

LABOR STANDARDS AND INTERNATIONAL COMPETITIVE ADVANTAGE

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Do countries with low labor standards obtain inherent advantages in markets for international trade and investment? This question is at the heart of protracted debates about whether the trade benefits accorded members of the World Trade Organization (WTO) should be conditional on adherence to international labor standards developed by the International Labor Organization (ILO).

Contemporary discussions of the relationship between labor standards and trade policy reflect a conflict between two points of view. One camp sees the adoption of labor standards proposed by the ILO as an important mechanism for improving the condition of labor, particularly in developing countries, but at least implicitly acknowledges that such standards may raise production costs. This group therefore argues that countries that fail to adopt key labor standards acquire unfair international competitive advantage over countries that ratify the ILO standards and proposes WTO actions to curb purported advantages. A second camp contends that the implementation of such views could become a form of protectionism by robbing developing countries of their comparative

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advantage.¹ Politically, some industrialized countries subscribe to the first position. Most developing countries subscribe to the second.

The “unfair economic advantage” view presumes that (a) national political processes fail to correct market failures producing poor labor conditions, (b) ratification of ILO labor standards leads to improved labor conditions, and (c) improved conditions raise the cost of labor sufficiently to reduce international competitiveness. An alternative view of the political economy of international labor standards predicts that countries are most likely to ratify standards that they have already attained, so that the symbolic act of ratification has no implications for labor costs and international competitiveness. In fact, little is known about either the interaction between the “political” labor standards formulated by the ILO and actual labor conditions or their relationship to international trade and investment patterns.

This paper addresses these important empirical issues using a panel sample of about 100 countries at different stages of development for the period 1980-1999. After reviewing the nature of and ratification experience with ILO labor standards (Section I), the paper examines the determinants of labor conditions and tests for the impact of ratifying ILO standards (Section II). The estimation procedures recognize that the ratification of labor standards by a country is an endogenous political act. In particular, ratification is least costly for countries that have already attained those standards. This part of the paper finds that the ratification of ILO standards does not influence labor rights and conditions, but ratification is instead a function of labor conditions in a country. An effort to simulate the effects of exogenous (involuntary) standards also finds

¹ For insightful perspectives on the conceptual issues, see Bhagwati and Hudec (1996), Brown (2000), Fields (1995), Maskus (2000), OECD (1996), Srinivasan (1996), and Stern (1997).

no general influence of standards on labor conditions. In addition, the analysis finds that countries with an open trade policy or a large trade sector do not have inferior labor conditions, given their stage of development.

The empirical analysis then addresses the question of whether poor labor conditions and/or an absence of political labor standards produce low labor costs (Section III). About 90 percent of the international variation in real labor costs is associated with cross-country differences in labor productivity. To the extent that poor labor conditions contribute to low productivity, countries with poor labor conditions will be low wage countries. Yet the analysis finds neither direct nor indirect effects of ratification or other measures of labor standards on labor costs.

Section IV tests for connections between labor standards and trade and investment patterns. If ratification of ILO standards does not influence labor costs, the argument that nonratification provides a competitive advantage disappears. Nonetheless, the paper provides direct tests of the hypotheses that nonratification produces superior export performance or attracts more foreign direct investment (FDI). Consistent with the evidence for labor costs, ratification activity and other measures of labor standards are not significantly related to either exports or FDI. The analyses also find that countries with unusually low (high) wages (relative to productivity) do not have higher (lower) exports and FDI. On the other hand, free trade policies have a powerful positive influence on trade and investment flows. In summary, this analysis of a diverse cross-section of countries over the past 20 years finds no support for the key empirical propositions underlying the race-to-the-bottom arguments for tying labor standards to WTO trade policies.

I. “Political” Labor Standards

Debates over potential links between international labor standards and trade policy are remarkably brief about the interplay between a political act (the ratification of an ILO labor standard) and the actual condition of labor in a country. Indeed, the implicit assumption that the political act influences labor conditions appears unexamined. This section provides background on the “political labor standards” developed by the ILO and ratified by some member countries.²

Founded in 1919, the International Labour Organization is the only surviving major creation of the Treaty of Versailles, which created the League of Nations. In 1946, it became the first specialized agency of the United Nations and it remains the only UN agency in which worker and employer representatives participate as equal partners with governments. The preamble to the ILO anticipates modern race-to-the-bottom (RTTB) arguments in stating "the failure of any nation to adopt humane conditions of labour is an obstacle in the way of other nations which desire to improve the conditions in their own countries."³ The ILO pursues its mandate to promote “internationally recognized human and labor rights” by formulating “...international labour standards in the form of Conventions and Recommendations setting minimum standards of basic labour rights.”⁴

² Henceforth, references to “labor standards” pertain to the “political” standards (conventions) developed by the International Labor Organization.

³ <http://www.ilo.org/public/english/about/mandate.htm>

⁴ Ibid. The ILO also provides technical assistance and other services to employers' and workers' organizations.

By February 2002, the ILO had formulated 184 conventions pertaining to labor conditions ranging from the very general to the very particular.⁵ There are now 175 member countries, and the number of ratifications of operative conventions (existing at least ten years) ranges from a high of 160 (forced labor convention) to a low of one (wages, hours of work and manning (sea) convention). The most widely ratified conventions address general issues such as equal remuneration, the right to organize and bargain collectively, and employment discrimination, while the least frequently adopted address labor conditions for narrowly-defined worker groups. Conventions bind only member countries that ratify them, and even these countries may denounce previously ratified conventions after ten years from the date on which the Convention first takes effect.

The ILO, other international organizations and several external constituencies now emphasize eight so-called “fundamental” or “core” labor standards, which address issues of forced labor (conventions on forced labor (1930) and the abolition of forced labor (1957)), freedom of association (conventions on freedom of association and protection of right to organize (1948) and the right to organize and bargain collectively (1948)), discrimination (conventions on equal remuneration (1951) and discrimination in employment and occupation (1958)), and child labor (conventions on minimum age (1973) and worst forms of child labor (1999)). On their face, the ILO “core” conventions seek to establish worker rights rather than direct economic outcomes. (For example, the minimum age of employment convention leaves the determination of a specific minimum age to each country within parameters set by the convention.) That said, ratification of

⁵ In the former category are conventions on hours of work, workers’ compensation, forced labor, etc. Other conventions focus more narrowly on conditions in particular occupations and industries, such as seafarers,

most core conventions would influence labor market outcomes, if ratification altered labor market arrangements in member countries. By reducing labor supply, for example, abolition of forced labor and minimum age requirements should raise wages of some jobs. Similarly, legislation that facilitates collective bargaining is likely to produce changes in pay and working conditions in at least some sectors. Whether these impacts are appropriate at all stages of development has been part of the ongoing debate over labor standards and trade policy.

Ratification of the core conventions varies widely among member countries. As of February 2002, about one-third of the member countries have ratified all eight core conventions (with considerable ratification activity since 1998).⁶ The United States is one of four countries that have ratified only two fundamental conventions.⁷ Interestingly, while the U.S. has ratified conventions addressing child labor and forced labor, it has not ratified the four conventions addressing freedom of association and discrimination – two areas of human rights in which the country has strong domestic legislation. This observation signals much broader interpretive issues to which we shall return in later sections.

ILO enforcement resources consist of carrots, not sticks, and the costs incurred by countries that fail to ratify ILO conventions seem low. The ILO constitution permits the ILO to ask member countries to explain why they have not ratified particular conventions (Article 19), to report on the implementation of conventions that they have ratified (Article 22), and (since 1998) to report on efforts to address the principles of core labor

dockworkers, fishermen, and agriculture.

⁶ This group includes several eastern and western European countries as well as Botswana, the Central African Republic, Indonesia, Senegal, and Yemen.

⁷ The other countries in this category are Armenia, China, and Myanmar.

standards that have not been ratified. Compliance with reporting requirements is low. The ILO also provides technical and financial assistance to countries seeking to improve enforcement of ILO conventions.

Article 26 empowers the ILO to investigate noncompliance complaints. After an investigation and report of findings by a Commission of Inquiry, the ILO may only recommend changes in a member country's laws and practices. The ILO website observation that "[t]he complaints procedure has not been used often" seems well supported by the fact that there have been only 25 Article 26 complaints since 1960 (6 during the 1990s). If countries ignore ILO recommendations, ILO cannot impose direct sanctions, but Article 33 permits it to recommend that member countries take appropriate action.⁸ These features of ILO activities condition the empirical analysis of political labor standards and labor conditions (including labor rights) in Section II.

II. Ratification and Labor Conditions

Does ratification of "political" labor standards improve labor conditions? If ratification of ILO conventions leads to the passage and enforcement of national legislation that alters working conditions, international labor standards may improve the condition of labor. As the prior section clarifies, however, non-ratification of ILO conventions is virtually costless. In contrast, ratification of ILO conventions that require the passage and implementation of new domestic legislation to alter labor conditions can impose significant domestic economic and political costs on a country. Why would

⁸ Article 33 was only invoked once – against Burma in March 2000 regarding the use of forced labor. Six months after final approval of the action, no member countries had taken action against Burma. See Elliot 2001 and <http://www.ilo.org/public/english/sitemap.htm> (the ILO website) for more details on compliance issues.

countries commit to potentially costly domestic actions by ratifying ILO conventions, when the costs of non-ratification are low?

This political calculus implies that countries that ratify the standards are likely to be the countries for which ratification is least costly in terms of adjusting national legislation and institutions, notably member countries whose national legislation already provides protections that are at least as strong as those proposed in the ILO convention. In this scenario, the causality is reversed, with gains in human development leading and facilitating the ratification of political labor standards. Ratification is a purely symbolic act.

Any effort to determine the effects of ratifying ILO conventions on labor conditions must disentangle the opposing directions of causality in these two scenarios. The empirical work reported in the rest of this section addresses this issue by studying the determinants of (1) ratification behavior and (2) labor rights and conditions. These two relationships are summarized by the following two-equation system:

$$(1) \text{ RATIFY} = f(\text{LABCOND}, \text{OPENNESS}, \text{X})$$

$$(2) \text{ LABCOND} = g(\text{RATIFY}, \text{OPENNESS}, \text{Z})$$

Equation (1) summarizes the ideas that the ratification of ILO conventions depends on (a) domestic costs of ratification (i.e., the hypothesis that ratification is positively related to the current level of labor conditions, LABCOND), (b) the openness of the economy to international trade (more open economies may be more reluctant to ratify ILO conventions if they believe that ratification raises labor costs), and (c) a vector of variables, X, capturing the prevailing cultural values and norms of a country. These variables, which include measures of include the dominant religion in the country and the

nature of the legal system, go to the question of why different countries might choose different labor conditions for themselves.

Studies of the effect of religious institutions on economic development emphasize that the Muslim and Catholic religions were historically opposed to institutions that facilitated economic development (Landes 1998, LaPorta et al 1999), while Protestantism fostered a strong work ethic (Weber 1958). More important for political expressions regarding workers rights and conditions, however, are shifts within the Catholic church which have produced papal encyclicals supportive of workers rights since at least the 1930s as well as a general support for democratization since the 1960s (Huntington 1968). Legal institutions, on the other hand, mediate the relative power of the state and the individual. At one extreme, socialist systems accord the state a dominant role in the ownership of property and control of resource allocation. At the other extreme, common law systems place dominant emphasis on the private rights of individuals and take a more skeptical stance toward the role of the state. Civil law systems take an intermediate position. These characterizations hint at the attractiveness of legal systems as an institutional influence on levels of economic development (LaPorta et al 1999). The influence of legal systems on labor standards is less well defined. In respecting the private rights of individuals, common law systems may weight private ownership rights highly and resist government intervention favoring labor standards (relative to other legal systems).⁹ On the other hand, socialist systems are presumably reluctant to accord rights that would interfere with the state's resource allocation and rent-extraction activities.

Equation (2) summarizes the ideas that actual labor conditions depend on (a) the ratification of ILO conventions (RATIFY), (b) international trade or trade policy

(OPENNESS), and (c) nonpolicy determinants of labor conditions, Z. The hypothesis that the political act of ratifying ILO conventions improves actual labor rights and conditions has been discussed above and predicts a significantly positive influence of RATIFY on LABCOND. Some proponents of tying labor standards to trade policy also claim that labor conditions deteriorate with globalization. Equation (2) includes the OPENNESS variables to test this hypothesis. Addressing these policy questions requires a model that holds constant factors that determine labor conditions in the absence of international trade or labor standards. An obvious candidate for Z is the level of economic development (per capita income). Higher per capita income permits the allocation of increasing amounts of time to nonmarket activities (e.g., shifting children from employment to schooling) and also permits better diets, health care and other activities contributing to longer life expectancy. Moreover, higher income societies can “afford” to limit workplace externalities, e.g., by regulating workplace health and safety.

The regression analyses of equations (1) and (2) is conducted on data for about 100 countries in 1980 and 1990.¹⁰ Measures of both the number of noncore ILO conventions (NONCORE LS) and the number of core ILO conventions (CORE LS) ratified by a country alternately appear as measures of RATIFY. The list of variables that might be used as proxies for labor conditions (LABCOND) is potentially large, but practically limited by availability of data for a broad sample of countries.¹¹ This analysis uses measures of child labor, civil liberties, and the health of the work force (which should capture the consequences of alternative but less available measures of labor

⁹ The common law doctrine of employment at will provides an example.

¹⁰ Exact sample sizes vary with the availability of data for different variables. Sources and descriptions for all variables in the study appear in Appendix A.

conditions, such as hours of work, and workplace safety). Wage levels are analyzed separately in the next section. The labor force participation of 10-14 year old children provides a measure of the extent of child labor (CHILDLAB) in a country, while civil liberties (CIVLIB) are measured by an index ranging from 1 to 7, with a score of 1 indicating the most liberties.¹² These two variables appear directly relevant to the core labor standards addressing child labor and freedom of association rights. Life expectancy at birth (LIFEEXP) provides a measure of health status.

The regression analyses test three measures of the international openness (OPENNESS) of an economy. EXPORT and TRADE respectively represent the shares of exports and exports plus imports in GDP. OPEN is a dummy variable taking the value 1 if a country is open and zero if it is closed. A country is closed if any of the following holds: Non-tariff barriers cover 40 percent or more of trade, the average tariff rate equals or exceeds 40 percent, the “black market premium” equals or exceeds 20 percent, a socialist economic system, a state monopoly on major exports.¹³ The remaining explanatory variables in the ratifications regressions seek to capture the prevailing cultural values that would influence a country’s ratification process. Following La Porta et al (1999) and Chau and Kanbur (2001), the analysis tests for the effect of a country’s legal system on ratifications with a set of dummy variables for British common law (the

¹¹ Information on weekly hours of work is available only for a small number of mostly industrialized countries, for example.

¹² The source is <http://www.freedomhouse.org/ratings/index.htm>. In determining the value of CIVLIB for each country, Freedom House evaluates the strength of most rights addressed in the ILO core conventions, including the presence of free trade unions and effective collective bargaining, freedom of choice of employment, equality of opportunity and gender equality. The index also reflects evaluations of the freedom of press, religious freedom, independence of the judiciary, etc. The index is based on actual practice rather than constitutional guarantees.

¹³ Romain Wacziarg (2001) constructed this variable from liberalization dates in Sachs and Warner (1995). The black market premium is defined as the difference between the black market exchange rate and the official exchange rate, divided by the official rate.

omitted reference category in the regressions), French civil law, German civil law, Scandinavian civil law, and socialist law. A vector of dummy variables taking the value one for the religion of the majority of a country's population and zero otherwise tests for the effects of religious values on the ratification process.¹⁴

Analysis of Ratification Behavior

Tables 1 and 2 report the three-stage least squares (3SLS) results of cross-country regressions of NONCORE LS and CORE LS on the variables discussed above.¹⁵ Two considerations govern the application of 3SLS. As discussed earlier, causality could in principle run from ratifications to labor conditions (exogenous ratifications) or from labor conditions to ratifications (endogenous ratifications). Equations (1) and (2), which capture this joint dependency, should be estimated as a simultaneous system to sort out the direction-of-influence question. Secondly, ratifications of core and noncore labor standards measure a country's effective legal labor standards with error. Identification of the countries that have ratified an unusually high or unusually low number of core labor standards (given their economic and social characteristics) highlights this issue. Relative to predicted numbers of ratifications, the Central African Republic, Ghana, Honduras, Niger, and Zambia have ratified the most core standards, while Botswana, El Salvador, Gambia and the United States have ratified the least.¹⁶ Some countries may ratify a labor standard but fail to pass and enforce supportive national legislation, while other countries with domestic policies that meet or exceed ILO conventions may not ratify them because of technical inconsistencies between domestic legislation and the conventions. By

¹⁴ The reference category in the analysis is Confucian/Buddhist/Zen.

¹⁵ All tables of regression results report heteroskedasticity-robust standard errors estimated using the Huber/White estimator of the variance.

instrumenting the ratifications variables, 3SLS estimation provides an approach to correcting the measurement error and estimating the impact of effective labor standards on labor conditions.

The first three regressions in Table 1 analyze the relationship between the three measures of labor conditions and noncore ratifications as of 1980. Each indicator of labor conditions is statistically significant, with signs supporting the view that countries ratify standards that they have already attained. (Recall that lower values of CHILDLAB and CIVLIB signify superior conditions.) Of the measures of openness to trade, trial regressions indicated that the overall TRADE measure is superior to EXPORT and OPEN. Since the (unreported) coefficient on EXPORT is measured much less precisely, the combined results imply that domestic, import-competing industries have a stronger influence than export industries on ratification policy. Nonetheless, one should not make too much of this particular result. The strongest result implies that it would take a trade-to-GDP ratio difference of 14 percentage points between countries to produce a difference of one ratification.

[TABLE 1 ABOUT HERE]

Turning to variables representing cultural influences on the ratification process, the results indicate that the religious makeup of a country can be an important influence on ratification. Relative to Confucian states, Muslim, Catholic and “other” (Jewish) countries ratify significantly more labor standards, and relative to the British common law system, countries with a Scandinavian civil law system ratify more ILO conventions,

¹⁶ Technically, the two sets of countries respectively have the highest and lowest residuals from regression 2 in Table 2.

ceteris paribus. Interestingly, ratifications are not significantly different in countries with socialist legal systems.¹⁷

Regressions (4) – (6) apply the same specifications to noncore ratifications in 1990. The results parallel the findings for 1980, except that the negative effect of trade on noncore ratifications is consistently significant, although still modest in impact. In summary, the regression analyses in Table 1 document the endogeneity of ratification activity. Existing labor conditions in a country as well as the size of the trade sector, the prevailing legal system and the dominant religion influence the ratification of ILO conventions.

Table 2 reports the results of a parallel analysis of the ratification of core labor standards. With only eight such standards, there is less variance to explain and the statistical results are somewhat less precise. Nonetheless, with the exception of the weaker results on the civil liberties variable, the results largely support the endogenous labor standards view that countries ratify core standards that they have already attained. Ratification of core labor standards also appears to be largely symbolic. Contrary to the results for noncore labor standards, countries with large TRADE sectors have not ratified fewer core standards. Religious and legal system variables remain influential.

[TABLE 2 ABOUT HERE]

Determinants of Labor Conditions

This section addresses two central empirical questions raised by proposals to tie labor standards to trade policy: (1) Does free trade worsen labor conditions? (2) Does the ratification of ILO conventions improve labor conditions? Tables 3 (1980) and 4 (1990) present 3SLS estimates of the following implementation of equation (2):

¹⁷ An index of democracy also did not produce a significant correlation.

$$(3) \text{ LABCOND} = c_0 + c_1 \text{ GDPCAP} + c_2 \text{ OPENNESS} + c_3 \text{ LS} + \varepsilon$$

The tables report separate results for child labor, civil liberties, and health (life expectancy). As expected, highly-developed countries have superior labor conditions. (A quadratic specification of GDPCAP provides a better fit in the child labor regressions and indicates a gradually diminishing relationship between economic development on the reduction of child labor.) Economic growth is clearly a powerful force for improving the condition of labor.

[TABLES 3 AND 4 ABOUT HERE]

Turning to the results for trade and labor standards, globalization skeptics expect $c_2 < 0$ and $c_3 > 0$ (and the reverse for the CIVLIB dependant variable).¹⁸ The results for the various OPENNESS variables effectively refute the RTTB view of the effect of trade policy on labor conditions. Health conditions and civil liberties are stronger, not weaker, in economies with more open trade policies. Moreover, these countries have less child labor.¹⁹ The size of a country's export sector relative to GDP has no statistically significant influence on labor conditions.²⁰ Finally, the 3SLS estimation indicates that with one exception, neither effective core nor noncore labor standards are significantly related to any of the measures of labor rights and conditions. (The exception is the anomalous finding that life expectancy is lower in countries that ratify many core labor

¹⁸ For quite different views of the potential effects of international labor standards on labor conditions, see Basu (2000) and Maskus (2000).

¹⁹ This finding is consistent with the results of a recent study of the effects of trade liberalization on child labor in Vietnam. Trade liberalization was followed by increases in the price of rice and other exports, which in turn were followed by a decline in child labor force participation and an increase in school enrollments among students of secondary school age. The authors conclude: "Overall, rice price increases can account for almost half of the decline in child labor that occurs in Vietnam in the 1990s." (Edmonds and Pavcnik 2002) .

²⁰ Unreported regressions found the same result after substituting TRADE for EXPORT.

standards.) The results for 1990 reported in Table 4 parallel these conclusions but the result for core labor standards and life expectancy is no longer statistically significant.

The statistical results reported in Tables 1 – 4 find no significant relationship between effective labor standards and labor conditions in a regime of voluntary ratification. Nevertheless, measures of freely chosen ratification behavior will not necessarily describe the impact of standards imposed by laws and regulations flowing from international agreements. Can one simulate the effects of involuntary, exogenous standards using data from a regime of voluntary standards? One proposal would use the country-specific residuals from a regression determining ratifications as a measure of such exogenous labor standards (Brown 2000). This variable measures the extent to which a country's ratifications depart from what one would on average expect based on the country's economic and cultural characteristics. International regulations could be a source of such departures. Regressions for each of the three measures of labor conditions were estimated, alternately using residuals from regressions explaining core and noncore ratifications for the RATIFY variable. None of the residuals attained statistical significance in these (unreported) regressions.

To summarize, this section addressed the question of whether ratification of ILO conventions produces improvements in labor conditions, as predicted by advocates of linking labor standards to trade policy, or whether labor conditions instead determine the ratification of political labor standards. The statistical analysis of ratifications and labor conditions found no evidence that ratifications of core or noncore labor standards lead to improvements in the condition of labor. On the other hand, there is strong evidence that countries with open trade policies have superior labor rights and health conditions and

less child labor. Those who propose imposing trade sanctions in an effort to induce adherence to ILO labor standards appear to be proposing a policy (trade sanctions) which is likely to reduce labor conditions) to induce compliance with labor standards that are not demonstrably effective in improving labor conditions.

Misunderstandings of the relationship between labor standards and labor conditions appear to rest on a failure to appreciate the endogeneity of labor standards. The statistical analysis does support the hypothesis that countries with superior labor conditions are more likely to ratify ILO conventions. The finding that ratifications are largely symbolic, reflecting previously attained labor conditions, undermines the RTTB view that ratifications raise labor costs. And if no linkage to labor costs exists, then nonratification should not produce superior export and foreign direct investment performance. A direct examination of these issues follows.

III. Labor Cost (Compensation) Analysis

The argument that countries with low labor standards have superior trade and FDI performance rests on the proposition that adherence to labor standards can place countries at a competitive disadvantage in international markets. Yet, elementary economic analysis predicts that labor productivity ultimately determines the equilibrium real compensation of workers. This section examines the extent to which cross-country productivity differentials explain international labor cost differences and tests for a relationship between measures of labor standards and wages.

Using cross-country panel data for the manufacturing sector, the analysis relates labor costs (total compensation) per worker to value added per worker and the average

price level of consumption in purchasing power parity (PPP) terms to capture cost-of-living differences not accounted for by the exchange rate conversion. The compensation measure is sufficiently broad to capture the cost of benefits required by legislation, although the effectiveness in capturing some elements of compensation may vary from country to country.²¹ The independent variable captures the effects on productivity of education, training, experience and other factors frequently specified in wage regressions on individual data, as well as unobservable influences. Data refer to workers of both sexes. The panel consists of five-year averages for 1980-84 (84 countries) and 1995-99 (51 countries).

Table 5, which provides descriptive data for the main variables for each of the time periods, confirms that the sample includes a wide range of development experience. In the early 1980s, compensation per worker in the lowest wage country (Kenya) was .5 percent of compensation in the highest wage country (the United States). How can a country whose manufacturing labor costs are over 180 times manufacturing wages in another country sell its products in international markets? A clue is provided by the 1980 productivity data, which show a virtually identical difference between the least productive country (again, Kenya) and the most productive country (the United States). The data for the late 1990s show even wider (but again, virtually identical) differences between the most-and least-productive countries. Table 5 also indicates that the

²¹ Total compensation “includes direct wages, salaries, and other remuneration paid directly by employers plus all contributions by employers to social security programs on behalf of their employees.” Both the compensation and productivity data are from surveys of relatively large establishments in the formal sector. “The data are converted into U.S. dollars using the average exchange rate for each year.” (World Bank, World Development Indicators, 2001, Table 2.5). The fixed effects estimation discussed below removes country-specific anomalies in the measurement of compensation.

ratification of both total and core ILO conventions varies widely and that no country has ratified all eight of the latter.²²

[TABLE 5 ABOUT HERE]

Tables 6 and 7 report for 1980-84 and 1995-99 respectively the results of cross-section regressions of period averages of labor costs (compensation) per employee on labor productivity and the price level (all specified as natural logarithms) as well as several measures of ratification of ILO conventions. Regression 1 in Tables 6 and 7 shows that cross-country variations in labor productivity and price levels account for 87-88 percent of the cross-country variation in labor compensation in both periods.²³ On average, a 10 percent productivity difference between countries is associated with an 8.5-9 percent difference in compensation per worker. Lesson number one is that cross-country differences in employee compensation are powerfully related to productivity differences.²⁴ Raising the relative productivity of the labor force is one reliable way to raise compensation. Lesson number two is that this relationship is quite stable over time. The relationship between labor costs, productivity and prices, its statistical significance and the ability of productivity variations to explain wage variations is virtually identical in the early 1980s and the late 1990s.

[TABLES 6 and 7 ABOUT HERE]

While productivity and price levels account for the vast majority of international wage variation, some scope remains for additional influence on compensation from

²² Interestingly, Kenya had ratified four core labor standards and 36 ILO conventions overall by 1980, while the United States had not ratified any core standards and only five conventions. As noted in the preceding section, ratifications of ILO conventions measure effective labor standards with error.

²³ The regression survives a specification test -- the Ramsey RESET test does not reject the hypothesis that the regression model has no omitted variables -- for 1980-84, but not the later period. Subsequent regressions pass this test unless otherwise noted.

domestic and international institutions. We now examine whether countries that fail to ratify ILO conventions have low wages relative to productivity. The analysis reported in the previous section indicates that ratification of ILO conventions may signal information about the condition of labor in a country not because ratification produces an improvement in the condition of labor but rather because countries with good labor conditions incur low ratification costs. This inference implies that ratification of ILO conventions should have no influence on labor costs, conditional on a country's productivity level.

Regression 2 tests for a relationship between the number of core labor standards (CORE LS) ratified by a country (as of the beginning of the estimation period) and compensation, conditional on productivity and the price level. Proposals to tie labor standards requirements to WTO benefits appear to rest on the proposition that this relationship is significantly positive, i.e., labor costs are lower in countries that do not ratify the core conventions. In contrast, the endogenous labor standards view predicts no relationship between compensation and ratifications (conditional on productivity and prices). For the early 1980s, the regression coefficient CORE LS is positive but not statistically significant; for the late 1990s, it is positive and statistically significant at the 10 percent level. Taken at face value, the coefficient implies an average compensation difference of nine percent per core labor standard ratified by the late 1990s. We shall return to the question of whether the result should be taken at face value.

Summary measures, such as CORE LS, place conventions addressing issues as varied as collective bargaining, discrimination, forced labor and child labor on an equal

²⁴ Golub (1997) and Rodrik (1996, 1999) obtain parallel results from smaller samples of countries and different time periods.

statistical footing, which is hard to defend. Moreover, if ratification forces a country to alter its domestic policies (contrary to the endogenous labor standards hypothesis) summary measures take no account of the length of time that a country has had since ratification to bring its legislation and enforcement into compliance. Regression 3 in Tables 6 and 7 tests for an influence of individual core labor standards on compensation. Since the eight core labor standards in fact address four areas -- child labor, freedom of association, forced labor and discrimination, these regressions relate compensation to dummy variables for one convention from each of the four areas – as well as the productivity and price levels.²⁵ For each time period, there is no significant correlation between compensation and ratification of any of the four core standards. Similarly, regression 4 shows no evidence that ratifications of the same core conventions gradually influence compensation over time.²⁶

Regression 5 tests for a relationship between the number of noncore ILO conventions (NONCORE LS) ratified by a country as of the beginning of the estimation period and compensation per worker, conditional on productivity and the price level. Taken at face value, the coefficient on ratifications is positive and statistically significant for both time periods. The coefficient implies that ratification of an additional convention is associated with higher compensation of about .5 (early 1980s) to .7 percent

²⁵ The four conventions are c98 (right to organize and bargain collectively), c111 (discrimination in equality of opportunity or conditions of employment on the basis of race, religion, gender, political opinion or social origin), c105 (abolition of forced labor), and c138 (minimum age of employment). The dummy variables take the value 1 if a country had ratified a convention by the beginning of the estimation period and zero otherwise.

²⁶ The variables, DC98, DC105, DC111 and DC138, specify the number of years between the ratification of the four core standards and the beginning of the period for which compensation and productivity are measured.

(late 1990s).²⁷ Consistent with the RTTB hypothesis, labor costs are positively correlated with total ratifications in both periods and with core ratifications in 1994-99. But can the cross-section results be accepted at face value?

There are two potential problems with the OLSQ analysis. First, cross-section analysis may not disentangle the question of whether ratification leads to higher wages or vice versa. The potential endogeneity of ratifications should be mitigated by the fact that the standards variables are defined as of the beginning of the estimation periods. If a problem remains, two stage least squares (2SLS) estimation can address it, but if ratifications are exogenous in the wage equation, OLSQ estimation is more efficient. To determine whether 2SLS is necessary, the Hausman (1978) test for endogeneity of independent variables was applied.²⁸ The Hausman test did not reject the hypothesis that coefficients obtained by the two estimation methods are the same. That is, by rejecting the endogeneity of CORE LS and NONCORE LS, the test supports the use of OLSQ over 2SLS.²⁹

Second, if unobserved country-specific factors are correlated with both wages and ratifications, the cross-section estimates of the relationship between ratifications and wages will be biased. The presence of unions or extensive domestic labor market regulation might produce both more ratifications and higher labor cost, for example. Fixed effect estimation effectively eliminates this potential source of bias by “differencing out” the country-specific effects that do not change over time. Moreover,

²⁷ Substituting actual minus predicted ratifications in an effort to capture the effect of involuntary ratifications did not produce statistically significant results.

²⁸ This test effectively tests for statistically significant differences between the OLSQ and 2SLS estimates. Drawing on the analysis in the (1) the majority religion and (2) the legal system of each country.

²⁹ As a further check on the potential endogeneity of labor standards in the wage equation, separate regressions of changes in the number of core ILO conventions and total conventions ratified between 1980

fixed-effects estimation will remove fixed, country-specific differences in the measurement and coverage of the compensation data. We therefore use the panel feature of the database to estimate a fixed effects model.³⁰

Regressions 6 and 7 in Table 7 provide fixed effects estimates of the relationship between compensation and ratifications. The fixed effects estimates confirm the significant relationships between productivity, price levels and compensation, but find no significant relationship between compensation and ratification measures.³¹ For this panel of 51 countries for which data are available for both time periods, there is no significant relationship between changes in the ratification of core or total labor standards and changes in compensation between the early 1980s and the late 1990s.³²

In conclusion, the statistical analyses reported in this section find a powerful relationship between a country's real labor costs and its productivity level. After holding the influence of productivity constant, however, the data reveal no significant relationship between ratification of either core or total ILO conventions, after addressing the issues of causality and potential bias through fixed effects estimation. This "non-result" is consistent with the view that countries tend to adopt labor standards that their domestic politics and policies have already met. Notwithstanding this conclusion, the remaining

and 1990 on the levels of the compensation and previous section, the instruments for CORE LS were dummy variables for productivity variables in the 1980-84 period found no significant results.

³⁰ On the other hand, random effects estimation seems inappropriate, because it is likely that the unobserved, country-specific fixed effects are correlated with explanatory variables. The possible endogeneity of labor standards implies that countries with unobservable (e.g., unspecified institutional) factors producing higher (lower) wages are more likely to ratify ILO conventions, for example. A similar argument may be made with respect to the productivity variable.

³¹ Notwithstanding the doubts expressed earlier, unreported random effect models were also computed. However, a specification test suggested by Hausman (1978) indicates that the random country-specific effects are correlated with the regressors, producing biased estimates of the latter.

³² Fixed effects rest on accurately measured changes in the policy variable over time. Since the official ILO website provides the ratifications data, mismeasurement seems unlikely. Between 1980 and 1995, 107 countries ratified at least one ILO convention and 37 countries ratified at least one core convention. The sample range is from zero to 33 ratifications.

analyses incorporate the possibility that ratifications or measures of actual labor rights and conditions in a country may influence wages. There is cross-section evidence that wages are high relative to productivity in more democratic countries (Rodrik 1999) and low relative to productivity in countries with significant child labor (Kucera 2001), for example. Subsequent sections include tests for the effects of unusually high or low wages (relative to productivity) on export and FDI performance.

IV. Do Labor Standards Suppress Exports and Foreign Direct Investment?

The previous sections have demonstrated that (a) the ratification of ILO conventions (political labor standards) is endogenous, with ratifications most likely in countries where the costs of ratification are lowest, (b) free trade is associated with higher, not lower, labor conditions and rights, (c) political labor standards are at best weakly related to labor conditions in a country, and (d) political labor standards do not influence labor costs. Result (d) would seem to undermine RTTB arguments that countries which do not ratify ILO conventions enjoy better export performance and attract more foreign direct investment (FDI), since this argument assumes relatively low labor costs accompany nonratification. Nonetheless, this section tests for links between ratifications and subsequent export and FDI performance. After establishing baseline models that explain international differences in export and FDI performance, we add measures of political labor standards to determine their effect in the context of the model.³³

³³ Earlier empirical studies of links between labor standards, exports and FDI (OECD (1996), Raynauld and Vidal (1998)) generally neglect the crucial role of other determinants. The study by Rodrik (1996) on a smaller sample of countries is an exception.

Exports and Labor Standards

Whether grouped by stage of development or region, countries showed little change in their shares of world exports over the 1980-99 period (UNCTAD 2000a, Table 1.9). Looking across countries, however, the ratio of exports to GDP ranges from 1.4 percent (Bangladesh) to 66 percent (Belgium) in the sample of about 80 countries that have data on all of the variables. These countries represent a sufficiently wide spread of development experience to offer a fair test of the RTTB hypothesis that ratification of ILO conventions puts countries at a competitive disadvantage in international trade.³⁴

The baseline model for explaining exports assumes that demand for a country's exports depends on the relative price of its exports, its sources of comparative advantage, and the costs of conducting trade (mainly transportation costs and the costs imposed by trade barriers). We estimate variants of the following regression model on the cross-country database.

$$\text{EXPORT} = a_0 + a_1 \text{TOT} + a_2 \text{LABLAND} + a_3 \text{HUMANK} + a_4 \text{TRCOST} + a_5 \text{OPEN} + e$$

The dependent variable, EXPORT is the ratio of exports to GDP in current international prices averaged over 1980-84 (Summers-Heston). TOT is the merchandise terms of trade shock defined as the difference in the growth rates of merchandise export and import prices over 1980-84 and is expected to have a negative influence on EXPORT.³⁵ We include two measures of comparative advantage. LABLAND, the population of a country divided by its area, provides a measure of labor intensity.

³⁴ Trade theory suggests an alternative mechanism, which (contrary to the RTTB view) rationalizes a positive correlation between labor standards and trade. Free trade leads a country to specialize in sectors of comparative advantage, a process that induces labor and other resources to move into sectors in which they are relatively productive internationally. The movement into relatively productive (higher wage) sectors should improve the condition of labor, thereby reducing the cost of ratifying ILO conventions.

³⁵ Romain Wacziarg (2001) calculated this variable from World Bank data.

HUMANK, the average schooling years in the population over 25 in 1980, provides a measure of the quality of the labor force. These are expected to be positively related to exports.

Proxies for transport costs (TRCOST) and measures of trade barriers represent trade costs. In the former category, the independent variables include DISTANCE, the average distance (in thousands of kilometers) to the capitals of the world's twenty major exporters weighted by value of bilateral imports (Lee), a zero-one dummy variable for whether a country is an ISLAND, and a dummy (LANDLOCK) taking the value one for landlocked countries. Trade policy is captured by the dummy variable, OPEN (defined in Section II).³⁶ Since more open countries should have more trade, we expect a positive coefficient on this variable.

Table 8 reports the regression results for 1980-84. The variables discussed above account for 63 percent of the international variance in export performance among the 80 sample countries (regression 1) and generally have the expected signs.³⁷ Increases in the terms of trade and larger distances from major markets reduce exports, while labor intensity and human capital investments raise exports. The coefficient on OPEN supports the idea that free trade raises exports, but is not statistically significant. As it happens, the performance of the trade policy variable is quite sensitive to the inclusion of HUMANK in the regression (regression 2). When the educational attainment variable is omitted, OPEN becomes statistically significant and indicates that the export/GDP ratio is 9.5 points higher in countries with free trade policies.

³⁶ Unreported export regressions included alternative trade policy measures, such as tariff rates and import duties as a percent of total imports, but these variables were available for a much smaller set of countries.

³⁷ The Ramsey RESET test rejects the hypothesis that these regression models have no omitted variables, however.

[TABLE 8 ABOUT HERE]

The next regressions add alternative measures of political labor standards to the baseline specification to test of an influence on subsequent export performance. The RTTB hypothesis predicts a significant inverse relationship between ratifications and export performance. Regressions 3 and 4 respectively add the number of ratifications of core (CORE LS) and noncore (NONCORE LS) ILO conventions as of the beginning of the estimation period to the baseline specification. Although each has a negative coefficient, the results are neither economically or statistically significant.³⁸ Indeed, they are the weakest variables in their respective regressions. **[WAGERES RESULTS??]**

The earlier analyses showed that actual labor conditions in a country influence ratification activity. From this perspective, deviations from the equilibrium relationship between labor conditions and ratifications may be more relevant to measure potential gains from nonratification (even though the wage analysis indicated no wage impact of such deviations). Consequently, regressions 5 and 6 include the residuals from earlier regressions determining ratification of core (CORERES) and total (NONCORES) labor standards respectively. The coefficients on these variables are also far from statistically significant.

In summary, the results of the regression analysis in Table 8 are not consistent with the RTTB hypothesis regarding the connection between ratification of ILO conventions and export performance. There is no evidence supporting the view that countries gain a competitive advantage by their ratification choices. Other factors, including international trade policies that emerge from GATT and later WTO

³⁸ When the ratifications variables are added to the specification in regression (2) of Table 8, the (unreported) regression coefficients are positive (contrary to the RTTB hypothesis) but not significant.

negotiations determine a country's export performance and as we saw in Section II, tend to improve labor conditions. Using trade policy to penalize countries who fail to ratify standards would be counterproductive.

Foreign Direct Investment

International capital flows increased through the late 19th century to the beginning of World War I. During this period, capital flows were dominantly unilateral, from capital-rich creditor countries, such as Great Britain, France and Germany, to less developed countries where capital was scarce and its marginal product was high. The interwar period saw a great diminution in global economic relationships, including a dramatic decline in capital flows. With post-WWII reductions in trade barriers, the return to flexible exchange rates in much of the world following the demise of the Bretton Woods system in 1972, and a subsequent relaxation of capital controls, international capital flows increased and during the 1990s regained the levels attained at the peak of the earlier period of globalization.

In modern times, the destination for international capital flows changed markedly. Capital-poor developing countries, which had received disproportionately large shares of global investment flows at the beginning of the 20th century, now receive disproportionately small shares. Paradoxically, most capital no longer flows toward the least developed nations where scarce capital presumably has a relatively high marginal product. Instead, "capital transactions seem to be mostly a rich-rich affair, a process of "diversification finance" rather than "development finance." (Obsfeld and Taylor 2001, p. 66)

International capital flows include both portfolio investment and foreign direct investment (FDI).³⁹ Portfolio investment flows are more important, but since 1970 when the International Monetary Fund began to publish regular comprehensive estimates of international capital flows, the share of FDI in world capital flows has increased from about 6 percent to over 30 percent in the last half of the 1990s (Lipsey 2001).⁴⁰

RTTB arguments hold that countries that fail to ratify political labor standards may gain abnormally large shares of world FDI. One difficulty faced by this argument is that most FDI flows, like total international capital flows, now occur between industrialized countries, which most frequently ratify ILO conventions (Table 9). During the 1990s, roughly 70 percent of gross FDI flows went to the developed countries, which were also the sources of almost 90 percent of gross FDI flows.⁴¹ Developing countries increased their share of world FDI during the 1990s, but never received more than a third of FDI inflows. Clearly, efforts to evade international labor standards cannot be the primary factor governing the international distribution of FDI.⁴²

[TABLE 9 ABOUT HERE]

³⁹ In the FDI statistics reported in IMF (2000) and UNCTAD (2000) foreign direct investment is defined as investment “involving a long-term relationship and reflecting a lasting interest and control of a resident entity in one economy (foreign direct investor or parent enterprise) in an enterprise resident of a different economy (FDI enterprise or affiliate enterprise or foreign affiliate).” In ordinary language, “[c]apital used by a firm in one country to establish a plant in another is labeled foreign direct investment, as are large purchases of equities that imply a lasting interest in an enterprise.” (U.S. President, 2002, p. 262) FDI consists of equity capital, reinvested earnings and intra-company loans and debt transactions. Negative FDI inflows (disinvestments) arise when “at least one of the three components of FDI ... is negative and not offset by positive amounts of the remaining components (UNCTAD 2000, p. 268).

⁴⁰ Froot (1991) points out that FDI really represents a cross-country spread of corporate control that may not involve actual capital flows or investment in capacity.

⁴¹ Although industrialized countries as a group are net exporters and developing countries are net importers of capital, there were four years during the 1990s in which the United States was a net importer of capital.

⁴² On a related point, a recent OECD study concluded “the evidence does not clearly point to any inexorable tendency toward global ‘bidding wars’ among governments in their competition to attract FDI,” but warned of a “permanent danger of such ‘wars’.” (Oman 2000, p. 10)

A second difficulty with the argument that FDI is attracted to countries with poor labor conditions follows from the analysis in section III: Poor labor conditions signal low skills as well as low wages, and not all investments thrive in a low-skill environment. Perhaps even more important is the fact that countries with low labor standards tend to be countries in which direct risks to investment are high. Cross-country correlations indicate that the risks of expropriation and repudiation of contracts are highest in countries with few civil liberties and considerable child labor. Testing for a relationship between standards and FDI therefore requires a baseline empirical model of FDI to which ratification measures may be added. The absence of a generally accepted model of FDI complicates this approach.⁴³ The empirical work below considers the following potential influences on a country's share of world FDI (FDISHARE).⁴⁴

Expected return on capital. As shown in Table 9, capital flows have shifted away from the K-scarce countries. Moreover, including the capital-labor ratio as a regressor would leave a very small sample of countries. As a result, this variable is not used in the analysis. The expected return on capital can also be influenced by various risk factors associated with the political and social climate. The regression analysis includes measures of government repudiation of contracts (REPUD), risk of expropriation (EXPROP), and corruption (CORRUP), all defined as of the beginning of the estimation

⁴³ A newer micro approach rests on Dunning's observation that firms that engage in multinational activity must (1) have some specific product or productivity advantage over host country firms, (2) find the foreign location advantageous over home-country production, and (3) prefer ownership of a foreign subsidiary over alternative contracting arrangements (Dunning, Markusen 2002). (With regard to point (3), several prominent companies in the global footwear industry contracted with local producers as an alternative to investing in production facilities in developing countries. This is a case in which low wages did not attract foreign investment.)

⁴⁴ By the late 1980s, the largest shares of world FDI inflows were in the United States (30.8 percent), the United Kingdom (13.1), France (5.8), Spain (5.2), the Netherlands (4.0), and Australia (3.9). The smallest shares were in Iran, Surinam and Panama. The shares for China and Myanmar, two countries frequently cited for human rights abuses, were 1.9 and .04 percent respectively.

period. Higher values of each of these measures imply lower risk and hence higher values of FDISHARE. The ratio of real government “consumption” expenditure to real GDP (GOVSHARE) is included to capture the degree of government intervention in the economy with high values expected to discourage FDI.

Market Size. Larger markets attract horizontal FDI, which more or less replicates home-country production facilities in a foreign host-country. Population in thousands (POP) proxies the number of potential consumers and per capita (GDP/POP) captures their wealth or potential purchasing power. AREA proxies the potential size of a country’s resource base.

Trade costs. Horizontal foreign investment becomes more attractive when transportation costs or barriers to trade with a country are relatively high. The proxies for these factors are again DIST, LANDLOCK and OPEN. Unfortunately, FDI data do not discriminate between horizontal investment and investments to establish global vertical integration. Trade costs and barriers that encourage horizontal FDI tend to discourage vertical FDI by raising the costs of moving items between different stages of the global production chain. There is no clear prediction on the signs of the coefficients.

Labor force quality and price. We have seen that economic advantages attributed to low labor costs tend to be offset by low productivity. Implicitly, the RTTB view implies that a low productivity workforce attracts FDI. An alternative view holds that high-productivity labor is complementary with FDI. The regressions include HUMANK to test for complementarities between FDI and work force quality. In testing for an effect of wages on FDI, we measure wages relative to productivity (WAGERES).

We examine the determinants of a country's share of world FDI inflows on a sample of about 70 countries at various stages of development. (The wealthiest country in the sample (the United States) has a per capita GDP that is 29 times that of the poorest country (Tanzania).) Given the somewhat volatile behavior of annual FDI flows, Tables 10 and 11 present cross-section estimates for 1980-85 and 1986-1991 averages respectively. The FDI share (dependent variable), per capita GDP and population variables are in natural logs.

Regression 1 in each table excludes trade policy variables. For each period, the model explains about three-quarters of the cross-country variation in the log of the share of world FDI inflows. There is considerable consistency across the two periods in the signs and statistical significance of the explanatory variables. A relatively high risk of expropriation reduces a country's FDI share.⁴⁵ Countries with relatively large shares of government consumption in GDP (a proxy for general government intervention in markets) also have relatively low shares of world FDI. (Actual shares of government consumption in this sample range from six percent (Hong Kong) to 37 percent (Zambia).) FDI shares increase with population, the wealth (purchasing power) of the population, and the potential size of a country's resource base. Higher trade costs (associated with longer transportation distances and lack of access to sea transport) are not significantly related to FDI shares, reflecting a rough standoff between the effects on horizontal and vertical FDI discussed earlier.

[TABLES 10 AND 11 ABOUT HERE]

⁴⁵ Expropriation is only one source of investment risk. Countries in which measures of contract repudiation and corruption are relatively high also have lower FDI shares, *ceteris paribus*, but these measures are too intercorrelated to determine the separate contribution of each risk factor.

Regressions 2 in Tables 10 and 11 add a trade policy variable to the base specification. Neither the OPEN dummy variable (defined in Section II) nor alternative indicators of trade policy were significantly related to FDI share in the 1980-85 period.⁴⁶ This may reflect the fact that trade barriers will tend to have opposing influence on horizontal and vertical investment flows. In the later period, however, countries with open trade policies had significantly higher FDI shares, suggesting that trade policy had a stronger influence on vertical than horizontal FDI flows.

The next four regressions address a key RTTB argument by examining the cross-country relationship between ratification of ILO conventions and FDI share. Regressions 3 and 4 respectively add variables for the number of core (CORE LS) and total (NONCORE LS) conventions ratified. Core labor standard ratifications are not significantly related to FDI share. On the other hand, FDI share increases with the total number of ILO conventions ratified in 1980-85 (but not the later period) – exactly the opposite of the RTTB view. Regressions 5 and 6 test for the effects of “abnormally” high or low ratification activity by substituting the difference between actual and predicted core and total ratifications for the total number of ratifications. While the statistical results are modestly stronger, the qualitative results are unchanged: The cross-section data reveal no trade-off between a country’s ratification of ILO conventions and its share of world FDI.

The foregoing tests for the effects of labor standards on FDI shares stem from the view that countries that ratify ILO conventions will have high labor costs relative to productivity, a proposition that was found to be false in Section III. Nonetheless, the

⁴⁶ The following measures of trade policy were tested as alternatives to OPEN: Tariff rates, import duties as a percentage of total imports, and the black market premium.

substantive question of whether countries with low (high) labor costs relative to productivity attract more (less) FDI remains interesting, irrespective of the reason for a country's relative cost position. Unreported regressions added WAGERES, the difference between the actual and predicted manufacturing labor cost in a country as a regressor.⁴⁷ The regression coefficients (robust standard errors) on WAGERES are -.731 (.599) for 1980-85 and -.054 (.701) for 1986-91. While the negative coefficients are consistent with the RTTB hypothesis, neither result is statistically significant. Cross-country differences in labor costs relative to productivity fail to explain differences in FDI shares.

In summary, the data show no reliable evidence that ratification of ILO conventions reduces a country's share of FDI. Given the earlier evidence that ratification is not associated with higher labor costs, this result should not be surprising. Indeed, discussions of the potential costs of labor standards often turn attention from the possibility that some labor standards may raise the productivity of investment by improving the quality of human capital.

Ratification of ILO conventions is only one of many potential government influences on FDI. Within the framework of this study, it is clear that government actions to reduce risks associated with expropriation and uncertain contract status and to reduce its own presence in the economy will have a much more powerful effect on FDI shares. Other factors that could not be examined in this study (e.g., tax policies) are also likely to have a more powerful influence on FDI.

⁴⁷ Labor costs are predicted on the basis of the countries productivity and price level.

V. Conclusions

The question of how international economic and regulatory policies influence the condition of labor forms the background of this study. The focus is the specific hypothesis that free trade suppresses labor conditions through a mechanism in which countries (1) refuse to ratify ILO conventions so that (2) they can degrade labor conditions in order to (3) reduce labor costs in order to (4) raise exports and (5) attract foreign direct investment seeking cheap labor. This study tests this hypothesis with data from a period in which such regulation was more form than substance – seemingly an ideal setting for observing the mechanisms believed to be driving such a “race to the bottom,” but the empirical analysis of a large sample of countries representing a wide range of economic and political development provides little support for any step in this chain of reasoning.

Consider first the linkage between trade and the political act of ratification. The results are consistent with the view that ratification is driven by a country’s dominant social values and pre-existing levels of labor rights and conditions. Once these factors are accounted for, neither the size of a country’s trade sector nor its trade policy stance appears to influence ratifications of the core ILO conventions that are the focus of policy discussions. That is, ratification signals existing levels of labor conditions. There is a significant relationship between the size of the trade sector and ratifications of all ILO conventions, however, and the evidence indicates that this is driven more by the interests of import-competing industries than exporters.

Consider next the link between the political act of ratification and actual labor conditions. The empirical analysis finds no significant relationship between ratifications

of either core or total ILO conventions and measures of labor rights or conditions. Ratifications do not seem to produce subsequent changes in domestic policies that affect labor conditions. Moreover, the significant link found between trade and total ratifications does not translate into improved labor rights and working conditions. Of course, free trade could also influence labor conditions directly, rather than through political action over ratifications. Some race-to-the-bottom scenarios in fact assert that open international markets produce a degradation of labor conditions. The direct tests of the effect of free trade on labor conditions reveal just the opposite, however. Free trade policies are associated with better, not worse labor rights and conditions.

With no evidence of a link between the ratification of ILO conventions and actual labor conditions, it seems unlikely that a country's ratification choice would influence its labor costs. Nonetheless, the paper presents both cross-section and fixed effects estimates of several measures of core labor standards. The results indicate that international differences in productivity and price levels drive international differences in labor costs (compensation). Once these factors are held constant, neither the numbers of ratifications of core labor standards, the ratification of specific core conventions, or the length of time since ratification are significantly related to labor costs in either cross-section or fixed-effects estimation. Labor costs are positively related to ratifications of all labor standards in the cross-section, but not the fixed effects estimates, indicating that the cross-section estimate is biased by unobserved country-specific factors correlated with both ratifications and labor costs. Of course, improvements in actual labor conditions may raise productivity and hence compensation, but the analysis finds no evidence that adoption of international labor standards has produced such improvements.

Assertions that free trade produces a degradation of working conditions focus on the labor cost but not the productivity side of this equation.

If ratifications are not linked to labor costs, then they should not be linked to export and FDI performance. After controlling for other determinants of these outcomes, the analysis finds that this is indeed the case.

The analysis supporting these conclusions covers a period in which ratification and compliance were essentially voluntary actions, so it is relevant to ask whether outcomes might differ in a regime of costly nonratification. If benefits of trade policy are contingent on adherence to certain labor standards, for example, ratification activity is no longer freely chosen based on domestic considerations, but imposed from outside. The statistical analysis includes tests for such a scenario and these results also provide no support for the RTTB hypotheses and policy prescriptions.

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APPENDIX A

VARIABLE NAMES, DEFINITIONS AND DATA SOURCES

<u>Variable</u>	<u>Definition</u>	<u>Source</u>
BMP	Black market premium (ratio of black market to official exchange rate minus 1)	Wacziarg (2001)
BRITISHL	Brit. common law dummy	World Bank website
C98	Dummy var.= 1 if country has ratified ILO Conv. #98 (right To organize & bargain)	Constructed from ILO website
C105	Dummy var.= 1 if country has ratified ILO Conv. #105 (abolit. of forced labor)	“
c111	Dummy var.= 1 if country has ratified ILO Conv. #111 (non-discrimination)	“
c138	Dummy var.= 1 if country has ratified ILO Conv. #138 (min. age of employment)	“
CATHO	Dummy var. = 1 if maj. religion is Catholic	Encyclop. Brittanica
CIVLIB	Index of civil liberties. Range: 1 (most freedom) to 7	Freedom House
CONFU	Dummy var. = 1 if maj. religion is confuc-Buddhist-Zen	Encyclop. Brittanica
CORE LS	Number of core labor	ILO website

	standards ratified	
COREPR	Predicted core ratifications	See text
CORERES	Actual ratifications minus COREPR	See text
CORRUPT	Corruption (0-10)	Int'l Country Risk Guide
DC98	Number of years since Country ratified c98	ILO website
DC105	Number of years since Country ratified c105	“
DC111	Number of years since Country ratified c111	“
DC138	Number of years since Country ratified c138	“
DEMOC	Index of democracy Range: 0 (author.) To 1 (democ.)	(Freedom in the World Reports)
DISTANCE	Average distance to capitals of 20 maj. exporters weighted by value of bilateral imports (1000 km.)	Lee
EXPORT	Ratio of export to GDP	Summers-Heston, v. 5.0
EXPROP	Risk of expropriation (0-10)	Int'l Country Risk Guide
FDISHARE	Share of world inward FDI	UNCTAD (1992, 2000b)
FRENCHL	French civil law dummy	World Bank website
GDPCAPITA	Real per capita GDP	Summers-Heston, v. 5.6
GERMANL	German civil law dummy	World Bank website

GOVSHARE	Ratio of real govt. consumption expend. to real GDP	Summers-Heston, v. 5.5
HINDU	Dummy var. = 1 if maj. religion is Hindu	Encyclop. Britannica
HUMANK	Average school years population over 25	Barro-Lee
ISLAND	Dummy var.=1 if country is island	World Bank
LABCOST	Labor cost per worker in manufacturing	World Bank (2001)
LABLAND	Population/area	
LANDLOCK	Dummy var.=1 if country is landlocked	World Bank
LIFEEXP	Life expectancy at age 0	World Bank (2001)
LNGDPCAP	Natural logarithm of GDPCAP	
LNLABCOST	Natural logarithm of LABCOST	
LNPOP	Natural logarithm of POP	
LNPRODUCT	Natural logarithm of PRODUCT	
MUSLIM	Dummy var. = 1 if maj. religion is Muslim	Encycl. Britannica
OPEN	Trade policy dummy var. (See text for full description)	Wacziarg (2001)
POP	Population	
PRICE	Price level of Consumption	Summers-Heston, 5.0
PRODUCT	Value added per worker	World Bank (2001)

in manufacturing

PUPILTEACH	Pupil/teacher ratio in secondary school	UNESCO
REPUD	Govt. repudiation of contracts (0-10)	Int'l Country Risk Guide
SCANDL	Scandin. Civil law dummy	World Bank website
TOT	Terms of trade	Wacziarg (2001)
NONCORE LS	Total number of labor standards ratified	ILO website
TOTALPR	Predicted total ratif.	See text
NONCORES	Actual ratifications minus TOTALPR	See text
TRADE	Exports plus imports as share of GDP	Summers-Heston, v.5.0
WAGERES	Actual minus predicted LNLABCOST.	

Table 1. Noncore Ratifications (3SLS Estimates)

Independent Variables	1980			1990		
	(1)	(2)	(3)	(4)	(5)	(6)
CHILDLAB	-0.590 (.119)*			-0.891 (.175)*		
CIVLIB		-4.921 (1.124)*			-7.233 (1.549)*	
LIFEEXP			0.945 (.207)*			1.292 (.267)*
TRADE	-0.072 (.039)***	-0.044 (0.030)	-0.044 (0.036)	-0.100 (.041)**	-0.078 (.033)**	-0.093 (.040)**
CATHO	14.679 (6.215)**	12.313 (5.677)**	16.545 (6.479)*	16.071 (7.536)**	13.658 (6.841)**	14.908 (7.328)**
HINDU	5.847 (9.746)	2.718 (8.568)	9.161 (9.960)	7.248 (12.293)	10.331 (10.871)	8.631 (12.201)
MUSLIM	13.651 (6.397)**	8.964 (5.619)	16.891 (7.070)**	13.955 (7.791)***	9.969 (6.461)	14.832 (7.986)***
OTHERCHR	5.984 (6.365)	4.159 (5.556)	8.444 (6.636)	9.890 (7.673)	6.875 (6.720)	7.593 (7.442)
OTHER	13.284 (7.631)***	7.080 (6.556)	17.768 (8.428)**	11.687 (9.159)	6.348 (7.230)	12.763 (9.512)
FRENCHL	2.802 (3.164)	3.780 (2.682)	5.608 (3.161)***	8.214 (3.721)**	6.852 (3.192)**	10.304 (3.873)*
GERMANL	-5.013 (6.966)	-6.678 (6.304)	-3.860 (6.765)	-6.383 (7.655)	-8.519 (6.878)	-8.952 (7.472)
SCANDL	22.518 (8.762)	16.458 (8.039)**	19.878 (8.551)**	25.984 (9.725)*	16.574 (8.481)**	22.056 (9.456)**
SOCIALIST	5.079 (6.808)	2.131 (5.921)	6.048 (6.748)	6.038 (7.479)	.180 (6.527)	5.238 (7.605)
Constant	28.26	37.938	-45.010	32.528	47.959	-60.733
R ²	0.288	0.224	0.339	0.246	0.314	0.378
Root MSE	13.818	14.135	13.276	17.109	16.070	15.385
Number of obs.	101	107	102	92	95	92

* p-value < .01

** p-value < .05

*** p-value < .10

Sources: See Appendix A

Table 2. Core Ratifications (3SLS)

Independent Variables	1980			1990		
	(1)	(2)	(3)	(4)	(5)	(6)
CHILDLAB	-0.034 (.013)**			-0.049 (.017)*		
CIVLIB		-.151 (.138)			-.227 (.166)	
LIFEEXP			0.041 (.024)**			0.05 (.026)***
TRADE	-.005 (.004)	-.001 (.004)	-.001 (.004)	-.005 (.004)	-.003 (.004)	-.003 (.004)
CATHO	3.322 (.712)*	3.338 (.744)*	3.666 (.730)*	3.584 (.791)*	3.369 (.834)*	3.522 (.741)*
HINDU	1.427 (1.120)	.946 (1.160)	2.346 (1.052)	1.715 (1.319)	1.986 (1.331)	2.262 (1.184)
MUSLIM	3.591 (.734)*	3.336 (.747)*	4.406 (.790)*	3.420 (.824)*	2.907 (.796)*	3.932 (.797)*
OTHERCHR	1.967 (.731)*	2.258 (.747)*	3.044 (.721)*	2.543 (.816)*	2.558 (.830)*	3.057 (.740)*
OTHER	4.031 (.876)*	3.533 (.879)*	5.241 (.937)*	4.644 (.973)*	3.617 (.905)*	5.421 (.959)*
FRENCHL	.049 (.363)	-0.066 (.356)	.216 (.331)	.266 (.391)	.259 (.377)	.534 (.371)
GERMANL	.436 (.799)	.607 (.847)	1.297 (.714)***	.261 (.809)	.215 (.834)	1.011 (.720)
SCANDL	2.53 (1.001)*	2.296 (1.051)**	2.321 (.919)**	2.280 (1.006)**	1.866 (1.005)***	2.26 (.916)**
SOCIALIST	-.625 (.782)	-.912 (.801)	-.232 (.712)	.322 (.801)	-0.253 (.801)	.612 (.724)
Constant	2.486	2.285	-1.642	2.493	2.848	-1.909
R ²	.355	.299	.307	.342	.305	.345
Root MSQ	1.56	1.6	1.61	1.56	1.58	1.55
Number of obs.	101	107	102	92	95	92

* p-value < .01

** p-value < .05

*** p-value < .10

Sources: See Appendix A

Table 3. 3SLS Analysis of Labor Conditions, 1980

Independent Variables	Child Labor		Civil Liberties		Life Expectancy	
	(1)	(2)	(3)	(4)	(5)	(6)
GDPCAP	-0.01026 (.00107)*	-0.01043 (.00129)*	-0.00028 (.00005)*	.00026 (.00006)*	0.00034 (.00004)*	0.00208 (.00032)*
GDPSQ	0.000006 (.000001)*	0.000005 (.000001)*				
OPEN	-4.132 (2.971)	-4.468 (2.847)	-1.150 (.387)*	-1.01 (.338)*	2.258 (2.031)	3.263 (1.962)***
CORE LS	1.427 (.958)		.016 (.136)		-1.831 (.808)**	
TOTAL LS		.15 (.159)		-.017 (.021)		-.029 (.106)
CONSTANT	37.02	40.105	5.343	5.743	58.131	51.183
R ²	.681	.692	.561	.562	.525	.639
Root MSE	9.837	9.658	1.317	6.912	7.733	6.74
Number of obs.	101	101	107	107	102	102

* p-value < .01

** p-value < .05

*** p-value < .10

Sources: See Appendix A

Table 4. 3SLS Analysis of Labor Conditions, 1990

Independent Variables	Child Labor		Civil Liberties		Life Expectancy	
	(1)	(2)	(3)	(4)	(5)	(6)
GDPCAP	-0.00765 (.0009)*	-0.00687 (.00088)*	-0.00021 (.00003)*	-0.00019 (.00003)*	0.00148 (.00017)*	0.00140 (.00018)*
GDPSQ	0.000004 (.000001)*	0.000003 (.000001)*				
OPEN	-2.643 (2.625)	-3.596 (2.275)	-1.025 (.277)*	.884 (.248)*	5.968 (1.780)*	5.468 (1.698)*
CORE LS	.962 (.904)		-.181 (.110)***		-1.175 (.727)	
TOTAL LS		.016 (.099)		-.022 (.012)		.021 (.068)
CONSTANT	29.9	34.068	5.941	5.569	57.576	51.805
R ²	.624	.639	.637	.624	.568	.655
Root MSE	9.297	9.116	1.06	1.079	7.064	6.31
Number of obs.	92	92	95	95	92	92

* p-value < .01

** p-value < .05

*** p-value < .10

Sources: See Appendix A

Table 5. Descriptive Statistics, Labor Cost Analysis

<u>1980-84</u> (n = 85)	<u>Mean</u>	<u>Std. Dev</u>	<u>Min</u>	<u>Max</u>
LABCOST	5972	5007	104	19103
PRODUCT	15,894	10,573	234	47,276
PRICE	68.6	34.8	21.7	198.2
CORE LS	4.5	2.0	0	7
NONCORE LS	27.7	17.6	0	78
<u>1995-99</u> (n = 51)				
LABCOST	13,695	12,305	94	38,415
PRODUCT	34,656	25,948	228	92,582
PRICE	79.1	38.4	3.7	164.6
CORE LS	5.1	1.9	0	7
NONCORE LS	39.7	22.1	0	95

Sources: See Appendix A for definitions and sources.

Table 6. Labor Cost Analysis, 1980-84

Variables	(1)	(2)	(3)	(4)	(5)
In PRODUCT	.913 (.081)*	.908 (.082)*	.91 (.095)*	.908 (.088)*	.899 (.078)*
In PRICE	.439 (.252)***	.428 (.253)***	.408 (.281)	.424 (.280)	.397 (0.250)
CORE LS		.019 (.017)			
NONCORE LS					.005 (.002)**
c98			-.081 (.094)		
c105			.158 (.098)		
c111			-.029 (.098)		
c138			.069 (.133)		
DC98				-.001 (.004)	
DC105				.004 (.005)	
DC111				.001 (0.006)	
DC138				.014 (.038)	
Constant	-2.09	-2.08	-1.99	-2.04	-1.92
R ²	.88	.89	.89	.89	.89
Root MSE	.347	.347	.349	.354	.339
Number of obs.	84	84	84	84	84

Robust standard errors in parentheses.

* p-value < .01

** p-value < .05

*** p-value < .10

Sources: See Appendix A

Table 7. Labor Cost Analysis, 1995-99

Variables	(1)	(2)	(3)	(4)	(5)	Fixed Effects	
						(6)	(7)
In PRODUCT	.859 (.092)*	.892 (.081)*	.872 (.099)*	.863 (.095)*	.88 (.087)*	.949 (.061)*	.959 (.071)*
In PRICE	.506 (.282)**	.4 (.255)	.479 (.299)	.453 (.308)	.377 (.263)	.189 (.091)**	.197 (.093)**
CORE LS		.093 (.049)**				-.066 (.044)	
NONCORE LS					.008 (.004)**		-.004 (.004)
c98			.094 (.188)				
c105			.34 (.236)				
c111			.135 (.159)				
c138			-.051 (.149)				
DC98				-.0001 (.0045)			
DC105				.0083 (.0069)			
DC111				.0063 (.0054)			
DC138				.0029 (.0084)			
Constant	-1.84	-2.2	-2.3	-2.01	-1.79	-1.08	-1.4
R ²	.88	.89	.89	.89	.89	0.86	0.85
Root MSE	.347	.347	.349	.354	.339	0.007	0.085
Number of obs.	51	51	51	51	51	51	51

Robust standard errors in parentheses.

* p-value < .01

** p-value < .05

*** p-value < .10

Sources: See Appendix A

Table 8. Ratifications and Export/GDP Ratio, 1980-84

Independent Variables	(1)	(2)	(3)	(4)	(5)	(6)
TOT	-1.217 (.528)**	-1.19 (.538)**	-1.097 (.526)**	-1.11 (.523)**	-1.544 (.332)*	-1.524 (.314)*
LABLAND	.00008 (.000006)	.00008 (.000007)	.00006 (0.0001)	.00008 (.000009)	.00003 (.0001)	.00009 (.000006)
HUMANK	.022 (.004)*		.023 (.004)*	.023 (.004)*	.019 (.005)*	.021 (.004)*
DISTANCE	-.023 (.004)*	-.021 (.005)*	-.023 (.004)*	-.023 (.004)*	-.022 (.004)*	-.022 (.004)*
ISLAND	.013 (.028)	.019 (.030)	.019 (.030)	.016 (.029)	.053 (.030)***	.044 (.026)***
LANDLOCK	.032 (.024)	.007 (.025)	.039 (.027)	.038 (.026)	.04 (.029)	.043 (.028)
OPEN	.016 (.022)	.095 (.028)	.018 (.023)	.016 (.022)	.003 (.023)	-.002 (.022)
CORE LS			-.00006 (.008)			
NONCORE LS				-.00001 (.0009)		
CORE RES					-.004 (.008)	
NONCORES						-.0004 (.0008)
Constant	.18	.175	.178	.181	.184	.175
R ²	.63	.51	.6	.66	.58	.66
Root MSE	.093	.104	.091	.091	.083	.083
Number of obs.	80	87	78	79	64	65

Robust standard errors in parentheses

* p-value < .01

** p-value < .05

*** p-value < .10

Sources: See Appendix A

Table 9 FDI Inflows & Outflows, 1982-99
(Percent)

<u>Countries</u>	Share of World FDI Inflows			Share of Gross fixed K form.	
	<u>1982-87</u>	<u>1988-93</u>	<u>1994-99</u>	<u>1988-93</u>	<u>1994-99</u>
World	100.0	100.0	100.0	100.0	100.0
Developed	74.6	73.5	65.8	89.3	89.2
Developing	25.3	24.6	31.1	10.6	10.5
Cent. & East. Europe	0.03	1.9	3.1	.1	.3

Source: UNCTAD, *World Investment 1992, 2000* (New York; United Nations, 1992, 2000). Annex table B. 5.

Table 10. Ratifications and FDI Shares, 1980-85

Independent Variables	(1)	(2)	(3)	(4)	(5)	(6)
EXPROP	.329 (.117) [*]	.3 (.128) ^{**}	.294 (.133) ^{**}	.272 (.131) ^{**}	.332 (.138) [*]	.263 (.142) ^{***}
GOVSHARE	-7.702 (3.131) ^{**}	-7.249 (3.321) ^{**}	-7.864 (3.330) ^{**}	-8.278 (3.268) ^{**}	-8.205 (3.821) ^{**}	-9.056 (3.741) ^{**}
LNPOP	.187 (.124)	.202 (.128)	.214 (.145)	.133 (.135)	.141 (.166)	.002 (.149)
LNGDPCAP	.812 (.377) ^{**}	.767 (.385) ^{**}	.613 (.384)	.482 (.402)	.58 (.406)	.343 (.439)
AREA	.0003 (.00007) [*]	.0003 (.00006) [*]	.0003 (.00007) [*]	.0003 (.00007) [*]	.0004 (.00009)	.0004 (.00009) [*]
DISTANCE	-.095 (.067)	-.116 (.072)	-.092 (.071)	-.088 (.067)	-.146 (.091)	-.159 (.085) ^{***}
LANDLOCK	-.824 (.680)	-.801 (.666)	-.799 (.653)	-.863 (.646)	-.656 (.845)	-.981 (.787)
HUMANK	-.043 (.091)	-.023 (.096)	-.009 (.100)	-.013 (.098)	.012 (.108)	.031 (.103)
OPEN		.183 (.398)	.287 (.400)	.425 (.396)	.154 (.512)	.435 (.464)
CORE LS			.093 (.080)			
NONCORE LS				.016 (.007) ^{**}		
CORERES					.224 (.140)	
NONCORES						.032 (.013) ^{**}
Constant	-10.46	-10.17	-9.55	-7.67	-8.08	-4.44
R ²	0.74	0.75	0.75	0.76	0.76	0.78
Root MSQ	1.19	1.19	1.2	1.17	1.27	1.22
Number of obs.	74	70	67	68	54	55

* p-value < .01

** p-value < .05

*** p-value < .10

Robust standard errors in parentheses.

Sources: See Appendix A

Table 11. Ratifications and FDI Shares, 1986-91

Independent Variables	(1)	(2)	(3)	(4)	(5)	(6)
EXPROP	.428 (.109)*	.327 (.114)*	.326 (.115)*	.324 (.121)*	.327 (.114)*	.334 (.118)*
GOVSHARE	-7.582 (2.101)*	-7.641 (2.184)*	-7.782 (2.220)*	-7.692 (2.250)*	-8.196 (2.219)*	-7.58 (2.194)*
LNPOP	.383 (.141)*	.436 (.129)*	.425 (.133)*	.430 (.138)*	.427 (.128)*	.447 (.133)*
LNGDPCAP	.770 (.380)**	.780 (.380)**	.782 (.382)**	.761 (.405)**	.697 (.379)**	.796 (.380)**
AREA	.00004 (.00007)	.00005 (.00007)	.00005 (.00007)	.00005 (.00008)	.00004 (.00007)	.00004 (.00007)
DISTANCE	.048 (.064)	.046 (.063)	.025 (.065)	.05 (.061)	.029 (.066)	.045 (.066)
LANDLOCK	-.205 (.464)	.025 (.421)	-.009 (.446)	.024 (.423)	.009 (.471)	.036 (.431)
HUMANK	.002 (.098)	-.0005 (.097)	.001 (.097)	-.0003 (.099)	.016 (.098)	-.005 (.099)
OPEN		.760 (.352)**	.711 (.355)**	.780 (.373)**	.743 (.346)	.748 (.351)**
CORE LS			-.067 (.070)			
NONCORE LS				-.002 (.007)		
CORERES					-.127 (.085)	
NONCORES						-.004 (.008)
Constant	-13.9	-14.22	-13.64	-14.07	-13.31	-14.48
R ²	.78	.83	.82	.82	.83	.83
Root MSQ	1.13	1.04	1.06	1.06	1.05	1.06
Number of obs.	73	71	69	70	69	70

* p-value < .01

** p-value < .05

*** p-value < .10

Robust standard errors in parentheses.

Sources: See Appendix A