Journal of International Development
J. Int. Dev. **17**, 1–16 (2005)
Published online in Wiley InterScience (www.interscience.wiley.com). DOI: 10.1002/jid.1140

LABOUR STANDARDS, DEMOCRACY AND WAGES: SOME CROSS-COUNTRY EVIDENCE

THOMAS I. PALLEY*
U.S.—China Economic and Security Review Commission Washington, DC USA

Abstract: The international community is divided over labour standards. Opponents claim that standards are protectionist. Proponents say they benefit developing economies by improving governance and income distribution. This paper presents evidence supporting the case for labour standards. Using cross-country data from the second half of the 1980s and the first half of the 1990s, it shows that labour standards are associated with improved governance and reduced corruption. Labour standards also improve income distribution and raise wages. The results qualify Rodrik's (1999) findings about democracy and wages. Labour standards rather than democracy cause higher wages, but democracy may still matter indirectly by promoting labour standards. Copyright © 2005 John Wiley & Sons, Ltd.

1 INTRODUCTION

The decade of the 1990s witnessed the emergence of a vigorous debate over the place of labour standards in the global economic order with the international labour movement calling for incorporation of labour standards into the rules governing international trade. This call has sharply divided the international community, with opponents calling standards protectionist. They argue that such standards are being pushed by organized labour in developed economies to protect jobs and blunt the comparative advantage of low wage developing economies. Proponents of labour standards deny this charge, and instead maintain that standards constitute good development policy that can raise living conditions and economic growth in the developing world. Their argument is that labour standards confer both static and dynamic economic efficiencies (Palley, 2004). Static efficiencies include one-time gains that come from improvements in existing economic practice. Dynamic efficiencies refer to gains that come from improvements to the growth path as a result of shifting from a 'low road' path of development to a 'high road' path.

*Correspondence to: Thomas I. Palley, Asst Dev of Public Policy, AFL-CIO, 815 16th Street, NW, Washington DC 20006, USA. E-mail: tpalley@uscc.gov

The 'good development policy' argument for labour standards rests on two lines of reasoning. First, by correcting gross imbalances of power between workers and firms, labour standards promote an improved distribution of income that contributes to the development of robust domestic markets, which fosters domestic growth. Second, labour standards promote good governance, which serves to check economic cronyism and reduce misallocation and dissipation of scarce resources. Additionally, labour standards are good for the international economy because they tilt developing economies away from exclusive reliance on export-led growth. Such growth tends to produce a global shortage of demand and deflation since countries look for markets in other countries rather than growing their own domestic markets. For developing countries as a group, export-led growth may also exacerbate the trend of declining terms of trade since increases in productive capacity are automatically directed on to world markets, which lowers prices. Thus, by fostering domestic demand-led growth and mitigating the dangers posed by excessive reliance on export-led growth, labour standards contribute to a 'win–win' outcome for both developed and developing countries.

The paper presents some new findings that are supportive of the above claims regarding the benefits of labour standards. Using cross-country evidence from the second half of the 1980s and first half of the 1990s, the paper shows that improved labour standards are associated with improvements in political governance, reduced levels of corruption, and improvement in the level of security of economic contracting. The evidence also shows that labour standards are associated with improvements in the pattern of income distribution as measured by the labour share of manufacturing value added and country gini coefficients.

A second focus of the paper is the relationship between, democracy, labour standards, and wages. Rodrik (1999) reports that democracies pay higher wages, and that the 'democracy effect' is responsible for this. The current paper shows that improved labour standards are strongly associated with higher wages, and it is labour standards rather than democracy that are directly instrumental. This finding qualifies Rodrik's (1999) results regarding the relation between wages and democracy. The nature of this qualification is shown in Figure 1. Whereas Rodrik posits a direct relation between improved democracy and higher wages, the paper suggests that democracy works to improve labour standards, and labour standards are the economic mechanism that changes the outcome in labour markets.

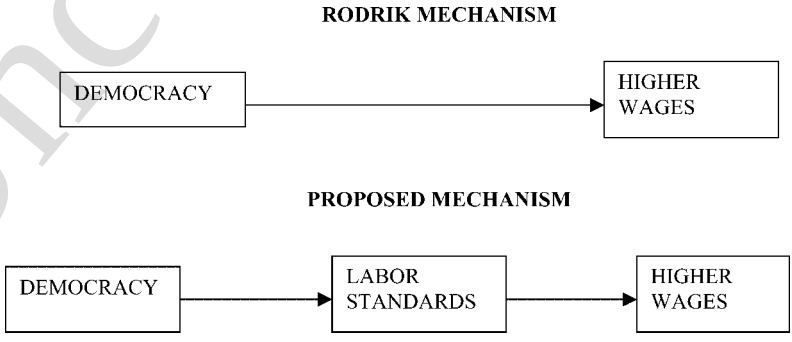

Figure 1. Comparison of alternative mechanisms via which democracy generates higher wages

2 DESCRIPTION OF THE DATA

The data used in the current exercise are cross-country data from the period 1985–94. The definition of variables is as follows:

LABSTDS = rating of labour standards in country *j* (rating scale = 1–4 with 1 = best) as proxied by the OECD's index of freedom of association
OECDDUM = OECD dummy variable (1 if country *j* is a member of the OECD and 0 otherwise)
GDPCAP95 = country *j* 1995 per capita GDP in US dollars
GDPCAP = country *j* five year average per capita GDP in US dollars
DEMNEW = five year average of Freedom House democracy index for country *j* (rating scale = 0–1 with 1 = most democratic)
DEMPOL = five year average of Polity III democracy index for country *j* (rating scale = 0–1 with 1 = most democratic)
FREE = five year average index of freedom in country *j* constructed from Freedom House's rankings (rating scale = 1–3 with 3 = least free)
FREE1999 = Freedom House index of freedom in 1999 in country *j* (rating scale = 1–3 with 3 = least free)
CORRUPT = country *j* corruption perception index in 1996 (rating scale = 0–10 with 0 = most corrupt)
ECONSEC = country *j* index of security for economic contracting (rating scale = 0–10 with 0 = least secure)
LABS = five year average measure of the labour share in country *j*
GINI = country *j* Gini coefficient
LANDINEQ = country *j* index of land ownership inequality
WAGE = five year average annual nominal wage in country *j* converted to U.S. dollars at current exchange rates
MVA = five year average annual nominal manufacturing value added per worker in country *j*. The five-year country averages are based on the periods 1985–89 and 1990–94. The data on country labour standards and 1995 per capita GDP are drawn from the OECD's *An Update of the 1996 Study 'Trade, Employment, and Labour Standards: A Study of Core Workers' Rights and International Trade'* (OECD, 2000). The OECD index of labour standards is based on country observations mostly made in the early 1990s, but for a few countries the observations are from the late 1980s. In all regressions the index of labour standards was multiplied by minus one so that -1 = best and -4 = worst.

The democracy indexes, DEMNEW and DEMPOL, were supplied by Dani Rodrik. The index values run from zero (undemocratic) to unity (democratic). The indexes of freedom, FREE and FREE1999, are drawn from Freedom House's web site. Each year Freedom House constructs a country index of freedom ranging from one (free) to three (unfree). FREE1999 represents the index value in 1999, while FREE is the simple average of the index for the five year periods 1985–89 and 1990–94. In all regressions the indexes FREE1999 and FREE were multiplied by minus one so that -1 = free and -3 = unfree.

The country Gini coefficients were obtained from the World Bank's web page and updated to include the most recent measure of the Gini coefficient published in the *2000 World Development Report*. The country corruption perception index is from

Transparency International as reported in Tanzi (1998). The economic contracting security index was drawn from Fabricius (1998). Data on country five year averages for labour costs, manufacturing value added per worker, GDP per capita, and country price levels were supplied by Dani Rodrik. A labour share index was constructed by taking the ratio of labour costs to manufacturing value added. The index of land ownership inequality is that used by Gupta *et al.* (1998).

3 EMPIRICAL RESULTS

3.1 Labour Standards, Freedom and Democracy

Recently, there has been a growth of interest in the role of democracy and freedom in promoting economic development. Sen (1999) argues that development itself needs to be re-conceptualized as a process of expanding freedom, with freedom being both the means and end of development. Thus, freedom contributes positively to economic development, and the process of development in turn confers freedom by relaxing economic constraints and burdens. In this new conception, democracy and freedom are become both means and ends of development.

Figures 2 and 3 suggest that there is a positive relationship between labour standards, freedom, and democracy. Figure 2 shows a cross-country scatter plot of an index of economic freedom (FREE9094) against an index of labour standards, and it also contains a uni-variate regression line that has a positive slope. This positive slope suggests that there exits a positive association between improvements in freedom and improvements in labour standards. Figure 3 shows a scatter plot between an index of democracy (DEMNEW9094) and labour standards, and once again the uni-variate regression line has a positive slope that suggests a positive association between the two.

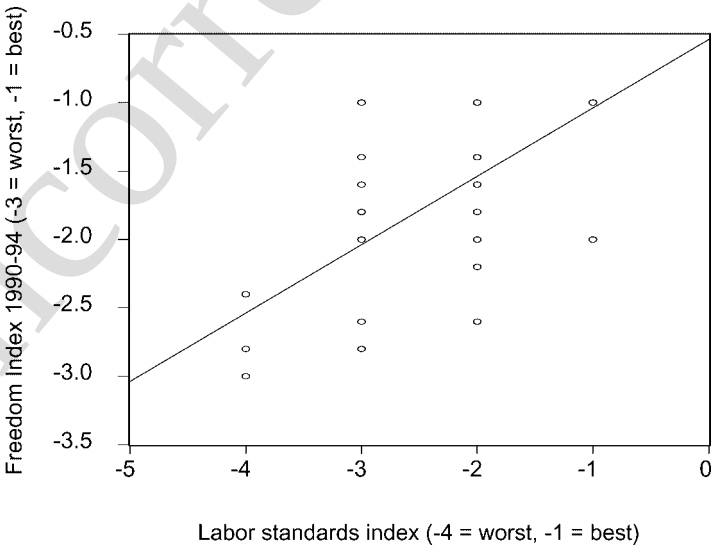

Figure 2. Scatter plot of freedom index against labour standards

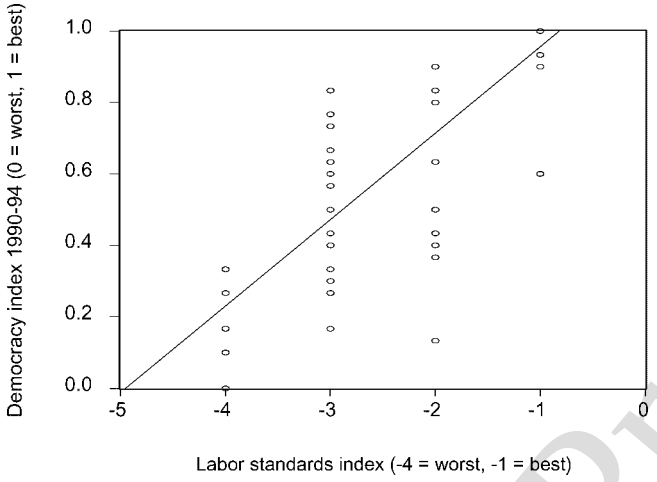

Figure 3. Scatter plot of labour standards index against democracy

To test formally for an empirical association between labour standards, freedom, and democracy, the following empirical model was estimated:

$$\text{FREE1999}_j = a_0 + a_1\text{LABSTDS}_j + a_2\text{lnGDPCAP95}_j + a_3\text{OECDDUMMY}_j \quad (1a)$$

$$\text{FREE9094}_j = a_0 + a_1\text{LABSTDS}_j + a_2\text{lnGDPCAP9094}_j + a_3\text{OECDDUMMY}_j \quad (1b)$$

$$\text{DEMPOL9094}_j = a_0 + a_1\text{LABSTDS}_j + a_2\text{lnGDPCAP9094}_j + a_3\text{OECDDUMMY}_j \quad (1c)$$

$$\text{DEMNEW9094}_j = a_0 + a_1\text{LABSTDS}_j + a_2\text{lnGDPCAP9094}_j + a_3\text{OECDDUMMY}_j \quad (1d)$$

Equations (1a)–(1d) were estimated under a range of coefficient restrictions using OLS. The inclusion of the natural log of GDPCAP95 and GDPCAP9094 variables control for the effect of income on the political process, while the OECD dummy variable controls for the possibility that OECD countries form a special elite rich group of countries that are characterized by greater freedom and democracy.[1]

The regression results are reported in Table 1. For each independent variable, three different regression specifications are estimated. In all cases (twelve regressions) the labour standards variable is statistically significant at the 1 per cent level and has a positive sign.[2] This confirms a positive association between labour standards and the level of freedom and democracy. However, the direction of causation cannot be ascertained, and

[1]In the regressions using FREE1999 the income measure is (GDPCAP95) is a lagged measure. In the other regressions in Table 1 the income measure (GDPCAP9094) is a contemporaneous measure since the democracy and freedom measures are averages for the period 1990–94.

[2]The Freedom house index of freedom is constructed from a questionnaire consisting of twenty two questions and yielding a maximum score of 88 points. One of these questions (maximum 4 points) deals with labour standards so that there may be a weak simultaneity bias in the regressions using the index of freedom as the independent variable.

Table 1. Labour standards, freedom, and democracy regressions

Dependent variable	Constant	Labour standards	ln(GDP per capita)	OECD Dummy	Adj. R^2	S.E.E.
1. FREE1999	−0.469**	1.088***			0.455	0.772
	(−2.03)	(7.65)			$N=70$	
2. FREE1999	−2.901***	0.732***	0.230**		0.533	0.715
	(−4.01)	(4.41)	(2.63)		$N=70$	
3. FREE1999	−1.905***	0.342***	0.146***	−0.218	0.501	0.461
	(−3.97)	(4.53)	(2.88)	(−1.18)	$N=70$	
4. FREE9094	−0.537***	0.500***			0.670	0.367
	(−5.46)	(11.79)			$N=69$	
5. FREE9094	−1.481***	0.435***	0.99*		0.690	0.343
	(−2.66)	(8.22)	(1.73)		$N=66$	
6. FREE9094	−1.586***	0.447***	0.117*	−0.069	0.687	0.345
	(−2.62)	(7.59)	(1.68)	(−0.46)	$N=66$	
7. DEMPOL	1.274***	0.277***			0.594	0.237
	(18.91)	(9.81)			$N=66$	
8. DEMPOL	1.193***	0.268***	0.009		0.600	0.228
	(3.13)	(7.34)	(0.23)		$N=64$	
9. DEMPOL	1.217***	0.264***	0.004	0.019	0.594	0.230
	(2.98)	(6.05)	(0.09)	(0.17)	$N=64$	
10. DEMNEW	1.198***	0.242***			0.671	0.175
	(25.51)	(11.98)			$N=71$	
11. DEMNEW	0.719***	0.212***	0.051*		0.701	0.161
	(2.80)	(8.62)	(1.93)		$N=68$	
12. DEMNEW	0.842***	0.200***	0.39	0.078	0.708	0.160
	(3.07)	(7.59)	(0.35)	(0.22)	$N=68$	

Figures in parentheses are *t*-statistics. *** = significant at 1 per cent, ** = significant at 5 per cent. * = significant at 10 per cent.

there may well be bi-directional causation with democracy and freedom promoting labour standards and labour standards promoting democracy and freedom. Interestingly, neither the per capita GDP variable nor the OECD dummy variable are statistically significant, and their sign also varies. This suggests that a high level of income is not the determining factor for improved freedom and democracy, and that freedom and democracy are not luxuries that only high-income countries can afford.

3.2 Labour Standards and Corruption

Just as there has been growth of interest in the economic development implications of political freedom, so too there has been a surge of interest in the role of good governance in promoting development. Thus, in 1997 the IMF Executive Board adopted a resolution whereby the promotion of good governance became a key objective of the Fund. This interest in good governance is now reflected in what the IMF is terming 'second generation reforms'. First generation reforms focused on promoting sustainable macroeconomic conditions through restoration of fiscal balance, external balance and monetary stability. Second generation reforms are intended to cement these earlier reforms by promoting institutions that contribute to good economic governance.

To the extent that cronyism and corruption are politically sponsored, labour standards may have a role to play by contributing to the development of counter-vailing powers that

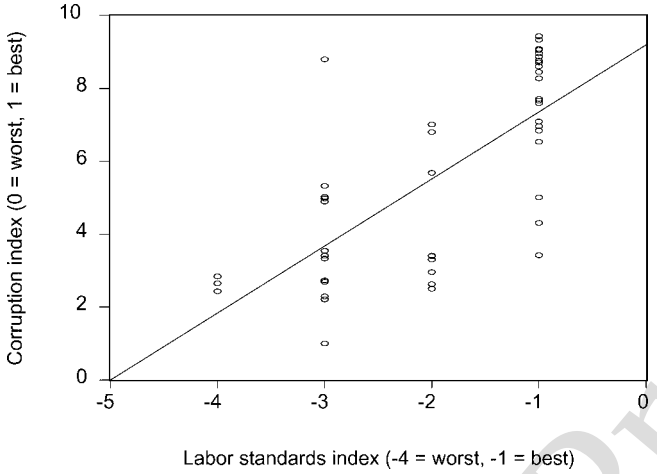

Figure 4. Scatter plot of corruption index against labour standards

can check such behaviors. This possibility is suggested in Figure 4 which shows a cross-country scatter plot between an index of corruption and labour standards, along with a regression line. The slope of the line is positive, indicating that improved labour standards are associated with less corruption. To test this hypothesis the following multi-variate model was estimated using OLS:

$$\begin{aligned}\text{CORRUPT}_j = {} & a_0 + a_1\text{LABSTDS}_j + a_2\text{DEMOCPOL9094}_j \\ & + a_3\text{DEMOCNEW9094}_j + a_4\text{FREE9094}_j + a_5\text{OECDDUMMY}_j \quad (2)\end{aligned}$$

where CORRUPT = Transparency International index of corruption for 1996. The inclusion of the democracy and freedom variables is intended to control for the possibility that it is political forces that rein in corruption, while the inclusion of the OECD dummy variable is intended to control for the fact that the OECD countries may represent a special group of honest economies.

The regression results are shown in Table 2. In all cases the labour standards variable has a negative sign indicating that improved labour standards are associated with reduced corruption. In six of the regressions the labour standards variable is significant at the 1 per cent level. In the seventh regression, which includes the variable FREE9094, it is not statistically significant. The two democracy variables actually have a negative sign, while the OECD dummy variable is statistically insignificant in all cases.[3]

3.3 Labour Standards and Economic Security

Economic security, predicated upon the ability to make binding contracts, is critical for market based economic activity. As such, economic security is critical for economic development. Here too labour standards may matter by contributing to a balance of political power that blocks arbitrary governance that undermines economic security.

[3]The freedom index (FREE9094) includes as part of its construction questions regarding rule of law so that it may embody the phenomenon of corruption itself. This would make it an inappropriate regressor, and this may explain the weakened statistical significance of labour standards in this regression.

Table 2. Labour standards, democracy, freedom, and corruption regressions

Dependent variable	Constant	Labour standards	Dempol	Demnew	Free9094	OECD Dummy	Adj. R^2	S.E.E.
1. CORRUPT	9.198***	−1.840***					0.503	1.827
	(15.82)	(−6.89)					$N=47$	
2. CORRUPT	9.921***	−1.989***	−0.602				0.498	1.850
	(5.92)	(−4.86)	(−0.48)				$N=46$	
3. CORRUPT	10.785***	−2.142***		−1.298			0.496	1.838
	(4.44)	(−4.09)		(−0.67)			$N=47$	
4. CORRUPT	9.421***	−1.594***			−0.506		0.490	1.869
	(12.42)	(−3.10)			(−0.55)		$N=45$	
5. CORRUPT	7.825***	1.300***	−0.741			1.822**	0.533	1.783
	(4.10)	(2.52)	(−0.61)			(2.07)	$N=46$	
6. CORRUPT	9.384***	1.603***		−1.855		1.682*	0.526	1.783
	(3.80)	(2.77)		(−0.98)		(1.94)	$N=47$	
7. CORRUPT	7.203***	0.783			−0.673	1.851	0.527	1.799
	(5.57)	(1.24)			(−0.76)	(2.08)	$N=45$	

Figures in parentheses are *t*-statistics. *** = significant at 1 per cent, ** = significant at 5 per cent. * = significant at 10 per cent.

Figure 5 shows a cross-country scatter plot between the index of economic security and labour standards, along with a uni-variate regression line. The slope of the regression line is positive, indicating that improved labour standards are indeed associated with improved economic security. To formally test this finding the following multi-variate regression model was estimated:

$$\text{ECONSEC}_j = a_0 + a_1\text{LABSTDS}_j + a_2\text{DEMOCPOL9094}_j + a_3\text{DEMOCNEW9094}_j + a_4\text{FREE9094}_j + a_5\text{OECDDUMMY}_j \quad (3)$$

The regression results are shown in Table 3. In all seven reported regressions the sign of the labour standards variable is positive, and it is statistically significant at the 1 per cent

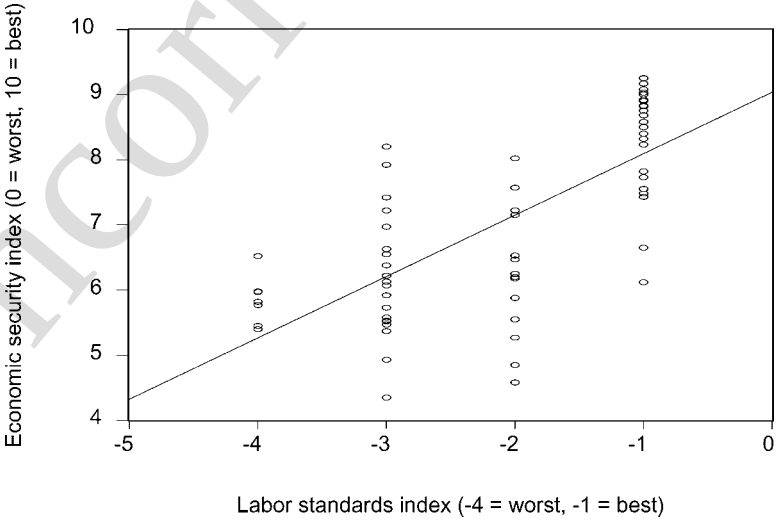

Figure 5. Scatter plot of economic security index against labour standards

Table 3. Labour standards, democracy, freedom, and economic security regressions

	Dependent variable = ECONSEC							
Dependent variable	Constant	Labour standards	Dempol	Demnew	Free9094	OECD dummy	Adj. R^2	S.E.E.
1. ECONSEC	9.036***	0.942***					0.499	0.980
	(33.91)	(8.29)					$N = 69$	
2. ECONSEC	8.169***	0.768***	0.753				0.533	0.960
	(11.61)	(4.23)	(1.48)				$N = 65$	
3. ECONSEC	6.315***	0.395**		2.263***			0.572	0.905
	(7.81)	(2.11)		(3.54)			$N = 69$	
4. ECONSEC	9.623***	0.382**			1.127***		0.582	0.904
	(32.62)	(2.06)			(3.69)		$N = 67$	
5. ECONSEC	6.562***	0.243	0.616			1.614**	0.662	0.818
	(9.63)	(1.30)	(1.43)			(4.95)	$N = 65$	
6. ECONSEC	5.816***	0.151		1.639***		1.259***	0.661	0.806
	(7.98)	(0.86)		(2.79)		(4.28)	$N = 69$	
7. ECONSEC	8.123***	−0.011			1.009***	1.439***	0.707	0.757
	(21.64)	(−0.06)			(3.93)	(5.31)	$N = 67$	

Figures in parentheses are *t*-statistics. *** = significant at 1 per cent, ** = significant at 5 per cent. * = significant at 10 per cent.

level in those equations containing just the democracy and freedom indexes. However, inclusion of the OECD dummy variable causes the labour standards coefficient to become statistically insignificant though the signs are unchanged.

3.4 Labour Standards and Inequality

An important claim on behalf of labour standards is that they reduce income inequality. The argument is that labour standards level the playing field between business and labour, and in doing so they contribute to an increased labour share. This increase in labour share is important both in terms of its impact on inequality, and because it can contribute to the development of robust domestic consumer markets that aid domestic growth. Robust domestic markets also help steer the global economy away from excessive reliance on export-led growth which carries the twin dangers of a race to the bottom and global deflation. The former may result if countries seek international competitive advantage at any cost, while the latter may result if countries seek to grow their economies on the back of demand in other countries so that the world economy ends up short of aggregate demand.

A labour share variable was constructed as follows:

Labour share (LABS) = wage per worker (WAGE)/manufacturing value added per worker(MVA)

where the wage per worker and manufacturing value added per worker are both averages for the five year periods 1985–89 and 1990–94. Figure 6 shows a cross-country scatter plot of the labour share for the period 1990–94 against the labour standards, along with a regression line. The slope of the regression line is positive, indicating that improved labour standards

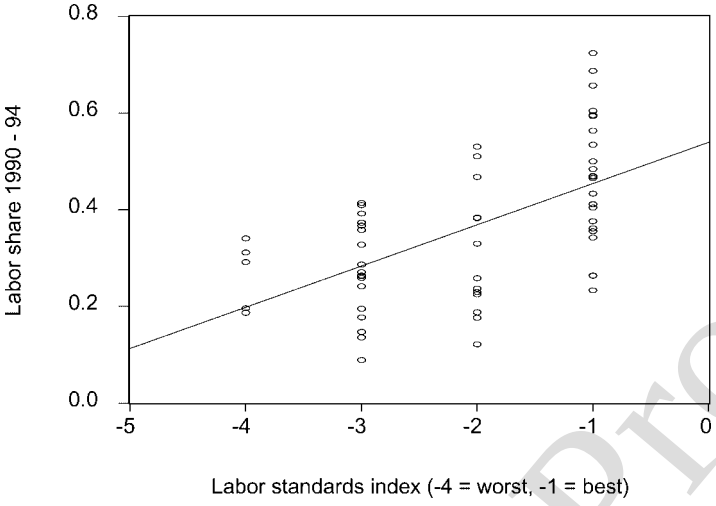

Figure 6. Scatter plot of labour share against labour standards

are associated with an increased labour share. Once again, to test the hypothesis more formally the model is estimated in multi-variate form. The empirical model is given by:

$$\begin{aligned}\text{LABS}_j = a_0 + a_1\text{LABSTDS}_j + a_2\text{DEMOCPOL}_j + a_3\text{DEMOCNEW}_j \\ + a_4\text{FREE}_j + a_5\ln(\text{GDPCAP})_j + a_6\text{OECDDUMMY}_j \qquad (4)\end{aligned}$$

The democracy and freedom variables control for the impact of political institutions on income distribution, while the GDP per capita variable controls for the possibility that labour's share rises with income. Finally, the OECD dummy controls for the possibility that the OECD countries have a unique 'rich club' distributional structure. The regressions are reported in Table 4. Regressions 1–12 use observations drawn from the period 1990–94 (i.e. there is one observation per country). In all 12 regressions improved labour standards have a positive impact on the labour share. In 11 regressions the labour standards coefficient is statistically significant at the 1 per cent level, and in regression (10) it is significant at the 5 per cent level. Interestingly, in all the regressions including a democracy variable, the coefficient of democracy is negative, and in two cases it is statistically significant at the 5 per cent level. This is not to say that democracy has no positive impact on the labour share, but only that if it does, this effect works indirectly through a positive impact on labour standards (recall from Table 1 that the two are positively associated). This makes sense economically, since the labour market effects of democracy are likely to be felt through the labour market rules democracy encourages. Finally, the coefficient of GDP per capita is positive in all the regressions including this variable, but in only one instance is it statistically significant, and then only at the 10 per cent level.

Regressions 13–24 in Table 4 are based on the extended sample period 1985–94, so that there are now two observations per country in most cases. These latter regressions confirm the positive effect of labour standards on the labour share. In 11 of the regressions the coefficient of labour standards is again positive and significant at the 1 per cent level. The principal differences from the shorter sample period are: (i) the coefficient of labour standards is now fractionally smaller; (ii) the coefficients of the democracy and freedom

Table 4. Labour standards, democracy, freedom, and labour share regressions

Dependent variable	Constant	Labour standards	Dempol	Demnew	Free	ln(GDP per capita)	OECD dummy	Adj. R^2	S.E.E.
1990–94:									
1. LABS	0.539***	0.085***						0.334	0.121
	(15.20)	(5.53)						$N=60$	
2. LABS	0.602***	0.097***	−0.067					0.315	0.117
	(6.72)	(4.17)	(−1.05)					$N=56$	
3. LABS	0.699***	0.117***		−0.134				0.346	0.120
	(5.88)	(4.33)		(−1.41)				$N=60$	
4. LABS	0.501***	0.113***			−0.062			0.340	0.119
	(11.86)	(4.17)			(−1.35)			$N=58$	
5. LABS	0.197	0.065***				0.036		0.360	0.118
	(0.85)	(3.21)				(1.51)		$N=58$	
6. LABS	0.322	0.088***	−0.108			0.034		0.354	0.114
	(1.32)	(3.26)	(−1.61)			(1.48)		$N=55$	
7. LABS	0.470*	0.122***		−0.249**		0.039*		0.403	0.115
	(1.84)	(3.93)		(−2.41)		(1.67)		$N=58$	
8. LABS	0.181	0.116***			−0.106**	0.31		0.381	0.116
	(0.78)	(3.67)			(−2.12)	(1.33)		$N=56$	
9. LABS	0.184	0.065***				0.037	−0.002	0.339	0.121
	(0.74)	(2.79)				(1.36)	(−0.03)	$N=58$	
10. LABS	0.431*	0.072**	−0.111*			0.015	0.081	0.367	0.113
	(1.70)	(2.49)	(−1.68)			(0.54)	(1.43)	$N=55$	
11. LABS	0.500*	0.120***		−0.256**		0.034	0.019	0.393	0.116
	(1.84)	(3.77)		(−2.42)		(1.31)	(0.36)	$N=58$	
12. LABS	0.186	0.116***			−0.106**	0.030	0.004	0.369	0.117
	(0.75)	(3.41)			(−2.09)	(1.10)	(0.07)	$N=56$	
1985–94:									
13. LABS	0.518***	0.076***						0.285	0.122
	(20.93)	(7.15)						$N=127$	
14. LABS	0.520***	0.075***	−0.020					0.257	0.119
	(8.77)	(4.58)	(−0.47)					$N=119$	
15. LABS	0.531***	0.079***		−0.013				0.283	0.122
	(6.92)	(4.43)		(−0.20)				$N=126$	
16. LABS	0.513***	0.074***			0.000			0.276	0.121
	(17.75)	(4.39)			(0.02)			$N=123$	
17. LABS	0.085	0.050***				0.045***		0.332	0.119
	(0.60)	(3.78)				(3.14)		$N=125$	
18. LABS	0.117	0.060***	−0.061			0.048***		0.320	0.114
	(0.84)	(3.56)	(−1.45)			(3.30)		$N=118$	
19. LABS	0.152	0.074***		−0.122*		0.053***		0.326	0.122
	(1.022)	(3.92)		(−1.79)		(3.36)		$N=124$	
20. LABS	0.050	0.063***			0.034	0.046***		0.324	0.122
	(0.32)	(3.46)			(1.16)	(2.99)		$N=121$	
21. LABS	0.080	0.048***				0.045***	0.006	0.309	0.124
	(0.53)	(3.11)				(2.66)	(0.16)	$N=125$	
22. LABS	0.201	0.043**	−0.070			0.030*	0.087	0.324	0.117
	(1.34)	(2.22)	(−1.61)			(1.75)	(2.19)	$N=118$	
23. LABS	0.179	0.070***		−0.128*		0.048***	0.023	0.322	0.122
	(1.15)	(3.59)		(−1.85)		(2.79)	(0.62)	$N=124$	
24. LABS	0.069	0.060***			0.033	0.043**	0.015	0.301	0.123
	(0.42)	(2.99)			(1.11)	(2.40)	(0.40)	$N=121$	

Figures in parentheses are *t*-statistics. *** = significant at 1 per cent, ** = significant at 5 per cent. * = significant at 10 per cent.

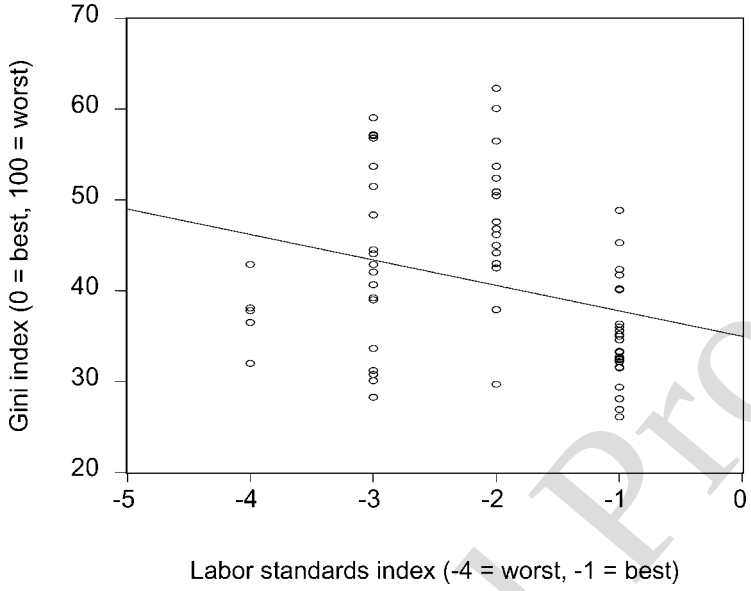

Figure 7. Scatter plot of Gini index against labour standards

variables now become less statistically; and (iii) the coefficient of GDP per capita is now statistically significant at the 1 per cent level in all eight regressions in which it is included. Labour standards do raise the labour share, but so too does a higher GDP per capita.

A second test of the distributional implications of labour standards comes from looking at their effect on country gini coefficients. Figure 7 presents a scatter plot of country Gini coefficients against labour standards, and the accompanying regression line is negatively sloped. As labour standards improve, income distribution also improves (i.e. Gini falls). To test the proposition more robustly, the following regression model was estimated:Q1

$$\begin{aligned}\text{GINI}_j = {} & a_0 + a_1\text{LABSTDS}_j + a_2\text{GDPCAP9094}_j + a_3(\text{GDPCAP9094})_j^2 \\ & + a_4\text{LANDINEQ}_j + a_5\text{AFRICA}_j + a_6\text{WESTHEM}_j \end{aligned} \quad (6)$$

where WESTHEM = western hemisphere dummy variable (excluding Canada and the US), AFRICA = African dummy variable, and LANDINEQ = index of inequality of land holdings. The GDP per capita variable is now in absolute levels, and a squared measure is included to control for the possibility of non-linearity in income associated with a Kuznets curve. The results are reported in Table 5. In all six regressions the labour standards coefficient is negatively signed. In one regression the coefficient is statistically significant at the 1 per cent level, and in three it is statistically significant at the 5 per cent level. The coefficients of the WESTHEM and AFRICA dummies are always positive and statistically significant at the 1 per cent level, revealing the pathological state of income distribution in these two regions. The LANDINEQ variable is positive in all four regressions, and statistically significant at the 1 per cent level in three of them. LANDINEQ is not statistically significant when the AFRICA and WESTHEM region dummies are included, but the labour standards variable does remain statistically significant. In sum, Table 5 provides further evidence, consistent with Table 4, that labour standards promote more equal distributional outcomes.

Table 5. Labour standards, democracy, freedom, and Gini coefficient regressions

Independent variable	Constant	Labour standards	Land inequality	GDP per capita	GDP per capita^2	Africa	West Hemis.	Adj. R^2
1. GINI	34.975***	−2.807**						0.074
	(13.66)	(−2.49)						$N=66$
2. GINI	11.404**	−4.475***	0.306***					0.449
	(2.04)	(−3.38)	(3.64)					$N=36$
3. GINI	17.493*	−3.131	0.289***	-2.0×10^{-4}				0.442
	(1.75)	(−1.38)	(3.25)	(−0.74)				$N=36$
4. GINI	15.520	−3.370	0.294***	5.0×10^{-5}	-1.8×10^{-8}			0.425
	(1.23)	(−1.37)	(3.15)	(0.04)	(−0.26)			$N=36$
5. GINI	15.092	−4.592**	0.105	0.001	-6.2×10^{-8}	16.577***	14.401***	0.603
	(1.41)	(−2.21)	(1.11)	(1.18)	(−1.08)	(3.14)	(3.45)	$N=36$
6. GINI	32.491***	−1.715**				11.511***	13.703***	0.501
	(16.93)	(−2.02)				(4.36)	(6.97)	$N=66$

Figures in parentheses are *t*-statistics. *** = significant at 1 per cent, ** = significant at 5 per cent. * = significant at 10 per cent.

3.5 Labour Standards and Wages

Finally, a key part of the argument for labour standards is that they contribute to good development policy by raising wages. In terms of Sen's (1999) '*Development as Freedom*' argument, higher wages confer freedom by loosening the economic constraints on individual workers. From a more conventional economic perspective, higher wages facilitate domestic demand-led growth. Figure 8 provides a scatter plot of the log of

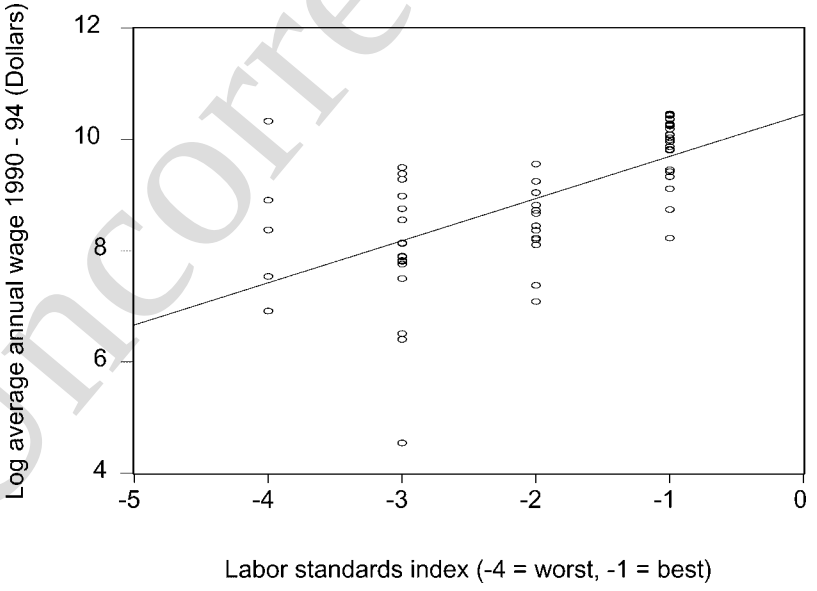

Figure 8. Scatter plot of average annual wages against labour standrds

average annual wages against the index of labour standards with an accompanying regression line. The slope of the line is positive, suggesting that labour standards have a positive impact on the level of wages.

To test for such an effect the following regression, which resembles those reported in Rodrik (1999), was estimated.

$$\begin{aligned}\ln(\text{WAGE}_j) = {} & a_0 + a_1\text{LABSTDS}_j + a_2\ln(\text{PRICE}_j) + a_3\ln(\text{MVA}_j) \\ & + a_3\ln(\text{GDPCAP}_j) + a_4\text{DEMOCPOL}_j + a_5\text{DEMOCNEW}_j \\ & + a_6\text{FREE}_j + a_7\text{OECDDUMMY}_j \end{aligned} \tag{7}$$

where ln(WAGE) = log of average nominal wage in country *j* converted to US dollars using current exchange rates, ln(PRICE) = log of average price level in country *j* relative to the US price level converted at current exchange rates, and ln(MVA) = average manufacturing value added per worker in country *j*. The regression estimates are shown in Table 6. Regressions 1–8 use observations from the period 1990–94 (i.e. one per country), while regressions 9–16 use observations from the period 1985–94 so that there are two observations for most countries.

With regard to the 1990–94 regressions, in all cases the coefficient of labour standards is positive and statistically significant at the 1 per cent level. Labour standards clearly result in higher wages. The coefficients of MVA and the relative price level are also both positive and statistically significant at the 1 per cent level. The GDP per capita variable is also positive in all cases, and statistically significant at the 5 per cent level in five instances. These findings broadly replicate those reported in Rodrik (1998). However, surprisingly, the democracy and freedom variables are always negatively signed, and DEMNEW is also statistically significant at the 5 per cent. *Prima facie*, this finding runs counter to that reported in Rodrik (1998).[4] However, the two findings can be reconciled as follows. Democracies may indeed pay higher wages, but the effect of democracy works indirectly through acceptance of labour standards and through the imposition of rules governing labour markets that contribute to higher wages.

Regressions 8–16 in Table 6 use the extended sample covering 1985–94. The coefficient of labour standards remains positive and statistically significant at the 1 per cent level in all eight cases. The principle differences from the shorter sample period regressions are: (i) the coefficient of labour standards is a little smaller; (ii) the magnitude and statistical significance of the GDP per capita coefficient is increased; and (iii) the coefficient of DEMNEW is now statistically insignificant, and the coefficients of the democracy and freedom variables are smaller.

In sum, the regressions in Tables 4, 5, and 6 give strong support to Rodrik's (1999, p. 733) central finding that 'Institutions matter to distributive outcomes.' However, the regressions qualify his findings and suggest that it is labour standards rather than democracy that matters, at least in terms of 'direct' impact on wages and income distribution.

[4]It should also be noted that Rodrik's (1998) study uses data from the period 1970–94 whereas the current study only uses data from 1990–94. This is because the OECD's labour standards index is only available for this period.

Table 6. Labour standards, democracy, freedom, and wage regressions

	Dependent variable = ln(Wage)															
	1990–94:								1985–94:							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Constant	2.024***	0.688	1.241	0.761	0.261	1.440	1.015	0.424	2.100***	0.680	0.724	0.635	0.688	0.705	0.689	0.664
	(2.96)	(0.79)	(1.41)	(0.84)	(0.29)	(1.61)	(1.11)	(0.45)	(4.66)	(1.39)	(1.47)	(1.24)	(1.29)	(1.39)	(1.32)	(1.20)
Labour	0.236***	0.171***	0.319***	0.218***	0.292***	0.302***	0.173***	0.269***	0.212***	0.144***	0.174***	0.147***	0.129***	0.176***	0.136***	0.132***
standards	(4.75)	(3.13)	(3.70)	(2.77)	(3.21)	(3.45)	(2.07)	(2.78)	(6.25)	(4.32)	(3.75)	(3.21)	(2.86)	(3.69)	(2.74)	(2.74)
ln(relative	0.704***	0.557***	0.527***	0.517***	0.465***	0.515***	0.497***	0.465***	0.753***	0.596***	0.586***	0.588***	0.579***	0.587***	0.586***	0.579***
price level)	(4.10)	(3.23)	(3.14)	(2.83)	(2.57)	(3.07)	(2.74)	(2.56)	(7.22)	(6.07)	(5.92)	(5.74)	(5.61)	(5.89)	(5.70)	(5.59)
ln(MVA	0.779***	0.693***	0.736***	0.727***	0.750***	0.734***	0.735***	0.748***	0.766***	0.663***	0.669***	0.679***	0.671***	0.669***	0.680***	0.671***
per worker)	(13.28)	(10.91)	(11.41)	(10.58)	(10.95)	(11.40)	(10.79)	(10.84)	(19.53)	(16.61)	(16.45)	(16.05)	(16.17)	(16.38)	(16.00)	(16.10)
ln(GDP		0.232**	0.205**	0.207**	0.195**	0.177*	0.147	0.171		0.262**	0.270**	0.250**	0.252**	0.273***	0.237***	0.256***
per capita)		(2.56)	(2.31)	(2.12)	(2.03)	(1.90)	(1.40)	(1.67)		(5.42)	(5.30)	(4.79)	(4.90)	(5.06)	(4.08)	(4.57)
Demnew			−0.632**			−0.677**					−0.155			−0.152		
			(−2.17)			(−2.31)					(−0.92)			(−0.89)		
Dempol				−0.185			−0.204					−0.039			−0.038	
				(−0.93)			(−1.03)					(−0.34)			(−0.33)	
Free					−0.245			−0.241					0.032			0.031
					(−1.68)			(−1.65)					(0.43)			(0.41)
OECD						0.144	0.238	0.104						−0.015	0.051	−0.015
dummy						(1.06)	(1.47)	(0.72)						(−0.18)	(0.52)	(−0.18)
Adj. R^2	0.926	0.933	0.937	0.934	0.936	0.938	0.936	0.943	0.924	0.939	0.939	0.939	0.939	0.938	0.938	0.938
S.E.E	0.336	0.319	0.309	0.324	0.315	0.308	0.321	0.316	0.331	0.298	0.299	0.304	0.301	0.300	0.305	0.302
N =	60	58	58	55	56	58	55	56	127	125	124	118	121	124	118	121

Figures in parentheses are t-statistics. *** = significant at 1 per cent, ** = significant at 5 per cent. * = significant at 10 per cent.

ACKNOWLEDGEMENTS

This paper was originally titled 'The Impact of Labour Standards on Economic Governance, and Income Distribution: Some Cross-Country Evidence,' AFL-CIO Public Policy Department Working Paper, T029, June 2000. My thanks to Heidi Hessler for her assistance in compiling the data base used in this study. My thanks also to Dani Rodrik for generously providing data. All errors of fact and interpretation are mine. The views expressed in this paper are those of the author and not those of the U.S.-China Economic & Security Review Commission.

REFERENCES

Fabricius M. 1988. The Impact of Economic Security on Bank Deposits and Investment. *IMF Working Paper*, WP/98/98.

Gupta S, Davoodi H, Alonso-Terme R. 1998. Does corruption affect income inequality and poverty? *IMF Working Paper*, WP/98/76.

OECD. 2000. *Update of the 1996 Study Trade, Employment and labour Standards: A Study of Core Workers' Rights and International Trade*. OECD: Paris.

Palley TI. 2004. The Economic Case for International Labour Standards. *Cambridge Journal of Economics* **28**: 21–36.

Rodrik D. 1999. Democracies pay Higher Wages. *Quarterly Journal of Economics* **CXIV**: 707–738.

Sen A. 1999. *Development as Freedom*. Alfred A. Knopf: New York.

Tanzi V. 1998. Corruption around the world: causes, consequences, scope, and cure. *IMF Working paper*, WP/98/63.

Author Query Form (JID/1140)

Special Instructions: Author please write responses to queries directly on Galley proofs and then fax back.

Q1: Author: Please provide equation no. 5.