30
Portugal	1893	*	1909	*	1913	1302	0
Russia	1882	1907	1905	*	1903	1237	0
Spain	1907	*	1909	*	1900	1789	0
Sweden	1889	1881	1909	*	1901	2561	.09
Switzerland	1877	1833	1894	1894	1911	3833	.72
United Kingdom	1833	1901	1844	1850	1897	4492	.36
Argentina	*	*	*	*	1915	2756	0
Australia	1885	1885	1896	1873	1914	4013	.46
Canada	1888	1885	1910	1910	*	2911	.61
Mexico	1913	*	*	*	*	1366	0
United States	1893 (1911)	1889 (1912)	1913 *	1892 *	1911 (1914)	4091	.35

Notes: * Indicates did not enact such a regulation. - Indicates information not available. GDP in 1990 international GK\$. Voter turnout measured as a percentage of electorate. Figures in parentheses record when ten most populous states adopted legislation.

Sources: See appendix; GDP: Maddison, *World Economy*; vote: Lindert, *Growing Public*, and Toke Aidt, personal communication.

TABLE 2
DIMENSIONS OF LABOR LEGISLATION

	Factory Inspection 1914		Night Rest for Women (hours)		Age Restriction Night Labor	Minimum Age (years)		Accident Comp. cost/wag es
	Inspectors	Workers (‘000) /Inspectors	1910	1919	Women (years) 1910	c1900	1919	(%) 1910
Austria	80	8.75	11	11	18	14	14	0.72
Belgium	33	12.12	8	11	21	12	14	3.10
Bulgaria			8	9			12	
Denmark	75	5.33			18	10	14	0.75
Finland	30	8.63		11				
France	121	6.61	9	11	18	13	13	2.10
Germany	279	10.75	9	11	18	13	14	1.08
Hungary	43		9	11	16	12	12	
Italy	29	51.72	9	11		9	12	1.95
Netherlands	92	4.35	10	11	16	12	13	
Norway	35	4.40	11	11	18	12	14	1.63
Portugal			8	11	21	10	12	
Russia	201	11.51	8	11	15	12	12	1.36
Spain	61	6.56	8	11	14	10	10	1.50
Sweden	45	4.44	11	11	18	12	13	1.21
Switzerland	20	5.00	10	11	18	14	13	
United Kingdom	206	12.14	12	12	all	11	14	0.73
Argentina							10	
Australia	50	6.72	12	12	18	14	14	
Canada	58	8.62	12	12	18	14	14	
Mexico							12	
United States	114	10.53			16	14	14	1.56

Notes: Australia is New South Wales; Canada is Ontario. Figures for U.S. for night work and age limits are the modal state values for the closest years to 1900, 1910, and 1919, Employers' cost for accident compensation as share of wage bill is average from year of adoption until 1911. U.S. figure is mean value for the first ten states that adopted compulsory accident insurance.

Sources: **Factory inspectors and numbers of workers:** ILO, *Factory Inspection*, and "Some Problems"; Price, "Administration"; Silvestre, "Workplace Accidents"; Mitchell, *Historical Statistics*; figure for U.S. is for Pennsylvania and employment of gainful workers from U.S.

Historical Statistics, D26-28, p. 130. **Night rest for women, age restriction for women, and minimum age**: sources for Australia and Canada listed in the Appendix. U.S from Fishback, Holmes, and Allen, "Lifting the Curse," pp. 58-62; Engerman, "History and Political Economy," pp. 52-54; Goldin, *Understanding*, pp. 190-91, pp. 76-77; Moehling, "State Child Laws." All other countries from Brooke, *Tabulation*; Engerman, "History and Political Economy," pp. 12-22, 52-54; Fallows, *Antecedents*; Keeling, *Child Labour*. **Employer costs for accident compensation as share of wage bill**: U.S. Commissioner of Labor, *Twenty-fourth Report*; figure for U.S. is from Fishback and Kantor, *Prelude*, p. 58.

TABLE 3
 EXPORT AND IMPORT MARKETS IN 1913 FOR EUROPEAN MANUFACTURERS:
 COTTON TEXTILES, SILK, LACE, AND WOOLENS
 (millions of marks)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	Exports to Europe as share of country exports (%)	Exports to Europe as share of all items exported in Europe(%)
Exporter	Austria-Hungary	Belgium	France	Germany	Great Britain	Italy	Netherlands	Switzerland	Other Europe	Americas	Asia		
A-H		3.8	6.4	109.3	28.1	26.7	9.2	56.3	110.5	22.1	20.4	0.89	0.06
Belgium	16.9		186.8	256.9	141.7	25.6	38.7	3.2	68.6	40.7	10.9	0.93	0.13
France	12.0	330.5		166.2	462.4	91.7	11.5	122.2	58.4	312.3	64.8	0.77	0.21
Germany	197.3	45.8	64.2		275.3	56.3	90.7	100.5	138.7	266.7	83.2	0.73	0.17
GB	24.7	153.7	209.4	503.8		32.1	124.7	64.0	467.7	1076.6	1329.3	0.40	0.27
Italy	30.2	4.0	59.0	94.6	63.6		0.5	106.6	95.8	150.3	44.7	0.70	0.08
Netherlands	0.0	73.2	1.0	44.2	45.3	0.0		0.0	9.3	10.6	76.2	0.67	0.03
Switzerland	25.8	8.2	24.0	101.8	109.1	16.7	3.6		28.4	117.1	14.0	0.71	0.05
Country import share of all items imported in Europe (%)	0.06	0.11	0.10	0.21	0.20	0.04	0.05	0.07	0.16	=100%			=100%

Notes: All values in millions of German marks.

Source: Kertesz, *Textilindustrie*.

TABLE 4
BILATERAL LABOR ACCORDS

Year	Countries	Agreement	MFN
1870	Great Britain - Netherlands	Emigration of Indian labor to Surinam	
1871	Great Britain - Netherlands	Labor recruitment (Guinea) Emigration of Indian labor to French Colonies	1860/1873
1872	France - Great Britain		
1874	China - Peru	Commerce, navigation and emigration	
1877	China - Spain	Emigration of Chinese labor to Cuba	
1880	China - United States	Emmigration of Chinese labor to USA	
1882	Hawaii - Portugal	Commerce, navigation and emigration	
1882	Belgium - France	Saving funds Emmigration of Chinese labor to USA	
1894	China - United States		
1897	Belgium - France	Saving funds	
1899	Germany - Great Britain	Colonial labor	
1899	China - Mexico	Labor mobility	
1901	Great Britain - Portugal	Labor mobility between Transvaal and Mozambique	
1904	France - Italy	Comprehensive labor treaty	1898
1904	China - Great Britain	Chinese labor	
1904	Italy - Switzerland	Accident compensation	1904
1904	Germany - Italy	Accident compensation	1904/1906
1905	Austria - Germany	Accident compensation and labor legislation	1905
1905	Belgium - Luxembourg	Accident compensation	
1905	Germany - Luxembourg	Accident compensation	
1906	France - Italy	Saving funds	
1906	Belgium - France	Accident compensation Emigration from New Hebrides	1881 1907
1906	France - Great Britain		
1906	Germany - Sweden	Accident compensation	1906/1911
1906	Belgium - Luxembourg	Accident compensation	
1906	France - Italy	Accident compensation	
1906	France - Luxembourg	Accident compensation	
1907	Germany - Netherlands	Accident compensation	
1909	France - Great Britain	Accident compensation	
1909	Great Britain - Sweden	Accident compensation	
1909	Austria-Italy	Accident compensation	1903/1906
1910	Belgium - France	Accident compensation	
1910	France - Italy	Protection of young persons	
1910	France - Italy	Social insurance laws	
1910	France - Great Britain	Accident compensation	
1911	Germany - Sweden	Accident compensation	
1911	Denmark - France	Arbitration	

1912	Belgium - Germany	Accident compensation	
1912	Germany - Italy	Accident compensation	1904/1906
1912	Germany - Spain	Maritime accidents	
1913	Italy - United States	Accident compensation	1913
1913	Belgium - Germany	Accident compensation	
1913	France - Switzerland	Pensions	1906
1914	Germany - Netherlands	Accident compensation	

Source: Lowe, *International Protection*, and Pahre, commercial treaty data set.

TABLE 5
DETERMINANTS OF CONVERGENCE IN LABOR REGULATIONS FOR COUNTRY PAIRS, 1881-1913

	(1)	(2)	(3)	(4)	(5)	(6)
	Baseline	Short Baseline	Europe Only	New World Only	Country Fixed Effects	Attendance at IALL
<i>INTERNATIONAL FORCES</i>						
Trade costs	-0.04 [0.024]*	-0.057 [0.020]***	-0.067 [0.038]*	0.065 [0.066]	-0.627 [0.261]**	-0.051 [0.022]**
ln (GDP B)	-0.027 [0.018]	-0.033 [0.015]**	-0.039 [0.027]	0.004 [0.072]	-0.431 [0.174]**	-0.028 [0.017]*
ln (Population B)	0.022 [0.019]	0.027 [0.017]	0.035 [0.030]	0.011 [0.065]	0.364 [0.195]*	0.022 [0.017]
Turnout B	0.025 [0.018]	0.021 [0.018]	0.015 [0.028]	0.017 [0.042]	0.292 [0.178]	0.02 [0.018]
<i>DOMESTIC FORCES</i>						
ln (GDP A)	0.019 [0.024]	0.013 [0.014]	0.031 [0.020]	-0.038 [0.193]	-2.863 [2.748]	0.023 [0.021]
ln (Population A)	0.002 [0.026]	0.001 [0.015]	-0.019 [0.021]	0.088 [0.208]	3.345 [6.920]	-0.007 [0.023]
New World A	-0.123 [0.040]***	-0.153 [0.026]***	---	---	---	-0.141 [0.039]***
Turnout A	0.005 [0.013]	0.006 [0.013]	0 [0.016]	0.262 [0.135]*	-0.143 [0.843]	-0.011 [0.018]
New World A x turnout A	0.286 [0.063]***	0.273 [0.054]***	---	---	---	0.262 [0.063]***
Union density A	-0.003	---	---	---	---	---

Share of labor in agriculture A	[0.002]* -0.019	---	---	---	---	---
Share of population 65+ A	[0.080] 0.002	---	---	---	---	---
	[0.006]					

TABLE 3 continued

	(1)	(2)	(3)	(4)	(5)	(6)
Lagged level of similarity in labor standards	-0.01 [0.006]	-0.01 [0.005]*	-0.022 [0.009]***	0.034 [0.019]*	-0.27 [0.206]	-0.011 [0.006]*
<i>INTERNATIONAL FORCES: ROBUSTNESS CHECKS</i>						
Absolute value of ln (GDP per capita A) - ln (GDP per capita B)	-0.021 [0.016]	---	---	---	---	---
Absolute value of (turnout A) - (turnout B)	-0.007 [0.020]	---	---	---	---	---
log (Distance km. between capitals)	-0.015 [0.006]***	---	---	---	---	---
Shared border	-0.022 [0.011]*	---	---	---	---	---
Both A & B attended IALL in 1901	---	---	---	---	---	0.049 [0.026]*
Both A & B attended IALL in 1905	---	---	---	---	---	-0.016 [0.018]
Both A & B attended IALL in 1913	---	---	---	---	---	0.099 [0.060]*
Observations	2,875	2,875	1,661	375	2,704	2,875
Pseudo-R-Squared	0.05	0.05	0.04	0.2	0.05	0.05

* = Significant at 10 percent level.

** = Significant at 5 percent level.

*** = Significant at 1 percent level.

Notes: Standard errors in brackets clustered at the country pair level. Estimation is by maximum likelihood for a logit model. The dependent variable is 1 when there is convergence on any of five labor standards. Columns 1-4 and 6 report average marginal effects; column 5, logit coefficients. Quinquennial dummies are included but not reported.

Sources: Trade costs, distance, and border: Jacks, Meissner, and Novy, “Trade Costs, 1870–2000,” and “Trade Costs in First Wave”; GDP and population: Maddison, *World Economy*; agriculture and population shares: Lindert, *Growing Public*, and Mitchell, *Statistics*; vote turnout: Table 1; union density: Gerald Friedman, personal communication; IALL: Follows, *Antecedents*, and Shotwell, *Origins*.

TABLE 6
DETERMINANTS OF CONVERGENCE BY TYPE OF LABOR REGULATIONS

	(1) Convergence in Women's Night Work, Women's Max. Hours, Minimum Working Age for Children	(2) Convergence in Accident Compensation or Factory Inspection Laws
<i>INTERNATIONAL FORCES</i>		
Trade costs	0 [0.01]	-0.05 [0.01]***
ln (GDP B)	0.01 [0.01]	-0.04 [0.01]***
ln (Population B)	-0.01 [0.01]	0.04 [0.02]**
Turnout B	0.03 [0.01]***	0 [0.02]
<i>DOMESTIC FORCES</i>		
ln (GDP A)	0.03 [0.01]***	-0.03 [0.01]**
ln (Population A)	-0.03 [0.01]***	0.03 [0.01]***
New World A	-0.01 [0.01]	-0.19 [0.03]***
Turnout A	0.03 [0.01]***	-0.02 [0.01]
New World A x turnout A	0.03 [0.03]	0.29 [0.05]***
Lagged level of similarity in column 1 labor standards	-0.01 [0.00]*	0.02 [0.01]***
Lagged level of similarity in column 2 labor standards	0.02 [0.01]***	-0.08 [0.01]***
Observations		2884
Pseudo-R-Squared		0.10

* = Significant at 10 percent level.

** = Significant at 5 percent level.

*** = Significant at 1 percent level.

Notes: Standard errors in brackets clustered at the country pair level. Columns 1 and 2 report average marginal effects. Estimation is by maximum likelihood for a multinomial logit. The omitted category is no convergence. Quinquennial dummies are included but not reported.
Sources: Table 5.

TABLE A1
DETERMINANTS OF CONVERGENCE: ROBUSTNESS CHECKS

	(2) Political Competition	(3) Trade Share
<i>INTERNATIONAL FORCES</i>		
Trade costs	-0.04 [0.02]**	---
ln (GDP B)	-0.04 [0.02]**	-0.03 [0.02]**
ln (Population B)	0.03 [0.02]*	0.03 [0.02]
Turnout B	---	0.02 [0.02]
<i>DOMESTIC FORCES</i>		
ln (GDP A)	0.02 [0.02]	0.03 [0.01]*
ln (Population A)	0 [0.02]	-0.01 [0.01]
New World A	-0.2 [0.08]**	-0.15 [0.03]***
Turnout A	---	0.01 [0.01]
New World A x turnout A	---	0.24 [0.05]***
Lagged level of similarity in labor standards	-0.01 [0.01]	-0.01 [0.01]
<i>ROBUSTNESS CHECKS</i>		
Total trade/GDP country A	---	0.24 [0.16]
Competition of participation-- Polity IV in A	0 [0.00]	---
Competition of participation-- Polity IV in A x New World	0.05 [0.02]*	---
Competition of participation-- Polity IV in B	0 [0.00]	---
Observations	2,778	2,884
Pseudo-R-Squared	0.04	0.05

* = Significant at 10 percent level.

** = Significant at 5 percent level.

*** = Significant at 1percent level.

Notes: Standard errors in brackets clustered at the country pair level. Estimation is by maximum likelihood for a logit model. We report average marginal effects. The dependent variable is 1 when there is convergence on any of five labor standards. Quinquennial dummies are included but not reported.

Sources: Political competition: Marshall and Jagers, *Polity IV Project*. Other variables, see Table 5.