

WORKING PAPER

International Trade and Core Labor Standards
A Survey of the Recent Literature

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**INTERNATIONAL TRADE AND CORE LABOR STANDARDS
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by

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Abstract

This paper reviews some recent literature that concerns the background, establishment and enforcement of international labor standards. Topics include (1) the selection and justification of core labor standards, (2) the economic events that have driven a demand for international labor standards, particularly growing wage inequality and unemployment in developed countries, (3) evidence on poor protection of core labor standards and export performance, (4) other motivations for internationally imposed core labor standards, (5) the economic effects of core labor standards including the effects of international sanctions imposed on countries with poor labor standards, and (6) the empirical evidence on core labor standards and overall economic growth.

Keywords: core labor standards, child labor, discrimination, wage inequality, trade policy, economic growth.

JEL codes: F1, F10, J13

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I. Introduction

The ongoing debate over core labor standards in the international arena covers a wide range of issues, few of which have been settled to the satisfaction scholars, policy makers and even the general public. The purpose of this paper is to provide a critical review of the current debate on several aspects of international core labor standards.

We turn first to the criteria for selecting core labor standards. Several options have been put forward, including labor standards as basic human rights to labor standards that support the efficient functioning of labor markets. As will become apparent in the discussion, no single set of criteria work perfectly (or even well) at selecting a set of core labor standards on which most participants in the debate are likely to agree.

The recent debate over core labor standards has, in part, been driven by growing wage inequality in some industrialized countries. To the extent that the fall in the return to unskilled labor is the result of trade with unskilled-labor abundant countries, the interest in labor practices in developing countries is intensified. If a large volume of trade with developing countries is the result of poor labor practices then any consequent decline in western wages of unskilled labor may be illegitimate in the minds of some. Therefore, in section III we take up a discussion of the empirical evidence concerning the relationship between trade and wages in order to determine the extent to which growing wage inequality might be the result of international trade.

Concern with the impact of trade with low standards counties also extends to the question as to how poor labor practices affect export performance and the ability to attract foreign direct investment. There is an abundance of empirical research on the relationship between the observance of core labor standards and trade performance that is surveyed in section IV.

The intense focus on international labor standards that has developed over the past decade has several different motivations and dimensions. Part of the debate turns on whether the pursuit of international standards is driven by hidden protectionism, a sense of fair play, humanitarian concerns, inefficiency of decentralized policy making, or the domestic political

economy of trade policy. A great deal of the discussion has focused on the desirability of international coordination of labor standards, or perhaps even harmonization, and the forum in which international discussions should occur. Each of these issues will be addressed in section V.

Next we turn in section VI to the economic effects of an international labor standards policy. Not surprisingly, the results are as varied as the models used for analysis. The discussion attempts to give a flavor of the wide range of conclusions that one might draw. The final section of the paper addresses the evidence concerning the connection between labor standards, trade and economic performance.

II. The Selection and Definition of Core Labor Standards

Participants in the debate concerning labor standards have come to divide standards into two broad categories. However, as we will see below, researchers do not necessarily agree on the logic used to sort standards. OECD (1996) isolates freedom of association, the right to collective bargaining, prohibition of forced labor, the elimination of *exploitative* child labor and non-discrimination in employment as core labor standards. These five standards are selected based on two criteria. First, they are regarded to be a fundamental component of basic human rights. Second, the above standards play a role in supporting the efficient function of labor markets by granting labor certain freedoms.

There are several different organizing principles that have been applied to the selection of core labor standards. Some possibilities are discussed below.

II.1 Basic Human Rights.

Core labor standards may be characterized as those that can be “universally” accepted human rights. Cast in these terms, the discussion of core labor standards is closely related to the

on-going debate in political science and philosophy over the notion of *natural rights*. At this point in time there seems to be little closure on the issue.

In the context of labor standards, Bhagwati (1995) and others argue that there are very few rights upon which we can uniformly agree. Bhagwati, in particular, argues that we have a near-universal consensus in favor of prohibiting forced labor. However, there are very few other human rights standards beyond the prohibition against forced labor to which we can universally agree.

Others, such as Maskus (1997), have responded that, even in the absence of a conclusion of the natural rights debate, something of a consensus has emerged on a broader set of *values* that are derived from the notion of *individual freedom*. Such values are arguably nearly universal since they are articulated and manifested in the charters and declarations of several international organizations that include nearly all countries in the world in their membership. For example, Eddy (1997) argues that we currently have embodied in the set of ILO Conventions a broadly accepted set of humanitarian principles concerning the treatment of labor. At this point, there has been nearly a century of consensus building by the ILO on the issue.

Relying on the notion of individual freedoms, we may be able to agree to include free association and freedom from forced labor, exploitative child labor and discrimination in employment as fundamental human rights. However, it is harder to defend the inclusion of collective bargaining as a human right. The right to collective bargaining is, essentially, the right to act in concert with other workers. Such conduct is outlawed in several other contexts and so is difficult to support as a fundamental freedom.

In fact, Portes (1994) suggests a somewhat narrower list of labor standards that are classified as human rights. Portes groups labor standards into four categories: Basic Rights, Survival Rights, Security Rights and Civic Rights.

Basic rights in the Portes taxonomy consist of the right against the use of child labor, involuntary servitude, physical coercion and discrimination. Basic rights are those that are

widely accepted as fundamental human rights and are presumably independent of economic standing or cultural values.

Civic rights govern the relationship between the worker and management and include free association, collective representation and expression of grievances. It can be argued that civic rights are an extension of basic rights because workers who are prevented from organizing freely are deprived of a crucial form of exercising choice in the workplace and may be subject to coercion.

Survival rights include a living wage, accident compensation and a limited work-week whereas *security rights* protect against arbitrary dismissal and provide for retirement compensation and survivors' compensation. These last two categories are distinct from the first two because they do not address the worker's freedom of choice but, rather, are characteristics of the labor contract.

II.2 Processes vs. Outcomes

In order to avoid the intellectual quagmire of natural rights, several other organizing principles have been proposed. Aggarwal (1995) divides labor standards between *process* related and *outcome* related standards. Aggarwal's presumable objective is to distinguish labor market *outcomes* that are sensitive to particular market characteristics and those that concern the legal framework in which the labor market operates. A minimum wage is an example of an outcome-related standard. Since wages clearly depend on productivity and economic development, it would be difficult to impose such a standard universally. A similar argument applies to the minimum age of work. By contrast, many of the core labor standards listed above are process-related and concern the organization of the labor market without specifying any particular market outcome.

A similar, though not identical approach, is to consider part of the core those standards that are not correlated with income and productivity. According to the proponents of this

definition, standards such as freedom of association, the right to collective bargaining, prohibition of forced labor, the principle of nondiscrimination and prohibition of exploitative child labor concern the process of production and can be imposed without regard to the degree of development. By contrast, minimum wage, occupational safety and health, and minimum age of employment are labor market characteristics that emerge as an equilibrium and depend heavily on labor productivity and income level. Imposing the latter type of standard may force an “out of equilibrium” market outcome.

However, even in the case of process related standards, aspects of economic development cloud the issue. For example, bonded child labor is frequently put forward as a form of exploitative child labor. Bonded child labor is a kin to forced labor and, therefore, violates one of the standards on which we are most likely to agree. However, it is generally the case that extremely poor families offer their children because it is the only form of collateral available to them. Otherwise they would be completely excluded from the capital market and have no ability to accumulate capital or weather transitional adverse events. In the absence of government action providing such families access to the capital markets, bonded child labor is likely to persist. Therefore, bonded child labor as a market outcome has some efficiency enhancing characteristics and is clearly related to income level.

The rights to freedom of association and collective bargaining similarly have stage-of-development characteristics. It is argued by the World Bank (1995) that many of the functions of trade unions in a formal industrial setting are carried out in the informal sector by other social institutions. Similarly, beyond the initial and intermediate stages of industrialization, labor unions tend to play little or no role in bargaining. It is very common to observe declining union density as an economy develops a comparative advantage in the provision of services. Hence, once again, freedom of association may be most relevant for countries in the first or second stages of industrialization.

II.3 Core and Cost Standards

Freeman (1996) offers a third variant on the theme. He divides standards between core standards that address human rights and *cost* standards that affect firm behavior. Cost standards are GNP sensitive and, therefore, should not be applied universally. Freeman argues for the inclusion of child labor among the core standards because the balance of empirical evidence suggests that a ban on child labor does not affect firm costs.

II.4 Labor Standards and Labor Market Efficiency

A fourth approach is to evaluate each standard in terms of whether they support market efficiency. Swinnerton (1997) makes a set of arguments relating to each of the core labor standards. Consider first the prohibition against forced labor. If forced labor is efficient in the Pareto-improving sense then both the worker and the employer can be made to gain from the transaction. Thus, the transaction can be accomplished voluntarily without resort to force. Therefore, forced labor should always be prohibited.

The weakness in this argument concerns the role that some aspects of forced labor play in helping the worker and the employer to resolve time-inconsistency issues that might otherwise be difficult to overcome. In particular, forced labor contracts are most likely to be Pareto-improving in the presence of capital market failure.

Braithwaite and Drahos (1998) point out that after the elimination of institutional slavery in the western world, most labor contracts retained some compulsory labor clause. Workers were typically required to buy themselves out of their labor contracts for a lump sum. Since workers rarely had adequate capital to do so, forced labor was the result.

Furthermore, labor contracts with a buyout clause were freely entered into by workers. For example, many migrants earned their passage by entering into a contract of indentured servitude. The convention of indentured servitude emerged because prospective migrants, lacking collateral, generally had no access to capital markets. The only collateral they could post

was their own future labor. However morally distasteful such arrangements may seem to us today, they were Pareto improving. Both the employer and the migrant were made better off as a consequence of the contract. That is, such contracts were efficiency enhancing in the presence of capital market failure.

Swinnerton applies a similar logic to discrimination where discrimination is defined as “differing employment conditions unrelated to worker characteristics.” It is presumed that discrimination keeps some workers out of the employment to which they are best suited, hence lowering GNP. However, if the discriminatory practice raises GNP then, once again, we have a potentially Pareto improving arrangement. That is, both the employer and the discriminated-against can be made better off. If that is the case, then the employment arrangement can be arrived at voluntarily. Therefore, involuntary variations in employment conditions without regard to worker characteristics is never efficient.

However, Rodrik (1999b) offers a fascinating example of a case in which discrimination is Pareto improving but, for political economy reasons, compensation is not possible. Mauritius set out on a development strategy that depended on an export-processing zone (EPZ) that operated under the principles of free trade. In order to generate a consensus in support of the export-oriented development strategy, the interests of those benefiting from long-standing protection had to be preserved. This was accomplished by following a two-part development strategy of export promotion plus continued support for previously protected sectors. Rodrik argues that the segmentation of the labor force along gender lines was critical to the policy’s success. The protected industries employed males while the EPZ’s employed females. As a consequence of labor force segmentation, the export sector expanded without raising the wages of workers in the protected sectors. If wages in the protected sectors had not been contained, the protected sectors would have rapidly become economically nonviable. In Rodrik’s words, “New profit opportunities were created at the margin, while leaving old opportunities undisturbed,” (p.

21). The bottom line here is that while compensation may be desirable, it may not always, or even often, be viable.

Swinnerton turns next to the rights of free association and collective bargaining. As noted by many authors, there are two faces of unionism. If the union behaves like a monopoly in an otherwise competitive market then the efficiency effects are negative. The monopoly view is most forcefully expressed by Bhagwati (1995) and Srinivasan (1997) as favoring the interests of a small elite at the expense of a large group of excluded workers. However, if the union provides a "voice face" then it can improve dispute resolution, provide a channel of information from worker to employer, and coordinate the differing views among workers concerning the tradeoff between working conditions and wages.

Furthermore, the monopoly aspects of unions may not be welfare reducing if the associated goods markets are also imperfectly competitive. In fact, unions are not able to raise wages above the competitive level if the firm itself is functioning in a perfectly competitive market. Thus, economic rents earned by unionized workers go hand in hand with rents earned by the firm. The firm's pricing and output decisions will be set with the intention of maximizing total profits and is unrelated to the proportion it must pay to its employees. Therefore, unions may not, in fact, alter resource allocation at all even when earning economic rents.

Finally, Swinnerton examines the issue of child labor exploitation as a core labor standard. Many authors note that there is no single definition of "exploitation" in this context. Swinnerton asks the following question: Would the child choose to work if he/she were able to evaluate the alternatives like a grown-up? If the answer is no, then the labor is exploitative. In this case, the agent making choices for the child has employment criteria that differ from the child's own interests.

If the decision to put the child to work is a matter of survival then the decision is clearly Pareto Optimal. There is no way to make the child better off without work.

It may seem at first blush that such a definition would render most child labor exploitative. However, this is not the case. Even if the child could evaluate choices like an adult, the choice not to work is contingent on the willingness of the parent to support the child. Any time a parent offers a child for employment, it is implicitly the case that the parent is either unable or unwilling to support the child. Therefore, by this definition, no child labor is exploitative.

Maskus (1997) adopts a more eclectic approach to child labor. He argues that labor standards should both reflect a shared view of morality and provide the underpinning to efficient labor market function. Efficiency is promoted when constraints on workers are removed and employers do not have access to anti-competitive employment practices. In the case of child labor, there are a number of characteristics that define exploitative practices. These are kidnapping, bonded labor, prostitution, physical danger, long hours of work, reduced educational opportunity and work that is physically and psychologically damaging. Put generally, Maskus asserts that child labor exploitation has occurred whenever the amount of child labor is greater than the social welfare maximum.

A final approach is to consider child labor (or any labor) practice to be exploitative if the child (or other worker) receives less than his or her marginal value product. Brown, Deardoff and Stern (1999) argue that bonded child labor may fall into this category. Children delivered into bonded labor are typically clothed, housed and fed by their employer and they may receive a very small wage. The excess product generated by the child's work that is not devoted to the child's support and wages is paid to the parent who receives a lump sum at the time that the child is delivered into servitude. Therefore, it must be the case that the child's standard of living falls short of what would have been possible if all of the value of the child's labor had been devoted to his support. That is, the child must be subsidizing the standard of living of the rest of the family. One normally expects the intergenerational transfer to flow from the parent to the child rather than the other way around as appears to be the case with bonded child labor.

III. Trade and Wages

The case for internationally established labor standards in part rests on the view that trade with low-wage countries has slowed the growth in, or even lowered, the wages of unskilled workers in industrialized countries over the past three decades. To the extent that low wages in developing countries are the result of poorly protected core labor rights, trade based on low wages is seen, in the minds of some, to be illegitimate. In the context of this aspect of the debate on labor standards, it is useful to evaluate the evidence concerning the impact of international trade on the wage profile in industrialized countries. Two useful reviews with competing points of view can be found in Cline (1997) and Slaughter and Swagel (1997).

The review and discussion that follow will focus on the recent empirical evidence on the role that international trade has played in determining the relative wages of skilled and unskilled workers. While most of the evidence presented reflects on the U.S. distribution of income, more recent studies have evaluated the impact of international trade on wages and unemployment on other members of the OECD and Latin America.

III.1 Early Evidence on Wage Determination: The Role of Technological Change

The debate over the determination of employment and wages is over 20 years old, beginning with work such as Frank (1977). Frank begins by attempting to determine the driving force behind aggregate labor demand. The rate of growth in employment depends positively on a share-weighted average of the rates of growth in domestic demand for domestically produced goods and exports and negatively on imports and labor productivity.

This identity is applied to 20 tradable 2-digit U.S. SIC industries for the period 1963-1971. Annual employment grew more slowly than domestic demand by 3.3 percent. Labor productivity, which grew at an average rate of 2.9 percent over the period, accounted for the lion's share of the sluggish employment growth.

Anticipating the debate over trade and employment to come, Frank found that international trade played only a very small role in employment determination. Net imports resulted in a decline of 600,000 jobs over the sample period which was 0.2% of the manufacturing labor force at the time. Other studies adopting the Frank methodology found similar results.¹

Labor economists returned to the issue of wage and employment determination in an attempt to understand the growing wage inequality that emerged in the 1980s. Bound and Johnson (1992) report startling results concerning the growing wage dispersion in the United States. They regress the log of wages on various skill and human capital variables in order to determine the remuneration that each of these labor characteristics is earning. Skill and human capital are measured by educational attainment, years of experience and gender.² The wage variable is CPS weekly earnings for 17 industries (deflated by the CPI) for the period 1979-1988.

About one-half of the male groups suffered a decline in real wages over the period. These groups included those who had not graduated from college and young males. Female workers were less adversely affected. They also found that the average wage of college graduates relative to high school graduates rose by 20 percent during the decade.

Bound and Johnson then turn to determine the source of the wage decline. They decompose the wage change for each skill category between technological efficiency, industry demand, factor supply and allocation of employment across industries.

First, they find that the supply of college-educated workers was rising over the period. But demand must have been rising more quickly because the relative wage was also rising. Second, Bound and Johnson conclude that the growth in the wage for male college graduates relative to high school graduates was overwhelmingly determined by technical efficiency parameters that favor females and highly educated workers.

¹ See Cline (1997) for a survey.

Clearly the demand for skill rose throughout the 1980s. The literature then turns to determine whether the wage shifts attributed to technological change might not in fact be due to the influence of international factors. Berman, Bound and Griliches (1994) consider the employment of nonproduction workers³ share in total employment. They argue that skill-biased technological change would drive up the demand for skill within each sector. However, if the demand for skill is driven by international trade or defense spending then we should observe a shift in demand for skill between sectors of the economy.

Analyzing 450 U.S. manufacturing industries, Berman et al., find that between 1973 and 1979, nonproduction workers' share of total employment rose by 0.3% per year. Of this, 0.11 percentage point is attributed to a shift between sectors and 0.19 percentage points occurred because of a shift within sectors. This trend accelerated between 1979 and 1987 to 0.55 % per year. Of this, only 0.16 percentage points is attributable to between sector employment changes while 0.39 percentage points is attributable to within sector employment changes. That is, 70 percent of the overall shift in labor demand was a change in skill demand within industries.

Thus the evidence appeared to support the view that technological change rather than international trade is the driving force behind the increased demand for nonproduction workers. In fact, the role of trade appeared to be close to zero since most of the between sector shifts in employment were due to defense spending.

Similar results are found for industrialized countries other than the United States. Berman, Machin and Bound (1996) find that pervasive skill-biased technological change has led to a shift in labor demand toward skilled workers in twelve advanced economies, including Germany and the United Kingdom. Goux and Maurin (1997) find that in France the decline in demand for unskilled labor results primarily from changes in domestic demand that favored skill-

² Four education categories are high school dropouts, high school graduates, college dropouts and college graduates. The experience categories are 0-9 years, 10-19, 20-29 and 30 and over years.

³ Nonproduction workers include supervisors, those engaged in installation and servicing, sales, delivery, professional, technological administration, etc.

intensive products, rather than technology. However, Freeman and Katz (1996) show that changes in demand resulted in a rise in the unemployment rate of unskilled workers rather than a change in relative wages.

Robbins (1996) and Feliciano (1995) present evidence that income inequality has risen in some developing countries, as well. These countries include Chile, Columbia, Costa Rica, Mexico and Uruguay.

III.2 Emerging Evidence on Trade and the Wage Profile

However, several studies began to show a greater role for trade. Katz and Murphy (1992) perform analysis similar to Bound and Johnson. In particular, they are interested in determining the degree to which the demand for skilled labor has changed. They consider the inner product of a vector of the change in wages and change in employment. If this relationship is negative, that is a rise in employment is correlated with a fall in wages, then we are moving up the labor demand curve. Hence, a shift in supply must be driving wage changes. Indeed, a negative correlation emerges for the period 1965-1980.

However, during the 1980s positive wage changes are correlated with positive employment changes. Therefore, during this period there must have been a shift in labor demand moving us up along the labor supply schedule.

Furthermore, during the 1980s within-industry labor demand is stable. Rather, demand is shifting labor out of basic manufacturing into professional and business services. The demand for high school dropouts falls by 6 percent and the demand for male college graduates rises by 2.9 percent. Hence, there appears to be some support for the notion that factors are moving intersectorally, a result compatible with the hypothesis that international trade is altering the relative demand for skilled workers.

Katz and Murphy then attempt to determine the extent to which trade is altering labor demand. They calculate the net factor flows implicit in U.S. trade. Between 1979 and 1985

international trade resulted in a decrease in the demand for male high school dropouts by between 0.63% and 1.48% and a fall in the demand for female high school dropouts by 2.22% to 4.00%.

Borjas, Freeman and Katz (1992) also calculate the factor supplies implied by U.S. international trade and immigration. They find that for 1985-86, trade and immigration implicitly increased the supply of workers with a skill level of a high school dropout in the United States by 27 percent. The comparable number for college graduates is 9 percent.

What did this do to wages? Borjas et al. find that international trade implicitly raised the supply of high school graduates relative to college graduates by 4.4 percent which resulted in a 2 percent increase in the college graduate wage premium. Since the total change in the premium was 11 percent, trade and immigration account for 20 percent of the total.

Borjas et al. are criticized because much of their analysis turns on the fact that the U.S. trade deficit peaked as a fraction of GNP in 1985. In response, Borjas, Freeman, and Katz (1997) repeat the analysis for the period 1980-1995. They find that college graduate wages relative to high school graduate wages rise by 21 percent over the period. Immigration and trade are found to account for only 10 percent of the change. However, high school graduate wages relative to high school drop-out wages rise by 11.5 percent. Immigration and trade are found to account for 40-50 percent of the change.

III.3 The Stolper-Samuelson Critique and the Ensuing Debate

Studies relating the factor content of trade to changes in the wage profile came under fierce attack by several trade economists including Bhagwati (1991), Lawrence and Slaughter (1993) and Krugman and Lawrence (1994). Trade economists initially argued that researchers who work within the confines of perfect competition must ultimately draw on the mechanics of the Stolper-Samuelson Theorem in order to understand the relationship between international trade and the distribution of income. That is, when trade is opened with an unskilled-labor abundant country, the price of unskilled-labor intensive goods will decline domestically. Factors

of production leave the unskilled-labor intensive sector and are re-employed in the skilled-labor intensive sector. As production of the skilled-labor intensive good rises, an excess demand for skilled labor emerges. The labor market resolves the imbalance by raising the relative wage paid to skilled workers as compared to unskilled workers. Firms economy-wide respond to the change in relative factor prices by adopting a more *unskilled* labor-intensive technique of production. Therefore, the telltale sign that trade with unskilled labor-abundant countries is lowering domestic wages is that the ratio of skilled to unskilled workers should fall across all industries of the economy.

Lawrence and Slaughter (1993) have found that just the opposite occurred in the U.S. economy throughout the 1980s. U.S. manufacturing firms consistently substituted *toward* skilled labor in spite of its rising cost. Such a pattern of behavior by firms is only cost-minimizing if there has been a technological change rendering skilled labor relatively more productive. Similar results emerged for Japan and Germany, as reported in Lawrence (1996). Firms exhibit no systematic relationship between goods prices and the skill-intensity of production.

Furthermore, there does not appear to be any decline in the relative price of unskilled labor-intensive production. Therefore, both links key to the connection between trade and factor prices appear to be missing.

The results concerning growing wage inequality from the developing countries are also instructive. As noted above, recent evidence finds increased wage dispersion in countries such as Chile, Columbia, Costa Rica, Mexico and Uruguay. If Stolper-Samuelson type mechanics were at work then we should have observed the opposite. Developing countries that export unskilled labor-intensive goods should experience a *convergence* in the relative wage of skilled and unskilled workers rather than growing inequality. The fact that relative wages in developing countries followed trends in industrialized countries lends further evidence to the hypothesis that skill biased technical change is the driving force behind changes in the relative wages rather than international trade.

Cline (1997), among others, has criticized the results obtained by Lawrence, Slaughter and Krugman. First, it is argued that reliance on Stolper-Samulson mechanics seems unreasonable given the restrictive assumptions necessary to prove this theorem. However, the fact of the matter is that the fundamental nature of the argument concerning the connection between trade and wages is a Stolper-Samuelson story. It is difficult to see how trade would lower the wages of unskilled workers if there is no evidence that the prices of unskilled-labor intensive goods have fallen.

It is incumbent upon critics to specify the transmission mechanism through which trade affects factor prices if it does not go through goods prices. Cooper (1994) offers the possible explanation that U.S. firms compete with an import surge by attempting to upgrade product quality. Hence, the domestic price may not change or may even rise as the domestic industry abandons the production of low quality goods. The implicit fall in the price of low quality goods, is thus not observed.

Critics also contend that the ratio of skilled to unskilled workers need not fall to satisfy the Stolper-Samuelson Theorem if there is an increase in the total supply of skilled workers that occurs at the same time as an increase in imports. For example, suppose that there is a skill-biased technological change that is raising the demand for skill. The subsequent rise in wages increases the number of students who choose to obtain a college education. The combination of the increase in the supply of skill and the demand for skill will raise the ratio of skilled to unskilled workers economy-wide. Wages will also increase as long as the demand for skill rises by more than the supply of skill.

Now introduce cheap unskilled-labor intensive imports. The Stolper-Samuelson Theorem tells us to expect that there will be downward pressure on the ratio of skilled to unskilled labor. However, there is nothing in the logic of the story that requires that the downward pressure on the skill-intensity of production from international trade dominate the upward pressure on the skill-intensity of production due to the skill-biased technological change.

Therefore, as long as some skill-biased technological change is present, international trade may be depressing the relative wage of unskilled workers even though firms are adopting a more skill-intensive technique of production. However, it remains the case that there must be a fall in the price of unskilled labor-intensive goods if international trade is to lower the wages of unskilled workers.

Some have disputed the evidence from the price data reported by Lawrence and Slaughter. Lawrence and Slaughter claim that analysis of two- and three-digit SIC industries indicates that traded goods prices show no systematic relationship to skill-intensity. Leamer (1992), using a different method of aggregation, claims to have found that the traded goods prices of unskilled labor-intensive sectors have fallen. However, given the arbitrariness of Leamer's construct, it is difficult to evaluate his evidence.

Further work by (1996) suggests that the relative price of labor-intensive goods fell during the 1970s but confirms the results of Lawrence and Slaughter that the price of labor-intensive goods did not fall during the 1980s. The decline in labor-intensive imports in the 1970s seems overwhelmingly caused by a surge in imports of wearing apparel and textiles. However, new import restrictions imposed in the 1980's stemmed the decline in import prices.

Leamer (1996) then considers the possibility that product prices of skill-intensive goods may have fallen as a consequence of technological improvements, thus masking the fall in import-competing goods prices. Therefore, he allows technological change to affect product prices. However, even abstracting away from technological change, relative import prices are found to have fallen only during the 1970s.

III.4 Reconciling the Factor-Content and Stolper-Samuelson Results

How then do we reconcile the contradictory results from the models based on the Stolper-Samuelson Theorem and those based on the factor-content approach? First, it is important to note that the early criticisms of the intellectual foundations of the factor-content approach appear to be relatively unfounded. Krugman and others had argued that the factor-content approach is evidence without theory.

However, Deardorff and Staiger (1988) demonstrate under fairly reasonable conditions that the two approaches are easily reconcilable. They find that each trading equilibrium has as its dual a nontrading equilibrium in which the factor endowments have been suitably adjusted. Identical factor prices will emerge in the two equilibria. As a consequence, one can reason from the implicit change in factor endowments embodied in trade to factor prices just as readily as one can reason from goods prices to factor prices as long as there has been no change in tastes or technology.

Baldwin and Cain (1994) adopt the Deardorff-Staiger approach to analyze U.S. manufacturing trade over the period 1977-87. They find that trade accounts for 2.3 percentage points of the 17 percentage point increase in the gap between wages earned by workers with more than 12 years of education relative to workers with 12 years or less of education.

Second, Krugman, Lawrence and Slaughter's observation concerning the growing skilled labor intensity of production turns out not to be the smoking gun that it first seemed. The fact that industries consistently substituted toward greater skill over the period that the wages of skilled labor was increasing, contrary to the requirements of the Stolper-Samuelson Theorem, can easily be accounted for if there was skill-biased technological change, accompanied by changes in factor supply, occurring over the same period. As discussed above, skill-biased technical change will raise the demand for skill, thereby bidding up its price. There appears to have been a supply response. Hence, more skilled labor and less unskilled labor became available for employment thereby raising the skill-intensity of production across industries.

The effect of international trade for a skill-abundant country is to raise the demand for skilled labor. If the change in supply of skilled labor had not been occurring then the skill-intensity of production would have fallen, as required by Stolper-Samuelson mechanics. However, the supply of skilled labor did increase. So firms economy-wide were able to intensify the use of skilled labor.

The absence of a change in relative prices is somewhat more difficult to account for. However, Sachs and Shatz (1995) offer a possible explanation. The connection between goods prices and factor prices is characterized by a “magnification” effect. The percent change in goods prices is a share-weighted average of the percent change in input prices. Consequently, the dispersion of factor price changes is always larger than the dispersion of goods price changes. That is, the change in factor prices is a magnification of the change in goods prices.

One could argue, as Krugman (1995) has, that as a consequence of the magnification effect, unobservable changes in goods prices may translate into readily observable changes in factor prices. Therefore, we may not be able to detect the change in goods prices that is generating the change in the distribution of wages. Krugman (1995) then adopts a standard trade theory equation that relates the change in wages to the change in relative factor endowments and finds results that are broadly comparable with the view that trade may have accounted for as much as 15 percent of the growing wage disparity between high school and college graduates between 1980 and 1988.

Similarly qualified results have been found for Europe. Neven and Wyplosz (1996) find that for Germany, wages and employment appear to be adversely affected by import competition. However, for Italy and the United Kingdom imports from advanced economies play a more important role in determining labor market outcomes.

III.5 Some Other Studies of Trade and Wages

Other studies have produced larger trade effects on wages, e.g., Borjas and Ramey (1995). However, deep criticisms of the use of data cast considerable doubt on the magnitude of the results.

One of the most comprehensive studies of the impact of North-South trade on wage inequality was undertaken by Wood (1994). Wood, adopting the factor content-approach, calculates the factor content for skilled workers, unskilled workers and capital per unit of exports to LDCs and per unit of imports from LDCs. Net factor content is then applied to total trade to calculate the impact on the implicit net demand for each factor or production in the industrialized countries.

When calculating the implicit supply of factors to the industrialized countries embodied in LDC exports, Wood assumes that LDC exports are not competing with industrialized country production. Therefore, rather than use the labor input coefficients in industrialized countries to calculate the implicit factor flows, Wood uses the labor input coefficients in developing countries. In other words, Wood is calculating the actual labor embodied in the trade flow from developing countries rather than the labor that would have been embodied in the goods had they been produced in the west. Since developing countries tend to use a more unskilled-labor intensive technique of production, Wood's technique over-estimated the unskilled labor displaced by developing country exports.

Not surprisingly, the results obtained by Wood are stronger than those obtained by others using the factor-content approach. In spite of some adjustment to the labor input coefficients, to address the obvious criticisms, Wood still finds that all of the growing wage dispersion in the North is attributable to North-South trade.

III.6 Final Observations on the Wage-Trade Debate

A couple of observations concerning the role of trade in wages are in order at this point. First, much of the discussion concerning trade and wages has focused on the role of trade relative to technological change. For the purposes of understanding wage determination, establishing the relative importance of these two factors is critical. However, for the purposes of understanding the relationship between trade and wages, the absolute response of wages to trade openness is of interest. We are concerned with the presence of technological change only to the extent that it dampens or obscures the effects of trade on wages.

Cline (1997) concludes based on a review of the literature that the preponderance of evidence indicates that international trade accounts for an increase in the return to some college education of about 2.5 percentage point over the decade of the 1980s. In some sense, this number seems small. Krugman's (1995) explanation is that trade with developing countries accounts for only two percent of OECD GNP, hence the small change in factor prices.

However, as low-wage countries turn toward an export-promotion development strategy, the implication for trade and, therefore, wages of unskilled workers could be much more severe. Nevertheless, the impact will be transitory. As developing countries industrialize they will have an incentive to increase human and physical capital formation. Overtime, the stock of unskilled labor relative to skilled labor worldwide should approach that currently observed in the industrialized countries. Therefore, in the early stages of an export promotion strategy, the negative impact will fall primarily on unskilled labor in industrialized countries. But as the stock of human and physical capital increase in the developing world, the impact will ripple up the wage hierarchy of industrialized countries.

III.7 Trade and Wage Stability

The foregoing analysis has focused attention on the role of international trade in reducing the demand for unskilled workers in industrialized countries. However, Rodrik (1997b) draws

attention to the impact of trade on the *elasticity* of the demand for labor and the consequences for real wages. International trade provides consumers with the opportunity to substitute toward imports and away from the domestic good in the event that some factor price increase raises goods prices. The result is to increase the elasticity of demand for the scarce factor. Richardson and Khripounova (1996) report that the cross-sectional labor demand elasticity has doubled between 1979 and 1991 for production workers.

There are several implications for increased labor demand elasticity. First, workers experience more volatility in wages and hours worked. Gottschalk and Moffitt (1994) claim that one-third to one-half of the widening wage distribution in the 1970s and 1980s can be attributed to the increase in the short-term variance in earnings. Farber (1996) also documents a decrease in job security in the 1990s compared to the 1980s. Job-loss rates are as high or higher now than they were during the depths of the recession of the early 1980s. The highest rates are experienced by craftspeople, operatives and laborers.

An increase in the elasticity of the demand for labor also alters the bargaining environment between labor and management in imperfectly competitive firms. Workers could, in principle, have a greater difficulty obtaining a share of economic rents, a point made by Borjas and Ramey (1995). Freeman (1996) argues that about one-fifth of the rise in U.S. wage inequality is due to the decline in unionization density.

IV. Empirical Evidence on the Relationship between Trade, Production Cost, Comparative Advantage and Observance of Core Labor Standards

The evidence presented in the preceding section suggests that the impact of trade on wages in industrialized countries while evident is also modest. We now turn to the question as to whether variation in labor standards across countries might be playing a contributing role in trade competitiveness and wage inequality in industrialized countries.

The relationship between the observance of core labor standards and international trade performance has been explored empirically by several authors. It is relatively straightforward to perform a simple correlation between measures of core labor standards observance and various measures of trade performance. However, this type of analysis tells us little as to the role that labor standards are playing in determining trade performance. In order to gauge the marginal contribution of labor standards one must compare each country's trade performance against a baseline expectation as to what such a country should be trading given factor endowments and other determinants of trade.

Many country characteristics play a role in constructing the expected baseline trade performance. Factor endowments along with many other factors, including (perhaps) labor standards are, central to the determination of both the pattern of trade and the volume of trade. Establishing the baseline for each country is a challenge but crucial to obtaining quality evidence. As we will see in the following discussion, some authors are more successful than others in controlling for other sources of comparative advantage.

Van Beers (1998) investigates the question, "Do OECD countries with high labor standards export less labor-intensive goods than those with low standards?" He estimates a bilateral gravity equation, regressing bilateral trade flows on the GDP of the importer and exporter, population of the importer and exporter, distance, and labor standards stringency of the importer and exporter for the year 1992. The measure of labor standards stringency is taken from the OECD Employment Outlook (1994, p. 152). This index incorporates measures of work time, contracts, minimum wages and worker's representational rights but does not include any of the core labor standards.

When the dependent variable includes all exports, the measure of labor standards stringency does not significantly explain the bilateral pattern of trade. Bilateral trade is then separated into labor-intensive and capital-intensive groups. Again, van Beers finds that labor standards stringency does not affect the exports of labor-intensive goods.

Next, trade is divided between low skill-intensive, intermediate skill-intensive and high skill-intensive categories. In this case, countries with strict labor standards are found to export *less* high skill labor-intensive goods. Rather, such countries export capital-intensive goods produced with low skilled labor. *Therefore, the role of strict labor standards is to reduce the exports of labor and capital intensive goods produced with skilled labor.*

These somewhat counter-intuitive results suggest that laws regulating work-hours, minimum wages and representational rights fall disproportionately on firms that hire *skilled* labor. The debate on international labor standards leads us to expect the opposite. That is, countries that export unskilled-labor intensive goods would be disadvantaged if required to adopt standards that prevail in high-skill abundant countries.

By contrast, Mah (1997) focuses exclusively on 45 developing countries that are not members of the OECD. In this study, export value as a fraction of GDP is regressed on measures of freedom of association rights, the right to organize, the right to collective bargaining, prohibitions against forced labor and discrimination in employment and the real interest rate. The labor rights variables are merely a binary index of whether a country has ratified the relevant ILO conventions.

Mah finds that each country's export share of GDP is negatively correlated with freedom of association rights and strongly negatively correlated with rights to nondiscrimination. Exports are also negatively correlated with the right to organize and collective bargaining but the relationship is much weaker.

While the regression results obtained by Mah are clear-cut, it is hard to know what to conclude. In any model in which trade is driven by comparative advantage,⁴ the volume of trade (as opposed to its composition) is determined by how different a country is from the rest of the world in terms of the characteristics that drive international trade. Trade volume will be low if

⁴ In models in which countries engage primarily in intra-industry trade, trade as a fraction of GDP is positively correlated with GDP.

countries are similar and large if they are different. Therefore, the strongest conclusion that we can draw here is that *developing countries who ratify ILO conventions with regard to worker rights are more similar to their trade partners in terms of the characteristics that determine trade than are developing countries that do not ratify ILO conventions*. However, since the estimated equations do not have any control variables, it is not possible to determine which characteristics are determining trade-related country differences. It may be worker rights, but it is equally the case that other country characteristics are central to determining the volume of trade.

A similar weakness characterizes the analysis of Jessup (1999). Jessup considers the export performance and ability to attract FDI for developing country democracies for the period 1989 to 1998. Democracies are those that are rated “free” by Freedom House. He finds that developing country democracies’ share of U.S. non-oil imports declined from 53.4 percent to 34.9 percent over the decade. Of this, 10.8 percentage points were picked up by countries rated as “not free” and 7.7 percentage points were picked up by countries ranked as “partly free.” The strong trend remains even if China and Mexico are excluded from the data.

A more distinctive pattern emerges when considering the exports of manufactured products only. The developing country democracies’ share of U.S. manufacturing imports fell from 56.7 percent to 35.1 percent. Countries ranked as “not free” gained 10.6 percentage points and those ranked as “partly free” gained 10.9 percentage points. These results are not sensitive to countries that changed rankings during the sample period.

A slightly different pattern emerges for U.S. FDI. Countries rated as “free” increased their share of U.S. FDI by 1.8 percentage points and countries rated as “not free” increased their share by 5.7 percentage points. This growth came at the expense of the “partly free” for whom U.S. FDI fell by 7.5 percentage points. In the case of FDI, the figures are heavily dominated by a small number of recipients. Brazil, Mexico, Malaysia and China account for well over half (67.7%) of U.S. FDI for manufacturing in developing countries.

Rama (1995) focuses attention on the determinants of economic growth of Latin America and the Caribbean for the period 1980-1992. Explanatory variables include measures of labor market interventions such as ratification of ILO conventions, annual paid leave, social security contributions, the minimum wage, and an aggregate index of labor-market rigidity. Other explanatory variables include unionization rates, the size of government employment, and macroeconomic determinants of growth and labor costs. The author concludes that rigid labor markets were correlated with slower growth. However, poor performance was not due to labor-market interventions. Rather, inefficient government employment and high unionization rates were the main sources of slow growth.

Generally, the results presented above provide little consistent evidence concerning the impact of labor standards and civil liberties on economic performance. We may be tempted to conclude that the relationship is weak and therefore international labor standards can be imposed without serious economic consequences. However, it is more likely that the lack of a consensus stems from the equation specification rather than the phenomena underlying the data.

IV.1 Controlling for the Determinants of Trade

As discussed above, labor standards are only one of several determinants of economic performance. Entering labor standards as an explanatory variable without properly controlling for other key variables will lead to biased estimates. Rodrik (1996) provides an excellent example of how such analysis ought to be undertaken. Not surprisingly, he obtains statistically significant results that accord well with intuition.

Rodrik uses several different measures of labor standards. These are:

1. Total number of ILO conventions ratified.
2. Number of ILO conventions pertaining to labor standards ratified. These are Convention 29 (Forced Labor), 87 (Freedom of Association and Protection of the Right to Organize), 98

(Right to Organize and Collective Bargaining), 105 (Abolition of Force Labor), 111 (Discrimination), and 138 (Minimum Age).

3. Freedom House indicators of civil liberties and political rights. (These variables focus on actual practice rather than on formal obligations).
4. An indicator of the incidence of child labor. This index captures inadequacies in legislation or enforcement relating to child labor restrictions.
5. Statutory hours of work in a normal week in manufacturing and construction.
6. Days of annual leave with pay in manufacturing.
7. Percentage of the labor force that is unionized.

Rodrik first considers the impact of labor standards on labor costs per worker in manufacturing. Labor costs are primarily determined by productivity. Rodrik measures productivity growth by per capita income. In order to determine whether labor standards have an influence on labor cost above and beyond productivity growth, labor cost is regressed on per capita income and the various measures of labor standards for the period 1985-1988 for all countries reporting labor cost data.

Per capita income, of course, dominates the equation. However, Rodrik also finds that ILO conventions ratified, Freedom House indicators of democracy, and the index of child labor are also statistically significant and large. For example, introducing child labor legislation or intensifying enforcement of existing law raises labor cost per worker by \$4849-\$8710. Rodrik does not believe that child labor law itself has produced such a large change in cost but rather that the child labor variable is a proxy for all labor standards.

Rodrik next turns to the determinants of comparative advantage in labor-intensive goods. Comparative advantage in labor-intensive goods is measured by the fraction of textiles and wearing apparel exports in total exports (excluding fuels). Comparative advantage is primarily determined by factor endowments. Therefore, the comparative advantage variable is regressed on the population-to-land ratio which is a measure of the labor endowment, average years of

schooling in the population over 25 which is a measure of the stock of human capital and the labor standards variables. The population and human capital variables have the expected sign. However, generally the labor standards variables, while having the expected sign, are not statistically significant. The lone exception is statutory hours worked. The longer the work-week the stronger the comparative advantage in textiles and clothing.

The sample is then divided into high and low-income countries where the dividing line is \$6000 per capita GDP in 1985. The division of the sample greatly improves the overall fit of the equation. Furthermore, the child labor variable becomes statistically significant in some specifications.

Finally, Rodrik turns to foreign direct investment. The value of investment by majority owned U.S. affiliates abroad as a fraction of the stock of such investment is regressed on the black-market premium for foreign currency, population, income growth in the host and the labor standards variables. The black market premium is a proxy for government policy distortions for the period 1982-1989. The freedom house measures of democracy and the child labor variable are statistically significant but not of the expected sign. Countries with weak democratic institutions and child labor practices attract *less* U.S. capital than democracies that protect child workers. Therefore, there is little evidence that low standard countries provide a haven for foreign firms.

Rodrik takes pains to point out, however, that the theory underlying the determination of foreign investment is far less well developed than for trade. Thus, there may be omitted variables that bias the labor standards coefficients.

Nevertheless, Rodrik obtains precisely the opposite result concerning the relationship between democratic institutions and FDI as obtained by Jessup. The difference is in part due to the fact that the two studies cover different periods with Rodrik focused on the 1980s and Jessup on the 1990s. However, it is also the case that Rodrik attempts to control for several factors that

might be determining FDI along with democratic institutions. Jessup, by contrast, only presents raw data.

The literature on the relationship between economic performance and labor standards suffers from an even greater problem than that of failing to control for other factors determining trade and growth. It is customary to treat labor standards as exogenous, but it is quite clear that industrial labor relations are generally determined endogenously. Three aspects of endogeneity pose problems for interpreting analysis. First, labor standards are set in response to goods markets imperfections. Second, labor standards are set as part of a broader industrial policy. Third, labor standards are set with regard to the nature of the production process.

Rama and Tabellini (1997) provide an excellent analysis of the relationship between goods markets imperfections and labor market standards. In their analysis, product market distortions and labor market distortions are jointly determined. For example, labor market distortions such as a minimum wage are determined as an optimal response to barriers to product competition. In the authors' view, removing distortions in the goods markets will give rise to an endogenous liberalizing adjustment to labor standards in the factors markets.

Perhaps more important than the simultaneous determination of goods and factor markets distortions is the simultaneous determination of industrial policy and industrial labor relations policy. The fact of the matter is that, rightly or wrongly, many developing country governments pursuing a stage-one export promotion strategy believe that stable and predictable labor relations are central to the policy's success. Therefore, results showing a positive correlation between export performance or rapid economic growth to the suppression of labor rights may, in fact, be capturing the relative success of various development strategies rather than the impact of labor standards themselves. Kuruvilla (1996) carefully documents the connection between industrial policy and industrial labor relations policy in Singapore, Malaysia, the Philippines and India. In each case, labor rights are negatively correlated with a successful stage-one export promotion strategy. Results are summarized in the Appendix.

Kuruvilla does not provide any evidence as to whether these governments needed to follow restrictive labor market practices during the early stages of export promotion. However, clearly governments thought that foreign investors required predictable labor market conditions. As a consequence, restrictive labor market practices came to be correlated with first-stage export promotion, a period in which the rate of economic growth and imports of foreign capital are extremely high. Therefore, any study that calculates a simple correlation between economic performance and labor standards may simply be picking up a correlation between economic performance and industrial policy.

Finally, it is important to note that the studies undertaken thus far consider the economic impact of endogenously determined labor standards. These are standards set within the political and economic context of each country. Therefore, they may or may not provide evidence of the economic consequences of imposing labor standards exogenously as would be the case if standards were imposed as a matter of international law. In order to gather evidence concerning exogenously imposed labor standards one would have to construct a model that predicts labor standards as a function of various economic variables. The prediction error of such an equation is a measure of labor standards that have been set exogenously. If one then regressed various measures of economic performance on the prediction error of the labor standards equation, that would provide information on the impact of exogenously imposed labor standards.

V. Trade Standards in the International Arena

The intense focus on international labor standards that has developed over the past decade has several different motivations and dimensions. Part of the debate turns on whether the pursuit of international standards is driven by hidden protectionism, a sense of fair play, humanitarian concerns, inefficiency of decentralized policy making, or the domestic political economy of trade policy. A great deal of the discussion has focused on the desirability of

international coordination of labor standards, or perhaps even harmonization, and the forum in which international discussions should occur. Each of these issues will be addressed in turn.

V.1 Race to the Bottom

One source of the pressure for international coordination of labor standards is the fear that, in the absence of coordination, a prisoner's dilemma of labor standards will emerge. Countries will each lower their own standards in order to gain a competitive advantage over foreign exporters. The prisoner's dilemma in labor standards may also emerge as a by-product of the competition over the international allocation of capital. As the argument goes, some of the hard-fought rights that workers in industrialized countries have earned, may be lost during the competition for foreign markets.

The possibility of a prisoner's dilemma outcome raises the question as to how much coordination is desirable. Must standards be harmonized according to a universal guideline or will some more limited coordination be more effective in establishing an efficient resource allocation?

First, it is worth pointing out that if all countries are small, then their individual standards do not affect one another. So there certainly will be no race to the bottom. In a well functioning small democracy each country will set standards for which the social benefit is equal to or greater than the social cost. The case for harmonization or coordination does not emerge unless countries are large enough relative to one another that strategic interaction occurs. Of course, as the range of regional trade agreements widens, the strategic interaction between trade groups will intensify.

Second, it is straightforward to demonstrate that a race *all the way* to the bottom is unlikely to occur in fairly competitive markets even if countries are large enough to affect one another. Wilson (1996), Lawrence (1996), Srinivasan (1996) and Krueger (1996), among others, lay out the simple analytics.

Standards that currently exist are partly established through labor-management negotiations and partly through domestic legislation. Consider first the aspects of standards that are the by-product of the market place. Firms in a competitive market are driven to set the cost of the total compensation package equal to the worker's marginal value product. The total value of the worker to the firm is fundamentally driven by the worker's productivity and the price that the firm can charge for its output. The allocation of the package between benefits, money wages and working conditions depends first and foremost on worker preferences.

Any firm that attempts to gain a competitive advantage by cutting benefits without paying increased money wages is essentially trying to cut wages below the worker's marginal value product. Competitive pressure from other employers will ultimately force the firm to return the total compensation package to the original level if the firm expects to be able to hire workers.

Any attempt to substitute money wages for benefits will meet the same end. A cost-minimizing firm will seek to find the lowest cost benefits-money wage mix that will yield its employees the market-determined level of utility for work. Any firm that attempts to shift away from the cost-minimizing mix will increase the cost of total compensation without making workers better off. Once again, competitive pressures will drive the deviant firm back to the market-determined compensation package.

The only ways in which international competition can affect the composition of the compensation package is if (1) the price of traded goods falls, putting downward pressure on the value of the worker's marginal product or if (2) a capital outflow lowers the amount of capital each worker has to work with, thus lowering productivity. Both of these could happen, but the empirical evidence cited above suggests that it is unlikely.

In the context of the environment, Levinsohn (1996) finds very little evidence that environmental regulation affects firm location. Rather, many firms employ the same technique of production at their foreign plants as they do at home. A similar argument applies the foreign labor practices by multi-national firms. Labor practices in foreign plants are broadly similar to

their domestic labor standards. In some cases employers actually prefer to have standards imposed because they constrain the behavior of some of their less scrupulous competitors as noted by Charnowitz (1996). In other cases, firms use domestic standards in their foreign operations to avoid the critique that they are shopping for low standard locations as argued by Bhagwati (1995).

V.2 Labor Standards and Developing Country Competitiveness

The flip side of the above argument is that imposing labor standards on the operations of foreign firms will not alter relative competitiveness either. Even if the west is successful in imposing labor standards internationally, foreign firms still can only afford to pay workers their marginal value product. Therefore, a rise in benefits must be matched by a fall in money wages. However, the worker, as a consequence, may be worse off because he/she is no longer receiving the benefits-money wage mix that is most desirable, but the costs of the firm are unchanged.

For a similar reason, developing country concern that the imposition of labor standards will erode their comparative advantage is somewhat off the mark. It is commonly argued that developing countries' comparative advantage lies in low wages. Any demand that raises labor costs will deny developing countries their right to exercise their comparative advantage in international trade.

However, developing countries have low wages because of low productivity. Rather, the comparative advantage derives from a relative abundance of low skilled labor. Several studies have established that productivity adjusted wages are very similar across countries. [See, for example, Rodrik (1997).] Imposing labor standards on developing countries will not necessarily raise the cost of labor. It will simply require labor in developing countries to divert some of their money wages to benefits, which may make workers worse off.

V.3 The Race to the Bottom in Labor Market Regulations

The argument concerning regulation is somewhat different. Regulations that improve relations between workers and firms are not likely to be a target in a race to the bottom. Any de-regulation that results in a deterioration in labor relations is unlikely to improve the performance of firms. So governments in a well functioning democracy will be disinclined to de-regulate if the objective is to meet competition from foreign firms.

Regulation also serves to internalize external effects of the production process. For example, a production process that, unknown to workers, is harming their health uses scarce resources without compensation. From an efficiency point of view, the dangerous technology is being overused. To the extent that unions or government regulations draw attention to the dangers, the externality will be internalized and the market will return to an efficient allocation.

De-regulation in this context or constraints on union activity will return the economy to an inefficient allocation. If production is for export, then a firm that exports a good using an inefficient amount of the dangerous technology is under-pricing the good relative to its true resource cost. The nation's overall interest is served when foreign consumers pay the full resource cost of producing a good. Therefore, de-regulation may expand exports of a particular good but those additional exports will be sold below the true cost of production. In a relatively competitive market, such an outcome will be welfare reducing. So, in this case, a country would not be lured into a prisoner's dilemma with another country that does not regulate.

In order for a prisoner's dilemma in labor standards to emerge, de-regulation has to be a dominant strategy for both countries. Clearly, in the above case, some regulation serves the national interest better than no regulation. So de-regulation cannot dominate.

This leads us to the question as to what kind of strategic interaction we might expect. As demonstrated by Brown, Deardorff and Stern (1996) the interaction depends on the type of model assumed. For example, suppose each country produces a differentiated product. A resource using labor standard will shift the production possibility curve in. Consequently, the supply of exports and the demand for imports will decline, leading to an improvement in the terms of trade.

In this model, the imposition of a standard not only benefits the country by correcting a market failure but also triggers a beneficial improvement in the terms of trade. Such a country is going to be tempted to *over-regulate* its labor market. In other words, a *race to the top* will occur. Coordination will be required to induce both countries to return to the lower efficient level of labor standards.

Alternatively, in a Heckscher-Ohlin world, a labor standard that uses labor will raise the price of the labor-intensive good on the world market. This is beneficial for the labor abundant country while harming the labor scarce country. As a consequence, the labor abundant country will tend to over-regulate its market while the capital abundant country will tend to under-regulate the labor market. Once again, no race to the bottom has occurred. However, coordination will help both countries achieve an optimal level of regulation.

Rodrik (1996) makes a somewhat different argument concerning the race to the bottom. He argues that opening to trade makes standards themselves more costly and so, therefore, harder to maintain. In a closed economy, firms can pass some of the cost of labor standards on to the consumer through higher prices. But in a free trading world in which prices are set on international markets, all of the cost of labor standards must be absorbed by the firm or by workers. Given the increase in the cost of labor standards to the firm in a trading situation, some downward pressure on labor standards might emerge.

V.4 Harmonization vs. Coordination

From the point of view of gains from trade, the interest in coordinating labor standards is a bit of a mystery as argued by Krugman (1997). The gains from trade are larger the more countries differ. The source of the differences is immaterial to the gains from trade. In fact, trade between countries with different moral values will generate welfare gains. Further, the gains from trade do not depend on an efficient allocation of resources in the partner country. As noted by

Krueger (1996), if differences among countries are diminished through harmonization of labor standards then the gains from trade will be smaller as well.

However, the conclusion that there will not be a race to the bottom reached above does not mean that there will not be some competitive change in regulations. This suggests that coordination in the setting of standards may be desirable. However, the above discussion does not lead us to the conclusion that all countries should harmonize on a common standard. To the extent that differences in standards reflect differences in income level and tastes, efficiency certainly dictates a variety of standards.

V.5 Labor Standards and Trade Disciplines

Currently, labor standards are unequivocally excluded from the WTO with very few exceptions. There is considerable analysis supporting the current status of labor standards.

Srinivasan (1996) argues in favor of a WTO that is concerned primarily with unfair trade practices that emerge at the border. The problem with adding labor standards to the anti-dumping clause is that such an action would establish a principle that any domestic policy that affects costs could be subject to anti-dumping duties.

Srinivasan (1998) makes a further argument against including labor standards in the WTO. Rather, he believes that labor standards should be in the exclusive purview of the ILO. In Srinivasan's view, monitoring tasks ought to be allocated across agencies according to the appropriate tools of enforcement. The virtues of free trade can be established without regard to income level or stage of development. Furthermore, we can determine that from an analytical point of view, trade barriers ought to be harmonized at zero. As a consequence, trade standards are clearly articulated, apply equally to all participants and the punishment for deviations can be severe.

By contrast, we cannot demonstrate clearly and unequivocally what the appropriate labor standards ought to be nor can we establish that labor standards ought to be applied uniformly

across all members. Furthermore, countries will endogenously move toward tighter labor standards as a byproduct of economic development. Therefore, labor standards are poorly suited to the culture of the WTO. Rather, labor standards are most appropriately encouraged through economic development and technical assistance, which is the approach adopted in the ILO.

Brown (2000) levels a somewhat different criticism of incorporating labor standards in the WTO. There is no reason in principle why the culture of the WTO could not set different standards and enforcement mechanisms for trade and labor standards. The problem, however, is that the United States, in particular, cannot credibly pre-commit not to try to interpret poor labor practices in terms of the trade discipline equivalent. If the United States were to succeed, the harsh and rigid rules governing international trade would be applied inappropriately to labor standards. Rather than run the risk, developing countries will seek to partition labor standards into a separate organization, such as the ILO, where the maximum power to punish by the agency is appropriate for labor standards.

Maskus (1997) points out that even extending Article XX to include a broader definition of labor standards would not be relevant. This article requires the acting government to demonstrate that suspending trade is necessary to correct the offending conduct. However, as discussed below, trade barriers are almost never the optimal intervention where labor standards are concerned and frequently have adverse consequences. Therefore, Article XX is unlikely to be relevant even if broadened.

Krugman (1997), however, takes the approach of a realist when thinking about the issues that should be subject to international trade negotiations. He views the WTO as, at least in part, an international agency that strikes international agreements that make it possible to maintain a coalition for open trade *within* each member. Maintaining support for an open trading regime frequently depends on controlling the impact of trade on the distribution of income. Since harmonization of labor standards can diminish the impact of trade on the distribution of income they may become a legitimate basis for negotiations.

Krugman's conclusions are drawn from the analysis of Brown, Deardorff and Stern (1996). They analyze the case in which costly but socially desirable standards are imposed by legislation. Underlying the legislation is the presence of some externality in a sector that is not efficiently mediated by the market. In a small open economy, firms subject to the legislation bear a new cost but are not able to change price. Therefore, all of the cost of the legislation is born by the producer.

However, if all countries in the trading system are subject to the similar legislation, the worldwide supply of the good will fall and, thus, the international price will rise. A rise in the world price allows domestic producers to pass some or all of the cost of the regulation on to consumers. A similar result would have occurred if the economy had been closed.

The conclusion, of course, is that developing a political consensus for the efficiency enhancing standard in the presence of an open trading system will be easier if all governments in the trading system agree to harmonize on the same standard. That is, harmonization that reduces the distributional effects of desirable economic policy supports both free trade and efficient resource allocation.

Some analysts such as Charnowitz (1996) and Lawrence (1996) make a similar argument with regard to the relationship between trade standards and the impact of trade on wages. International trade is expected to harm the scarce factor of production, which in the west is unskilled labor. If international trade standards are basically labor using then world-wide adoption would contract the supply of labor and bid up the international wage. The impact on labor scarce countries would be to reduce the negative income effect on unskilled labor thereby countering some of the adverse distributional effects of international trade.

Other domestic political failures can also be used to justify placing labor standards on the international agenda. First, countries that do not have democratically elected governments may not choose a socially optimal level of standards. Second, newly industrializing countries may not realize that they have lost a comparative advantage in unskilled labor intensive production or are

suffering through the political consequences of the transition to the second stage of industrialization. Such countries may be inclined to resist labor standards in a vain hope of preserving competitiveness in sectors that are intensive in unskilled labor.

V.6 The Political Context

In spite of the theoretical and practical challenges to international labor standards, countries such as the United States have continued to press the issue inside and outside the WTO. However, Bhagwati (1995) argues that the U.S. position on labor standards is untenable for several reasons. First, the U.S. record on labor standards is not without its weaknesses. In particular, Bhagwati cites the brutal treatment of migrant labor, inadequate and corrupt enforcement of U.S. labor law, wearing apparel sweatshops that employ female immigrant labor for low wages and long hours and the air traffic controller *union-busting* by the Reagan Administration. Second, it is Bhagwati's view that the spread of moral values should not be accomplished by coercion.

Bhagwati is quite open in presuming that the motivation for international labor standards is fundamentally protectionist. However, the empirical evidence on this point is mixed. Krueger (1996) draws evidence from the sponsors of the Child Labor Deterrence Act of 1995. The intent of the legislation was to prohibit imports of goods by the United States that were produced with child labor. There were 35 co-sponsors in the House of Representatives and seven in the U.S. Senate. If the legislation were fundamentally protectionist then one would expect that the voters in the districts supporting the legislation would be disproportionately made up of voters who are in competition with child labor.

Krueger looks at four voter characteristics for each district. These are the proportion of voters older than 25 years who have less than a high school diploma, union density, vote on the NAFTA and party affiliation. The proportion of voters with less than a high school diploma was not a significant predictor of support of the legislation. This result in particular suggests that the

motivation was not protectionist. Districts with high union density were more likely to support the legislation. However, as Krueger points out, union members are not in competition with child labor. Finally, opponents of NAFTA and GATT legislation were more likely to co-sponsor the Child Labor Deterrence Act. This last result suggests that those who support international labor standards are more likely to support protectionist policies generally.

Though the results seem to weakly support the notion that opposition to imports made by child labor is protectionist, the evidence is nowhere near as strong as in the case of NAFTA. NAFTA was opposed by representatives from districts that had voters with lower than average educational attainment and high union density. Krueger interprets the evidence of supporting the view that opposition to child labor is a luxury good and, therefore, is opposed primarily by voters with high incomes.

In a critique of Krueger's analysis, Srinivasan (1996) points out that poorly educated workers are less likely to vote than the average. However, if the voters most adversely affected by trade don't vote, then one would still not expect trade legislation to be fundamentally protectionist.

VI. The Economic Effects of an International Labor Standards Policy

The economic effects of an international labor standards policy are as varied as the models used for analysis. The discussion below attempts to give a flavor of the wide range of conclusions that one might draw.

VI.1 Child Labor

We consider first, the economic analysis of policies concerning child labor. In the course of the discussion great emphasis will be placed on each policy's impact on the welfare of the children involved rather than on the level of child labor. Policies that lower the level of child employment while simultaneously making children worse off are not considered successful from

the point of view of this survey. In fact, we will find that there is considerable evidence, as discussed below, that employment of older children can be productively and humanely combined with schooling.

Similarly, policies that are welfare-improving in the sense of increasing the sense of well-being that western consumers experience knowing that imports were not produced by child labor will only be considered successful if the welfare of children involved can also be shown to have improved as a consequence. Prohibiting children from working will frequently leave them with inferior alternatives. Therefore, evaluating the alternatives to working will be central to the analysis.

Maskus (1997) begins his analysis of child labor policy with a model of family choice in which parents make child employment decisions to maximize a family welfare function subject to market constraints. A child will attend school rather than work only if the net return to education is larger than the forgone wage. Therefore, in order to tilt the balance toward school one or more of the following must happen: (1) the adult wage rises, (2) the child wage falls, (3) the cost of education falls, and/or (4) the productivity of education rises.

Policy analysis is carried out for a small open economy in which the export sector is adult labor intensive, the import sector is capital intensive and a nontraded intermediate input to the export sector is produced using child labor. The child's labor supply is increasing in the child's wage and decreasing in the adult wage. A child who does not work is assumed to take leisure or receive an education. The marginal child worker is the youngest since the opportunity cost in terms of foregone education falls as the child ages. Finally, disutility from child work is a public good.

In this setting, a tax imposed on child work can lead to the social optimum in the sense of internalizing the external effect of child work on the well being of western consumers. However, the impact on children themselves is ambiguous. First, the tax will have the effect of raising the minimum age at which children begin working. This is the case since younger children are closer

to the work-leisure margin than older children and, therefore, are more likely to have their employment decisions affected by the tax.

Second, for children who are no longer working, the effect of the tax could be positive if, as the model assumes, unemployed children take leisure or receive an education. However, if the alternatives for the child are diminished then the newly unemployed child will become worse off.

This leads us to the question as to whether we can say anything about the child's alternatives. If the parents choosing to place the child in employment had sacrificed the child's interests to that of the rest of the family then the alternatives available to the child may be better than employment. The tax constrains the ability of the parent to place the child in employment that is detrimental to the child. Thus, the child will be better off in the presence of the tax.

However, if the parent placing the child in employment was acting in the best interest of the child when offering him for work, then work is the best alternative available to the child. Any other alternative must necessarily be worse. In this case, the tax on child labor lowers the welfare of the children no longer working.

Children who continue to work are definitely worse off. Firms who continue to employ children have to pay a tax. In a small open economy, a tax must lower the after-tax wage of the working child.

Therefore, the success of the policy in terms of benefiting children at all turns exclusively on the condition that parents offering their children for work are doing so to serve the best interests of the family rather than the child.

A ban on child labor is more likely to be beneficial. Children forced from work will face the same options as with the tax. But firms no longer have to pay a tax on children still working. Furthermore, the number of children employed will fall, so the wages of children who continue to work will rise.

Basu (1998) offers further analysis that supports a ban on child labor. He argues that the labor market has multiple equilibria and government policy can be used to affect which emerges

from the market place. Basu points out that the supply of labor has three segments. At a wage below some critical level, both children and adults work. This part of the labor supply curve is upward sloping. However, at a critical level, parents will choose to withdraw their children from the work force. At this point, there is a discrete decline in the labor supply as children are withdrawn from the work force. For wages above the critical level, adult employment continues to rise in response to the wage. The end result is that the labor supply is zig-zagged.

The demand for labor intersects the supply of labor at three points. The two stable points are the low-wage equilibrium in which both children and adults work and the high wage equilibrium in which only adults work. A ban on child labor forcibly withdraws children from the labor supply. As a consequence, the only equilibrium that can emerge is characterized by high wages.

The above analysis comparing tax penalties on firms that employ children and an outright ban on child employment suggests that the ban is a preferable policy instrument. However, several caveats must be noted.

First, Dixit (1998) has pointed out that for a small open economy, wages are determined on international markets. Therefore, government policy cannot move the equilibrium from one wage to another.

Second, Brown, Deardorff and Stern (1999) point out that the only way in which a ban on child labor might work in a trading equilibrium is if it is applied worldwide. In this case, the world supply of labor will decline, thereby raising wages and, hopefully, rendering a high wage-no child labor outcome as an equilibrium. In order for a ban on child labor to work, the supply of child labor must be large enough relative to the market to alter the international wage structure. However, this seems unlikely. UNICEF (1994) estimates that there are approximately 80 million exploited child workers. These children typically earn \$.50 to \$1.00 per day. So the total value of child labor worldwide is on the order of \$300 billion. It is hard to imagine that such a small figure could effect international factor prices.

Third, Krueger (1996) points out that many markets have multiple equilibria. Carefully designed policies can move the economy away from a second-best outcome to a first-best outcome, but the reverse is possible as well. When labor standards are imposed indiscriminately without regard to each market's peculiarities, the outcome can be perverse.

VI.1.1 Sectoral Taxes and Foreign Intervention

There are other policies that affect the employment of children indirectly. For example, the government could tax the output of the export sector employing children. However, such a tax is not focused directly on the source of the market failure and so must have added a distorting affect on consumer decisions.

Similarly, a foreign tax on imports of goods produced using child labor will be counter-productive. First, as in the case of the tax on child employment, the impact of child wages and opportunities is likely to be negative. Second, the exporting country could suffer a terms-of-trade loss normally associated with a foreign tariff.

Generally, we will find that a foreign tariff does little to correct the effects of poor labor practices. This result is simply an application of the theory of optimal intervention. Market failure should be addressed at the source. Since the source is almost never at the border, border controls are almost never a first best policy. Furthermore, border controls introduce distortions of their own which may or may not offset the original market failure.

The optimal intervention here is for those impacted by the external effect of child labor to make a lump-sum payment to lower child labor. Srinivasan (1998) has suggested further that many of the problems that labor standards are designed to address can also be dealt with simply by allowing free international migration.

Although the above analysis lends little support to the idea that textbook analysis of trade sanctions will improve the lot of children, Krueger (1996) argues that this is not necessarily the relevant criterion. Governments of countries in which children are employed may choose to

change their laws rather than endure the punishment of trade sanctions. As long as trade sanctions are only applied in cases where the cost of the sanction exceeds the benefit of the offending labor practice, the targeted country may choose to reduce child labor rather than suffer the trade sanction penalty. Thus, the threat of sanctions could have positive implications for child welfare. Nevertheless, when considering sanctions, it is essential that the gain from the threat of sanctions be weighed against the possibility that child labor practices will not change despite the penalties imposed by the rest of the world.

Trade sanctions against poor labor practices can also be justified using the same type of argument that is used to justify the general application of trade sanctions. In fact, it is rarely optimal in textbook analysis to countervail foreign subsidies nor to impose anti-dumping duties yet this class of trade sanctions survives in the WTO. However, such institutional characteristics can be justified in a political economy context.

It is argued by Krugman (1997) that the structure of punishments in the WTO and the emphasis on reciprocity and harmonization is aimed at constraining domestic special interests rather than introducing first-best policy. A similar argument applies to sanctions against child labor. To the extent that western domestic interests believe that they are exposed to unfair or unethical competition from producers that employ exploitative labor practices, punishing such practices will serve to support the free trade coalition.

VI.1.2 Poverty Alleviation

Other policy options include targeted education programs, improved access to capital markets for poor families and other policies designed to alleviate poverty. Education programs are designed to raise the opportunity cost of child labor.

Improved access to capital markets and poverty alleviation are intended to eliminate the root cause that motivate parents to offer their children for employment in the first place. Krueger (1996) has demonstrated empirically that there is a *very* strong negative correlation between child

labor and per capita GDP. In fact, when GDP reaches \$5000 per capita, child labor virtually disappears.

However, for lower income levels the point at which children are removed from the labor force varies across societies. Ray (1998) finds that Peruvian parents remove their children from the work force as the family crosses the poverty line, while parents in Pakistan do not.

In spite of the evidence presented by Krueger linking child labor and GDP per capita, Basu (1998) points to several other determinants of child labor such as technological change, conditions in the labor market and school availability and quality. For example, Levy (1985) shows that in rural Egypt mechanization lowered both child labor and fertility. However, the evidence does not indicate the direction of causality.

Consequently, there may be several additional strategies that can be pursued to deter child labor exploitation while waiting for the level of economic growth to reach the critical level identified by Krueger. Some possibilities are discussed below.

VI.1.3 Product Labeling

Freeman (1996) has proposed the use of product labeling to deter the employment of children. He argues that if the negative external effect of child labor is a private good affecting only the consumer purchasing the good then the external affect can be fully internalized if a credible product label distinguishing products that are produced by adults is affixed to the product.

Critics of the labeling approach frequently point out that only about five percent of child labor is employed in the production of goods for export. Therefore, product labeling is severely limited by its potential to reduce child labor.

However, problems with product labeling run far deeper than its small reach. Freeman's analysis once again turns the attention to the negative effects of child labor to the welfare interests of western consumers and does address the interests of the children involved at all. Brown (1999)

has shown that even a credible labeling program introduces inefficiencies in the market and may have no effect on the total employment of children or the wages of their parents.

In this model, the export sector for a small open economy is taken to be adult-labor intensive and the import-competing sector is taken to be child labor-intensive. Cost-minimizing firms in each sector employ a mix of child and adult labor.

If we introduce a credible labeling scheme, the consumer pays a premium for goods produced with adult labor only. Firms that choose to label, employing adults only, must be paid a premium that covers the additional cost of the adult-only technology. If the willingness to pay by consumers falls short of this amount then no firms will choose to label.

However, if some consumers are willing to pay a premium for labeled products that just covers the additional cost of the adult-only technology then some firms will choose to label. In the new equilibrium, export sector firms will be indifferent between labeling and not labeling. So some adult labor will be re-deployed to a third sector which uses the adult-only technology to produce for export.

What is the effect on employment and production? The Rybczynski Theorem tells us that if the supply of adult labor to the two original sectors is reduced then production of the adult-labor intensive export sector declines and production of the child-labor intensive import-competing sector expands. All of this is accomplished without changing factor prices.

This leads us to several conclusions. Adult wages and child wages are unchanged. Therefore, there is no impact on the supply of child labor. Second, child labor moves from the export sector to the import-competing sector.

One might wonder then, what happened to the premium paid by consumers for goods produced only by adult labor. The answer is that it was dissipated through the use of an inefficient technology. Producers who choose to employ adults only are no longer employing a cost minimizing mix of adults and children. That is, they are not using the most efficient technology available to them. The premium paid by consumers is just sufficient to cover the cost

of the less efficient adult-only technology. What have we bought through the use of inefficient technology? Only the good feeling that western consumers enjoy knowing that they have not bought a good produced by a child.

Additional complications arise when one considers issues of cheating by firms claiming to use an adult-only technology and problems of credibility for the labeling agency. For a complete discussion see Brown (1999). However, suffice it to say that none of the complications make it more likely that a labeling program will improve the interests of children they were designed to protect. Children can only gain if consumers are willing to pay a labeling premium that is large enough both to cover the additional cost of the adult-only technology and also bids up the cost of adult labor relative to child labor to the point where parents begin to withdraw their children from the labor force.

VI.1.4 Alternative Trade Organizations

Some of the weaknesses of the product labeling can be resolved by alternative trading organizations (ATOs), as argued by Zadek and Tiffen (1996). ATOs, which began to emerge in the 1970s, offer more attractive terms of trade in handicrafts, textiles, manufacturers using traditional techniques of production and coffee than could be obtained by most multinational firms. ATOs pay a higher price and provide market information, thereby improving the bargaining power of suppliers.

ATOs clearly will not be as profitable as profit-maximizing firms. Employees are expressing their humanitarian values by accepting lower wages and lower profits. This is not unlike the willingness of consumers to pay higher than market prices for goods produced using socially responsible techniques of production. The difference, however, is that the principal-agent relationship that exists between the consumer and the labeling agency makes it difficult to determine whether the good has actually been produced using the techniques claimed. However,

in the case of the ATO no informational problems exist. The employees of the firm whose moral values are at issue can easily observe the practices of the firm.

VI.1.5 Targeted Educational Subsidies

Finally, a new strategy has been employed by the Mexican government in order to reduce child labor. It is generally recognized that the two most common sources of child labor are poverty and poor or expensive educational opportunities. Making education available to a child is unlikely to reduce child labor unless there is some mechanism to replace the child's income in the home.

The Mexican government offers subsidies to families whose children maintain a minimum attendance record in school. In other words, the government is buying out the child's labor contract in return for school attendance. This strategy dominates one of simply paying a per child subsidy independent of school attendance in cases where the family's income is far below the level at which the child would normally leave the work force and attend school. Such families would accept a cash grant but the child would continue to work. Therefore, if the subsidy is tied to school attendance the transition out of the work place can be accomplished at a much lower level of economic development.

Two other design features of the Mexican program are intended to improve its effectiveness. First, the subsidy is paid to the mother. Some empirical evidence suggests that the child's stature in the household is positively correlated with the mother's relative contribution to household income. Therefore, if the subsidy is paid to the mother it is more likely that household decision making will reflect the direct interest of the child. Second, the size of the subsidy increases with years of school attendance. The older a child is the greater the opportunity cost of schooling. Consequently, a larger subsidy is necessary to deter work *in lieu* of education.

It remains to be determined how successful the Mexican program will be. However, a similar program has been introduced in Cantaduva, Brazil with remarkable effect. During the tenure of the program the truancy rate dropped from over 20 percent to under one percent.

The targeted educational subsidy dominates the use of sanctions, a ban on child labor, product labeling and economic development as a strategy for improving child welfare and lowering child employment. First, the options available to the family would not be reduced by the educational subsidy. If child labor is still optimal even in the presence of the subsidy, then that option remains open to the family. Second, the wages of children who continue to work will not fall. If there is any change, child wages will rise. Third, education subsidies have the potential to dramatically reduce child employment well before a community reaches the critical level of per capita GDP at which parents might normally remove their children from the labor force. Fourth, the policy is not punitive and, therefore, elides most of the political complications associated with imposing western values on developing countries. Fifth, the cost of the education subsidies is not prohibitive. The subsidy need only replace the value of child employment in the household, which is on the order of \$0.50 to \$1.00 per day per child.

Finally, the subsidy only needs to be paid for one generation of children. Basu points out that policies such as the Mexican education subsidy help countries avoid the child labor trap. In the absence of education, human capital formation is low. As a consequence, adult wages are low thereby requiring children to work. However, if the Mexican experiment is successful for one generation the country can escape the child labor trap indefinitely.

VI.1.5 Empirical Evidence on Regulation and Child Labor

Before closing the discussion on child labor, it is interesting to review the evidence on the successful assault on child labor in the early part of the 20th century. At that time, three strategies were used to reduce child labor: (1) laws regulating the employment of children, (2) laws on

compulsory education, and (3) economic prosperity. Several authors have attempted to determine empirically which of these strategies was the most effective.

Scholliers (1995) examines the case of Ghent, Belgium. By the mid 19th century there were no children under the age of ten years working. This transition occurred completely in the absence of legislative intervention. By contrast, Bolin-Hort (1989) reports that the decline in child labor in the cotton mills of Manchester, England was heavily influenced by laws regulating child labor and education. Brown, Christiansen and Philips (1992) study child labor in the U.S. fruit and vegetable canning industry between 1880 and 1920. They conclude that the law played a role but economic factors dominated.

Although these studies provide conflicting conclusions, they generally agree that laws regulating education are easier to monitor than laws regulating child labor. For example, Moehling (1998) looks at the decline in child labor in the United States between 1880 and 1910. As a consequence of activism, several states introduced minimum age legislation. In 1900, twelve states had a minimum age law prohibiting work by children under the age of 14 years. By 1910, 32 states had enacted similar legislation. However, a review of the censuses taken in 1880, 1900 and 1910 suggest that the legislation had little effect.

It should be pointed out, though, that this type of analysis can be misleading if little attempt is made to distinguish cases in which the law is properly implemented from those where enforcement is inadequate. The phenomenon of endogenous compliance frequently clouds the analysis of policy where externally imposed standards are concerned.

In fact, there is an abundance of evidence of noncompliance. Krueger (1996) looks at the relationship between mandatory education and the actual age at which children leave school. In Brazil, 80 percent of students leave school before the age of 13 even though school attendance is mandatory through age 14. In Mexico and Portugal, 25 percent leave school before the legal age.

In fact, none of the developing countries studied showed a spike at the compulsory age. By contrast, changes in the minimum age correspond well to the law in the United Kingdom. In

1947 the U.K. raised the age at which children could leave school from 14 years to 15. In 1973, the age was raised again from 15 years to 16. In both cases, the modal age at which students left school corresponded with the law. Furthermore, only 5 percent of students left school early.

The evidence leads Krueger to conclude that compulsory laws in and of themselves have no effect. They must be accompanied by available education, enforcement, parental support and the financial means to attend school.

Furthermore, education and work are not necessarily incompatible. Psacharopoulos (1997), examining data from Bolivia and Venezuela, found that child workers make an important contribution to household income, though they also receive less education. By contrast, Patrinos and Psacharopoulos (1997), examining the case of Peru, find that child labor makes it possible for children to attend school. Hence, part-time work and schooling can be complimentary.

VI.1 Discrimination in Employment and Wages

Much attention concerning labor standards focuses on the possibility that the imposition of labor standards will adversely affect the international competitiveness of developing countries. Brown, Deardorff and Stern (1996) argue that labor standards are inherently labor-using. The contraction in the world supply of labor that might occur as a consequence of the imposition of international labor standards should bid up the wage worldwide. Since labor is the abundant factor in developing countries, the rise in the wage profile should manifest itself as a rise in the price of labor intensive goods. That is, the terms of trade of developing countries should improve.

The above logic, while perhaps applicable to most labor standards, may not apply to discrimination in employment. In fact, Maskus (1997) argues just the opposite. For example, suppose that the supply of female labor is upward sloping but there is a legally mandated ceiling on the wages paid to female workers in the export sector. The ceiling on female wages will deter women from supplying labor to the export sector. Thus, exports will be lower than otherwise

expected. Furthermore, female workers will be diverted to the residual sector where they are likely to bid down the wage, thus increasing the competitiveness of the residual sector. That is, discrimination is worsening the competitiveness of the export sector while simultaneously reducing the options for female workers. Therefore, efforts to eliminate discrimination by the local government will, if successful, ultimately expand export supply while raising female wages.

By contrast, a foreign tariff will have the opposite effect. The tariff will lower the demand for the export good and, therefore, lower the demand for female workers. As a consequence, firms will find it less costly than before to engage in discrimination thus making discrimination more likely. Women, of course, are made worse off in the process relative to male workers.

A similar result emerges if the discrimination is economy wide and the export sector is female-labor intensive. Discrimination against females will lower the number of women in the labor force. As a consequence, the production possibility frontier will shift in. Following the Rybszynski Theorem, production of the female labor-intensive export good will contract and production of the male labor-intensive good will expand. Thus exports will decline.

Maskus draws several conclusions from his analysis. First, discrimination may or may not expand exports. So the impact of labor standards on competitiveness is ambiguous. In any event, discrimination that depresses the wages of women (or any group) and keeps them out of the labor force, contracts the world-wide supply of labor. Thus wages are generally higher in the presence of discrimination than they otherwise would be.

From the point of view of the country where discrimination is occurring, discrimination is costly and inefficient. So it is in the country's overall best interest to eliminate discriminatory practices whether or not they are impelled to do so by international pressure. Nevertheless, there maybe special interests that gain from continued discrimination that have the political power to block reforms. Foreign pressure may be usefully applied in this case. However, the form of the

intervention that will lead to the reduction in discrimination depends on the market situation, as discussed above.

A foreign tariff will unambiguously raise the cost of discrimination only if the export sector is male-labor intensive. In this case, the fall in the demand for exports will simultaneously lower the demand for male workers. The *equilibrium* male wage will decline relative to females. Therefore, it will be more costly to preserve the pre-existing male wage premium. In addition, the tariff may impose a terms-of-trade loss. Thus, there will be increased pressure to eliminate the practice of discrimination. However, if the foreign tariff lowers the demand for female labor then it will also lower the equilibrium female wage. Thus, the efficiency loss associated with discrimination is reduced. In that case, the only penalty to continued discrimination is the deterioration in the terms of trade which must be set against the reduced efficiency loss associated with discrimination. In this case, a country may choose to continue with the discriminatory practice rather than yield to international pressure.

The objective of a foreign tariff would be to induce the country in which the discrimination is occurring to eliminate the practice. The policy has failed, from a world-welfare point of view and from the point of view of female workers, if the country chooses the tariff punishment over eliminating the practice of discrimination. The problem with using a policy that makes discrimination less costly is that it raises the probability that the exporting country will choose to live with the tariff rather than eliminate the practice of discrimination.

Furthermore, discriminatory practices are most likely to abate with the intensification of trade. Although this argument is made with regard to all labor standards, it is particularly the case with discrimination. Discriminatory practices are not generally profit-maximizing. The more intense international competition the greater the pro-competitive pressures to cut costs. This provides firms with a strong incentive to discontinue discriminatory practices.

VI.2.1 Imperfect Competition

The presence of imperfect competition generally alters the results of policy analysis because we are thrust into the world of the second best. For example, Maskus models a 2-sector economy with sector specific male and female employees. The employer is monopsonistic and discriminates between male and female workers. On the one hand, the firm discriminates against females which is welfare reducing. However, discrimination against women forces the firm to hire more males. Thus, the distortion in the market for male workers is not as severe as it otherwise would be.

The impact on trade depends on where the distortion is most severe. If the distortion is most severe in the export market then discriminatory practices will contract the supply of exports. Eliminating discrimination in this case will expand exports, thereby intensifying worldwide competition in the market for labor-intensive goods. The impact of a foreign tariff also depends on where the distortion is most intense. If the discrimination is most distorting in the export market, then a foreign tariff, by further lowering factor demand in the export sector, will make the distortion greater.

VI.3 Freedom of Association and the Right to Collective Bargaining

As discussed above, the effect of freedom of association and the right to collective bargaining depend heavily on the objectives of the union. The ambiguous nature of unions and the consequences for economic policy are nicely captured in Maskus' (1997) discussion.

For example, if union activity produces an inefficient allocation of resources then and trade policy that punishes restrictions on union activity is inefficient. Unions that attempt to set a minimum wage that generates unemployment are generally inefficient. Constraining such activity should not be subject to international sanctions. However, if unions offset monopsony power and bargain for a wage that is equal to the worker's marginal value product, then the union's conduct may be welfare enhancing.

The impact of trade sanctions when union activity is suppressed is ambiguous. For example, suppose there is monopsony power in the export sector but unions are not permitted to organize labor or bargain collectively. In this case, a tariff that lowers the demand for the export good will also lower the demand for labor in the export sector. The monopsonistic distortion is thus intensified. The policy can only be considered a success if the threat of a foreign tariff leads the local government to relax the control over union activity.⁵

A second concern with union activity is raised by Harrison and Leamer (1997) and others. Unions function in the formal sector only. They have little relevance for the informal sector and compliance will almost certainly be an issue. Given the varying degrees of compliance with the right to organize, it is likely to be the case that labor standards will vary markedly across the economy. Labor may be forced to flow out of the export sector into the informal sector, lowering compliance even further.

However, as noted by the World Bank (1995), the informal sector may have its own traditional or community-based devices for mediating the mutual interests of workers and employers. Thus, issues of compliance may not be as relevant in the informal sector.

There are many reasons, of course, that unions may actually be welfare enhancing. For example, to the extent that job security is enhanced, workers may increase investment in job-specific human capital. Workers, feeling a greater investment in the firm may reveal productivity-enhancing information. Firms that are less concerned with wage cutting may increase investment in training and innovation.

The question, however, is if providing job security serves the interests of the firm, for all of the reasons listed above, why must they be forced to provide job security by a union? Several explanations are offered. For example, the firm may not be able to credibly commit to job security in absence of a union contract. Furthermore, Summers (1989) has argued that collective

⁵ See also Corden and Vousden for analysis of the effects of trade policy when the export sector is monopsonized.

bargaining eliminates moral hazard. Finally, firms may not have an interest in divulging job-related risks in the absence of union pressure.

However, it is not inevitable that unions will improve upon the efficiency characteristics of the contract independently offered by the firm. For example, unions may raise demands beyond an efficient level and they may interfere with efficiency wages that induce effort.

The empirical evidence on the welfare effects of unions is ambiguous. The connection to productivity growth is weak, as noted by Freeman (1993).

VII. Labor Standards in Export Processing Zones (EPZs)

Much concern about the enforcement of labor rights has focused on government regulations of export processing zones. It is commonly argued that rights are most likely to be suppressed in EPZs precisely to gain a competitive advantage in trade. Romero (1995), however, argues that wages in EPZs are generally higher than in the rest of the economy for several reasons. First, firms that operate in EPZs pay productivity incentive bonuses and overtime. Second, firms that operate in EPZs tend to be larger. Pay scales and working conditions are positively correlated with firm size. Furthermore, large firms are more effectively regulated than small firms in the informal sector. Third, company policy of foreign-owned firms frequently call for higher wages and better working conditions than in the surrounding economy partly to attract quality workers and partly because supervisors are bound by “best practices” company policies. Finally, some governments have established higher minimum wages for EPZs in the hope of establishing a more stable and productive work force.

Romer also points out that workers in virtually all EPZs worldwide have a legal right to form or join a union. A strong majority of countries that host EPZs have ratified ILO Conventions 87 and 98 that cover rights of association. Overall, however, EPZs tend to have relatively low unionization rates due both to the difficulty of organizing workers and lax enforcement of rights.

Workers in EPZs also tend to enjoy better working conditions. Foreign firms especially those headquartered in an OECD country tend to follow higher standards generally. Exceptions tend to occur in low-skilled labor-intensive assembly operations where enforcement of rights is lax, such as garment and gem-cutting firms. Poor working conditions are also likely to prevail in older plants or in cases where legal protections have not kept pace with technological change.

Maskus (1997) makes two additional arguments. First, firms that operate in EPZs may have to pay a wage premium in order to attract workers into the area. Second, products made in EPZs are generally intended for export to developed economies. The demand for product quality is quite high, necessitating the employment of better than average workers.

However, Maskus does go on to point out that there are some cases in which EPZ firms have been found to pay inferior wages as compared to other local enterprises. Such cases may occur even in countries that have liberal wage policies and minimum wage legislation. This may be the case if there are restrictions on labor union rights and if inspection procedures are lax. Maskus does *not* believe that sub-par wages are the result of restrictions on labor migration in and out of EPZs that might depress wages since he has found little systematic evidence of such restrictions.

VIII. Core Labor Standards and Trade Liberalization

VIII.1 Labor Standards Convergence and International Trade

The connection between labor standards and trade liberalization has been analyzed by Casella (1996) from a theoretical standpoint. Her analysis begins from the assumption that differences in labor standards are in part driven by differences in income. Therefore, trade will cause endogenous convergence in labor standards if trade also precipitates convergence in income levels. However, the convergence is not triggered by a drive for competitiveness but rather a convergence in the underlying demand for standards.

So when would we expect convergence in incomes? Casella examines the case of a Heckscher-Ohlin type model with two countries, two goods, and two factors. The two factors are skilled and unskilled labor. Suppose first, that both countries are democracies and the number of unskilled workers is larger than the number of skilled workers. If factor-price equilization occurs, then unskilled workers will earn the same wage in both countries and, therefore, will vote in favor of the same level of labor standards regulations. So perfect convergence in standards occurs.

If on the other hand, there are more skilled workers in the skill abundant country and more unskilled workers in the unskilled-labor abundant country, then standards may or may not move closer together but they definitely will not converge. Opening to trade raises the return to the abundant factor. Since the median voter in each country is also an abundant factor, opening to trade will raise the demand for standards in both countries. However, the return to skilled labor will be higher than the return to unskilled labor. So voters in the skill-abundant country will demand higher labor standards than voters in the unskilled labor abundant country. Obviously, it is also possible to get divergence in labor standards after the opening of trade, as well.

Alternatively, we could consider a Ricardian type trade model in which trade is driven by differences in technology. If we assume that the country with the low technology is also smaller, then trade will lead to convergence on the standards set by the high productivity/high standards country. We know that in a Ricardian model with trade occurring between a small and a large country that the equilibrium goods prices will equal the autarky goods prices of the large country. Hence, the large country does not gain from trade. All the gains from trade accrue to the small country. In this case the small country is also the low standards country. The subsequent convergence in income to the level of the richer country triggered by trade will also lead to a convergence in standards on the level set by the high standards country.

Needless to say, if the small country is the high standards country, then all of the gains from trade accrue to the high-income country. Income levels then diverge further and so do standards.

VIII.2 Political Institutions and Economic Performance

The relationship between core labor standards and trade liberalization falls into a broader discussion concerning the relationship between political institutions and market performance. The recent literature has focused on the connection between political freedoms, on the one hand, and overall economic performance and labor's share of income on the other. While labor rights are included among the political freedoms considered, broader democratic institutions appear to play the central role.

For example, Barro (1996) explores the empirical relationship between democratic institutions and economic growth for the period 1972 to 1994. The measure of democracy is taken from Gastil who has constructed an index of political rights in which countries are categorized subjectively into one of seven groups. Countries with a low indicator have the highest degree of political rights and those with an indicator of seven have the least political rights. The work by Gastil was picked up by Freedom House, which published annual ratings of all countries in the world.

Barro regresses per capita growth in GDP on the level of GDP, measures of schooling for males, life expectancy, fertility, government consumption, a measure of the rule of law, terms of trade, the inflation rate and a transformation of Gastil's index of political rights. The index on political rights has a positive and statistically significant coefficient but a negative coefficient on the squared value of the index of political rights. That is, for low levels of democratic rights, an increase in rights will raise the growth rate. However, once a moderate level of democracy is achieved, further democratization reduces the rate of economic growth.

Barro points out that while the results are statistically significant, the impact of democratic institutions on economic growth is small. In fact, it is generally the case that this literature produces ambiguous results concerning the relationship between democratic institutions

and growth. For some examples, see Bhalla, Przeworski and Limongi (1993) and Helliwell (1994).

By contrast, Rodrik (1999a) considers the relationship between political freedoms and wages and obtains quite striking results. Wages are regressed on measures of democracy, average labor productivity in manufacturing, per-capita GDP, average price level of consumption and geographical dummies.⁶ Data is analyzed for the period 1960-1994.

Not surprisingly, labor productivity is the major determinant of wages. Manufacturing value added per worker explains 80-90 percent of the cross-national variation in manufacturing wages. However, the democracy variables are statistically significant with a strongly positive effect on wages. Tests of causality suggest that democratic institutions are generating a wage premium relative to productivity growth, rather than the other way around.

Results remained robust when applied to individual countries. The time-series evidence is primarily driven by Spain, Portugal, Greece, Korea, Taiwan and Sri Lanka. The first five of these countries have become more democratic over time. Furthermore, wages grew faster than labor productivity at the time of the political transition. Sri Lanka, which has become less democratic, experienced the opposite. Again, the role of democracy is large and statistically significant.

Rodrik then investigates the question as to why democracy matters for wages. Among the competing hypotheses is that democracy matters because it enhances the bargaining power of labor by supporting rights to freedom of association and collective bargaining. Labor rights are measured by the unionization rate and the number of ILO conventions ratified concerning basic worker rights. Results are mixed. Using the Bureau of Labor Statistics wage data, ILO conventions ratified is highly significant and the unionization rate is very nearly significant at the

⁶ Wage data is taken from the World Bank Labor Market Data Base and the U.S. Bureau of Labor Statistics International Comparison of Hourly Compensation Costs for Production Workers in Manufacturing. Measures of democracy come from the Freedom House and the Polity III data set of Jagers and Gurr (1995).

95 percent level. However, the presence of labor rights variables does not reduce the explanatory power of the democracy variables.

Rodrik applies a second test in order to determine which rights supported by democracy play the most important role in setting wages. The Freedom House index can be divided between *civil liberties*, which include labor rights, and *political rights*. When both are introduced into the wage equation, the political rights variable is statistically significant but the index of civil liberties is not. Similarly, when the Polity III measure of democracy is decomposed, Rodrik finds that *competitiveness of political participation* has the largest coefficient and is significant in nearly all equations. Thus, Rodrik is inclined to the view that political rights are playing a dominant role, rather than the rule of law, political stability, civil liberties or specific labor rights.

It remains an interesting question as to how higher wages in democracies affect overall economic performance. One possibility is that democracies remove the impediments to efficient labor contracts that are not allowed to emerge in authoritarian regimes. Alternatively, democracies may raise wages while making labor markets less efficient.

Rodrik (1997a) has explored the issue empirically as to whether democracies grow faster or more slowly than countries governed by autocratic regimes. First, Rodrik regresses growth in per capita GDP on initial income, education, quality of government institutions and an index of democracy. The democracy variable is insignificantly different from zero. Therefore, it does not appear to be the case that the democratic institutions that enhance the bargaining power of labor simultaneously foster inefficient market outcomes.

Rodrik then examines the question as to whether democracies have more stable economic performance. The coefficient of variation of the above equation is then calculated for democracies and countries governed by autocratic regimes. The coefficient of variation was significantly smaller for democratically governed countries suggesting that GDP per capita is less volatile in democracies.

However, Rodrik allows for the possibility that democracies are more stable because they have higher incomes. So Rodrik estimates an equation that can be used to forecast the degree of democratic institutions a country would be expected to have given per capita GDP and a measure of human capital. Countries were grouped as to whether their democratic institutions were stronger or weaker than predicted. The coefficient of variation for the per capita GDP equation was again calculated. As before, it was smaller in countries that had greater political freedoms than one would expect given country characteristics.

Perhaps more importantly from the point of view of trade and labor standards is the evidence concerning the relationship between democratic institutions and the reaction to economic shocks. An economic shock might include an opening to trade, for example. For this purpose, Rodrik calculates the standard deviation for annual growth rates in real GDP, real consumption and investment. This measure of volatility is then regressed on per capita GDP, population, exposure to external risk, regional dummies, and the index of democracy. The coefficient on the democracy index was negative, large and statistically significant. Furthermore, the causality appears to run from regime type to volatility rather than the other way around.

Finally, Rodrik considers the particular impact of adverse shocks that rocked the developing countries during the 1970s. First, he looks for breaks in the trend growth rate by country. The change in the rate of growth during the break is taken to be the dependent variable, which is regressed on indicators of latent conflict and on proxies for institutions of conflict management. He finds that countries with greater ethnic tensions suffer the greatest decline in economic growth during a negative shock, whereas, countries with greater civil liberties and political rights had smaller negative responses to shocks. Furthermore, the results were highly significant.

Thus, strong governments do not appear to be necessary to deal with adversity or to steer a poor country through the development process. In fact, Rodrik concludes that adjustment to shocks requires institutions that help countries manage social conflicts. Democracies are better

able to resolve such conflicts. If one applies this logic to episodes of trade liberalization, Rodrik's results predict that countries that develop democratic institutions before the transition will weather the transition with smaller adverse consequences.

The emphasis on conflict management that emerges from Rodrik's analysis, raises an additional question concerning the cross-country comparison of institutions that support efficient markets. In Rodrik (1999b) the role of conflict resolution is to avoid coordination failures that stand in the way of mutually beneficial innovations. There are several generic institutions that are particularly effective at avoiding coordination failure. These are: the rule of law, a high-quality judiciary, representative political institutions, free elections, independent trade unions, social partnerships, institutionalized representation of minority groups and social insurance.

Although it has been argued that economic integration through trade will lead to a convergence of institutional systems, Rodrik does not support that view. Nor does he believe the institutional convergence is desirable. Rather, he emphasizes the importance of "local knowledge" in developing mechanisms of conflict resolution that are optimal given a particular society's objectives and values. As a consequence, the development of institutions should emphasize local experimentation rather than best-practice "blueprints". Rodrik is highly skeptical of the notion that there is a specific type of institution, such as labor market legislation, that is uniquely capable of supporting efficient markets. Thus, international trade may alter a country's objectives and, therefore, alter its institutions, but convergence may not be inevitable or desirable.

APPENDIX

Industrial Labor Relations Policy and Strategies for Growth

Singapore, like many other developing countries, adopted an import substitution strategy shortly after independence in 1959. This policy was relatively unsuccessful due to the absence of a large domestic market, and so was replaced with an export orientation in 1965. The expectation was that export growth would be financed with foreign direct investment concentrated in sectors such as radio receivers and television.

In order to attract FDI, attention was directed to infrastructure development and the establishment of export processing zones. The objective of industrial labor relations policy was to provide investors with a flexible, cheap, stable work force.

Stability in the labor force was fostered by the creation of a national tripartite governance structure. Union leaders were educated as to development needs in relation to the labor force. Restrictions were placed on the range of issues subject to collective bargaining. Transfers, promotions, job assignments and layoffs were not negotiable. Furthermore, strikes were not permitted as a part of dispute resolution.

An industrial arbitration court ratified all collective bargaining agreements. Contracts were written for a fixed five-year term and wage guidelines were set by a national wage council.

By 1974-75, wages in Singapore had risen sufficiently that competitive pressures were felt from countries such as Korea and Taiwan. The Singapore government, at this point, launched a second-stage export promotion policy. The move to higher value-added industries included computer assembly and semiconductors.

The national wage council set out to raise wages by 12 percent each year for the period 1979-1981. Great emphasis was placed on secondary education, vocational training and the creation of technical universities. The union structure was reorganized in 1981 similar to the Japanese style of house unions. House unions were created and collective bargaining agreements

were intended to reflect the specific financial circumstances of each firm. Firms were encouraged to invest in human capital financed by a skills-development fund. Labor contracts made increasing use of lump-sum payments rather than changes in the wage base in order to maintain flexibility in the labor contract. Wages were no longer set nationally, but rather by industry.

Singapore is now turning to the development of the services sector, particularly finance, banking and shipping. Unions have a voice at the national level but there are still restrictions on strikes and bargaining. Labor-management relations are cordial and wages rise steadily. However, as the economy turns towards the provision of services union density has dropped dramatically.

Malaysia followed a somewhat different path. In the period following independence, 1957-1963, government policy focused on infrastructure and rural development. Industry was largely left to the private sector.

However, between 1963 and 1970, the government became an investor in the industrial structure. Industrial relations followed the British model of collective bargaining and minimum standards. The government saw its role as one of containing conflict, prohibiting strikes, limiting union activity and restricting bargaining over transfers and layoffs. However, the government did not regulate heavily. Kuruvilla refers to this period as one of “controlled pluralism”

By 1973 it was clear that heavy industry was going to fail and Malaysia was saddled with a huge foreign debt. At this point, the government turned to a policy of export promotion based on cheap labor and FDI.

Labor relations policy changed dramatically with a focus toward containing costs. Tax breaks were introduced for foreign corporations, foreign corporations were exempt from labor law, and changes were introduced in overtime pay. There was no minimum-wage legislation, no provisions for nondiscrimination, and unions were banned in some sectors such as electronics. The government became very activist in managing labor relations matters including registering

unions and dispute resolution. Heavy use was made of compulsory arbitration in an attempt to control conflict.

The overall policy was successful. As with Singapore, wage growth accelerated rapidly.

By the mid-1980s, Malaysia shifted to a secondary export promotion strategy. At this point, attention shifted from cost containment to training. However, there is a continued attempt on the part of the government to keep the labor union movement fragmented and ineffective.

The Philippines Islands provide the most interesting example in Kuruvilla's set of studies. During the post World War I period, the Philippines followed a policy of import substitution, tax incentives and border controls. Labor relations during this period followed the American model of collective bargaining, arbitration and unionism.

A large inflow of capital precipitated a balance of payments crisis in 1960. Loans from the IMF and the World Bank were made on condition that the Philippines relax import restrictions. Between 1962 and 1972, the Philippines followed a mixed development strategy. Agricultural interests sought liberalization while the manufacturing sector preferred protection.

In 1972, the Philippines set out on an export promotion strategy, emphasizing cheap labor. Industrial relations followed the New Labor Code of 1974. The objective was to guarantee industrial peace. It included a ban on strikes in vital industries and compulsory arbitration. Existing strike funds were converted to education funds. "Unfair" labor practices were decriminalized and one union was established for each industry. Furthermore, each union was required to become a member of the National Trade Congress, a group heavily influenced by the government. Growth in the minimum wage was controlled and rules were relaxed on work hours, overtime and occupational safety and health.

The development strategy was unsuccessful, compared to Malaysia and Singapore. Crony capitalism and macro-mismanagement are frequently blamed for the failure. The government resorted to marshal law under which greater restrictions were placed on labor activity. Strikes were made more difficult, membership in the registered unions declined, illegal

unions began to emerge and unemployment began to rise. Overall, labor relations were characterized by far more strife than had been seen in Singapore and Malaysia at a similar stage of development.

When the Marcos regime was replaced by Aquino and Ramos, restrictions on labor activity were relaxed. Industrial labor relations policy came to resemble a policy more characteristic of the period of import substitution. But the change in policy did not promote stable labor relations since the labor movement was fragmented and weak. Ultimately, it took 30 years to implement the first stage of export promotion.

The case of India provides further evidence concerning the relationship between industrial labor relations and development strategy. Following independence, India launched on a path of import substitution and central planning, with a heavy emphasis on capital goods and indigenous technology.

Close ties existed between labor and the government as an artifact of the independence movement. Labor law in 1948 called for protections that exceeded standards in industrialized countries, including maternity leave, child care, occupational health and safety and unregulated union formation. All aspects of the labor contract were eligible for bargaining and restrictions were placed on firing, layoffs, and unemployment compensation. Firms were allowed to close only with government approval. Labor relations were contentious and characterized by frequent strike activity. Clearly, the government was mandating inefficient labor contracts.

The financial crisis in 1991 triggered a change in policy toward export promotion. Simultaneously, pressure emerged to change labor law.

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