Are Workers in the Developing World Winners or Losers in the Current Era of Globalization?

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1 Introduction

It is crucial to understand the link between globalization and expanding opportunities for labor in less developed countries (LDCs). One group of scholars and policymakers, or the globalization "optimists," place great confidence in international markets and the purported worker benefits associated with it. LDC workers are considered "winners" in globalization, given increased growth, greater employment opportunities, and higher wages. To counter this faith, globalization pessimists argue that the existence of stagnant growth rates in some parts of the world, persistent

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unemployment problems, recurring political repression, and growing surplus labor problems indicate that workers in LDCs are in fact "losers" during international market integration. Given this polemic, far too little attention has been paid to how global forces affect workers in LDCs, and even fewer studies have attempted to use cross-national data to assess whether international market pressures are actually the cause of deleterious outcomes for labor, as its critics suggest.

This chapter aims to investigate to what extent workers in LDCs, who are arguably the largest social class both domestically and internationally, are overall "winners" or "losers" in the global economy. This study is distinctive in that it looks beyond labor's economic benefits to assess if workers are also in a better "marketplace bargaining position" with globalization.[1] Most studies on globalization either focus solely on the economic gains and losses of labor in developing economies, or speculate how workers' bargaining power is affected without sufficient empirical justification.[2] I use a time-series cross-sectional unbalanced panel data set for 59 developing countries from 1972 to 1997 to investigate the effects of economic globalization on the skills of the LDC labor force (i.e., employment of high-skilled workers relative to low-skilled workers) and the size of the surplus labor pool. Based on these trends in labor market conditions, I deduce whether international market integration enhances or reduces their potential labor power (PLP), a variable used to approximate labor's marketplace bargaining power.[3]

[1] Silver (2003) identifies labor's marketplace bargaining power based on Erik O. Wright's (2000) analysis. It refers specifically to the *structural power* gamed by workers based on their location in the economic system and is a direct result of tight labor markets. Silver emphasizes three forms of marketplace bargaining power: (1) the possession of scarce skills, (2) low unemployment, and (3) "the ability of workers to pull out of the labor market entirely and survive on nonwage sources of income." She also discusses a*ssociational power*, which refers to "the various forms of power that result from the formation of collective organization of workers" and another form of structural power or *workplace bargaining power* that results "from the strategic location of a particular group of workers within a key industrial sector." Associational and structural bargaining powers are often positively correlated *in the long run* (e.g., teachers, European automobile workers).

[2] The edited volume by Candland and Sil (2001) is a notable exception. The case studies are limited to the experiences of five developing countries: Mexico, Brazil, India, Pakistan, and China. Silver (2003) also discusses the effects of globalization on labor, but focuses on identifying waves of labor unrest and uses the world system rather than nation states as the level of analysis.

[3] PLP is an index I developed to make inferences about the extent of labor's bargaining power. I place emphasis on *potential* labor power since, as Silver (2003) also acknowledges, workers' bargaining power does not automatically mean that workers will apply that power to demand greater political and economic benefits.

Findings in this study reveal that there are merits to the claims of both pessimists and optimists. The effects of globalization on workers in LDCs are conditional upon a nation's level of economic development. Consistent with the views of the globalization optimists, market integration has brought greater job opportunities for workers in the low-, middle-, and high-income LDCs.[4] However, as the globalization pessimists have charged, the results also indicate that globalization has exacerbated surplus labor problems in all but the high-income LDCs. Labor solidarity in the lowest-income countries has particularly come under pressure with globalization. Large populations of low-skilled workers, faced with intense competition from surplus labor, make it extremely difficult for them to overcome collective action problems in the marketplace and subsequently form broader labor alliances. The value placed on such alliances is based on Esping-Andersen's (1990) observation that working-class and white-collar coalitions have historically been most the most decisive force influencing social policies.

Based on these trends, I conclude that although workers in the lower-income LDCs are experiencing greater economic gains (greater employment opportunities), they are not necessarily increasing their bargaining power with employers and, even less likely, with the government. The repercussions may be significant: labor-friendly policies (e.g., higher wages, national welfare programs, employment benefits, political freedoms, etc.) will be inconceivable in poor nations undergoing globalization.

In the higher-income LDCs (e.g., Korea and Singapore), my findings reveal that market integration has helped improve the composition of workers' skills and has encouraged a slight reduction in surplus labor. Under these labor market conditions, I argue that workers in high-income LDCs face better prospects for mobilization. Hence, labor's economic and potential labor power in the richer LDCs is improving with globalization.

I structure the chapter by first evaluating the shortcomings of the outstanding literature on globalization and labor in LDCs. Second, I present an argument for why the effects of labor on globalization are likely to be

[4] Categories of low-, lower-middle, upper-middle, and high-income LDC are based on *World Development Indicators* 2002. Even though Greece and Mexico are also OECD countries, I included them in my LDC dataset because neither country was categorized as "high-income" for most of the time period of this study. Korea is included because it was not an OECD country until the 1990s.

conditional upon the level of economic development. Third, I use panel regression econometric techniques to assess if and how globalization affects labor in low-, middle-, and high-income LDCs. Finally, I conclude by discussing the implications of the econometric results for LDCs.

2 Globalization and Labor: The Pessimists Versus the Optimists

The debates on globalization and its effects on labor as a social actor are highly polarized. Yet little has been done to systematically assess which position the evidence favors in LDCs. On the one hand, globalization optimists apply international trade theory to argue that low-skilled labor in LDC gains with openness in terms of standard economic benefits (e.g., employment and wages). The empirical evidence supporting this position is mixed, and their models exclude any consideration of how globalization might affect labor's bargaining power in the marketplace. Conversely, pessimists who argue that international market integration is harmful to labor tend to rely on anecdotal, case-specific, or region-specific evidence, and they place primary emphasis on issues related to the weakening of labor's bargaining power (e.g., repression and poor working conditions). I argue that to achieve a sense of whether workers as a social class are improving their lot with globalization, we must assess changes in both their economic strength *and* bargaining power. A large- *N*, cross-regional assessment of the effects of international market integration can determine with more confidence whether we can generalize about particular labor patterns across LDCs.

The optimists draw from the Hecksher-Ohlin (H-O) theory of international trade, which focuses on the importance of factor endowments in determining who wins and who loses with globalization (Learner, 1996; Krugman and Venables, 1995; World Bank, 2000, 2001).[5] Because trade increases the demand for abundant factors, the theory asserts that low-skilled labor in LDCs should experience higher wages and employment with increased exposure to international markets, whereas in the more developed countries, high-skilled labor and capital should gain. This logic could also be applied to capital flows. Both productive and financial capital flows will increase in nations that are more efficiently utilizing their most

[5] This literature emphasizes that wages and income will increase with openness as long as the LDCs are fairly rapid globalizers, have strong institutions, and good governance.

abundant factor. Thus, the optimists contend that globalization improves the economic conditions of workers in labor-abundant LDCs at the expense of low-skilled labor in the capital-rich developed world. This neoclassical trade theory has become the basis of conventional wisdom on the relationship between globalization and labor.

Although such analyses help establish a conceptual framework by which to evaluate whether there is a systematic relationship between globalization and labor in LDCs, they suffer from two related shortcomings. First, the empirical evidence provided by these models is inconclusive. While several studies find that income and employment improve with globalization in LDCs (Ghose, 2000; Brunner, 2003), others determine that globalization actually worsens workers' economic position. The latter studies arrive at their conclusion by additionally considering the possible countervailing effects of structural conditions, that is, high surplus labor, lack of access to new technology, and rising global demands for skilled labor rather than low-skilled labor. Wood (1997), for example, finds very different results when he factors in characteristics of the contemporary world market such as skill-biased technological progress and the greater competitive pressures caused by the entrance of large low-income countries (e.g., China and India). His findings challenge the conventional wisdom of the optimists by demonstrating that openness has reduced the wages of unskilled labor relative to high-skilled labor in Latin America. Others such as Berman and Machin (2000), Robbins and Gindling (1997), Mazumdar and Quispe-Magnoli (2002) support Wood's contention that skill-biased technological change disadvantages low-skilled workers in LDCs. Findings from these studies emphasize the importance of taking additional domestic-level international and domestic variables into consideration.

Second, by focusing primarily on economic consequences, the aforementioned studies are arguably narrow in scope. Globalization optimists tend to focus on employment or wages as their primary dependent variable. They exclude any consideration of the bargaining prospects of labor during globalization. Even if we accept the basic premise of the H-O theory of international trade, it is yet unknown whether labor's increased economic power (i.e., higher wages and/or employment) translates into stronger bargaining power.

In contrast, the globalization pessimists downplay economic gains and focus primarily on how international markets have consequences that dampen workers' bargaining position. Often using illustrations from the

East Asian newly industrialized countries (NICs), these studies argue that globalization tends to encourage governments to be repressive toward labor to keep labor costs down and improve competitiveness in international markets. Labor's bargaining position erodes with globalization as wages, working conditions, and opportunities for mobilization and protest are forcibly suppressed (see, for example, Munck, 2002; Prasad, 1998; Manning, 1998; Beeson and Hadiz, 1998; Frenkel and Peetz, 1998; Deyo, 1989). Deyo (1989), for instance, presents the extreme subordination and exclusion of workers as the "dark side" of the Asian miracle. Such polemical accounts give rise to the growing alarm by many observers that capital is rapidly gaining rights over labor in a globalizing world.

Note that a small body of literature challenges these claims and argues contrarily that labor's bargaining power has been resilient in the face of globalization. Yet the few studies that provide empirical evidence that unions and labor mobilization strategies have *not* been adversely affected by globalization are based mostly on the experience of the Organization for Economic Cooperation and Development (OECD) nations (Scruggs and Lange, 2002; Golden et al., 1999). Frundt (2002), Webster and Lipsig-Mumme (2002), and Frenkel (1993) are exceptions that do focus on poorer nations and postulate that globalization can present greater opportunities for labor, such as incentives for mobilization and solidarity with other social groups.[6] Yet these studies lack either empirical evidence or generalizability of their thesis beyond their selected intraregional case studies. Finally, Silver focuses on the rise and decline of the world labor movement under different global political conditions. This approach, while informative, leaves out how country-specific factors might shape labor outcomes.[7]

To summarize, existing analyses have not yet considered how globalization has affected the overall circumstances of labor, and they have not presented empirical evidence that is sufficiently able to discriminate between the optimist and pessimist hypotheses. We do not have a comprehensive picture of how globalization affects labor groups across LDCs.

[6] Silver (2003) also analyzes labor and globalization, but with a different focus. Her approach centers on the interaction between global patterns of labor unrest and world political dynamics. Furthermore, globalization is considered mainly in terms of the increasing mobility of capital.

[7] Silver(2003) makes a good case for why Galton's problem precludes the necessity of observing cross-national variations. Nonetheless, this argument is not supported with empirical evidence.

How do we assess whether workers are winners in globalization? Do labor's economic gains automatically beget a stronger bargaining position under conditions of globalization? Is international market integration presenting the same opportunities to workers in relatively richer and poorer LDCs? Before a rigorous test of the pessimist and optimist hypotheses can be conducted, it is essential to first parse out the reasons why globalization might have a varying effect on workers in different type LDCs.

3 Globalization, Level of Economic Development, and Potential Gains (or Losses) for Labor

The fundamental question in this analysis is whether exposure to the global economy creates conditions in which labor is better-off economically *and* in a stronger position to demand better living and working conditions. For the purposes of this investigation, globalization refers to the expansion of international markets along three commonly recognized dimensions: trade, foreign direct investment (FDI), and portfolio flows. There are several reasons why globalization is thought to generally improve prospects for workers. A more rigorous application of existing international economic and political theories reveals that the impact of globalization on workers ultimately differs according to a nation's level of economic development.

To begin with, we should consider whether gains in workers' bargaining power are necessarily linked to the economic gains from globalization. Trade, or specifically exports of manufactured goods, is expected to encourage greater employment opportunities and eventually higher wages in LDCs, *provided that the exported goods are intensive in their most abundant factor, which is low-skilled labor*. Yet if these economic gains are realized, does this automatically translate into an improvement in labor's bargaining position, giving labor a greater "voice" in the marketplace and possibly even in policy debates (e.g., personal freedoms, welfare programs, higher wages, etc.)?[8] Conventional wisdom accepts this to be the case. As Rogowski (1989) argues, owners of locally abundant factors do in fact

[8] Silver (2003) suggests that improvements (recessions) in marketplace bargaining power do not always translate to greater (weaker) "associational power" in the short run (see fn.l). for example, British, Chinese, and Indian textile workers in the nineteenth century. However, she concludes that "these were the exceptional cases; most commonly, associational power was not sufficiently strong to compensate for the weak structural power of workers."

experience greater political power with increased trade. His study would predict that low-skilled labor in LDCs will be in a better bargaining position because of the greater wealth that accompanies openness.[9]

Yet there are several reasons to suspect that labor's bargaining position may not be enhanced by globalization, despite their economic gains. First, LDCs continue to maintain large reserves of surplus labor that do not bode well for the organizing capacity of labor. As Mancur Olson (1971) argues, tight labor markets are a necessary condition for strong bargaining power. He claims "it appears that whenever tight labor markets … increased labor's bargaining power, unions demanded and obtained union recognition and some form of compulsory membership (Olson, 1971, p. 82). Union membership has then accordingly also increased." In LDCs, labor markets are far from tight. Much of low-skilled labor is still employed in traditional nontradable (informal) sectors, which is exceptionally difficult to mobilize (ILO, 1997, 1999, World Bank, 1995).[10] In addition, it has been argued that globalization exacerbates labor market dualism. Studies have shown the "race to the bottom" for wages has been intensified by the recent entrance of large low-wage economies into global markets (Wood, 1997). Firms now have stronger incentives to reach out to the surplus labor population and take advantage of both their lower labor costs and greater labor market flexibility (Portes, 1990; Deshpande and Deshpande, 1998; Harriss-White, 1999; Papola, 1994).

The second reason that globalization may be unfavorable to labor's bargaining position is because growing numbers of low-skilled workers in developing countries can dampen labor solidarity. Low-skilled workers are initially difficult to mobilize because they have little education, work erratic hours, and a growing percentage of them are women, who according to the literature, are particularly hard to organize (Lok, 1993; Ingerson, 1984). In addition, this group is large in LDCs and growing larger with globalization. This situation results in collective-action problems because, according to Olson (1971), the larger the group, the greater the propensity for the free-rider problem to occur and the less likely the collective good (e.g., unionization) will be supplied.

[9] Conversely, capitalists and skilled workers will be better able to influence government policies in more developed countries.

[10] Nontradable informal activities include services such as haircutting, domestic help, street vending, etc.

Little systematic evidence refutes the claim that low-skilled labor populations generally have weak bargaining power. India is a paradigmatic example of how a large percentage of low-skill and surplus workers result in lower potential labor power. Low bargaining power of labor in India is particularly telling since the generous political freedom afforded to labor since independence in 1947 is contrary to the experience of most LDCs. Before globalizing, although the actual numbers belonging to unions were high, the percentage of the workforce unionized in India was a low 6.5 percent. Even then, the Indian labor movement has been marked by intense interunion rivalry that has consistently imposed limits on their collective bargaining power. After India began globalizing in the early 1990s, interviews conducted for this study with both workers and leaders of some of India's strongest unions confirmed that growing surplus labor problems were making it even harder for them to overcome their collective action problems.[11]

In contrast, *skilled* labor groups in LDCs are more capable of surmounting collective action problems in LDCs. These LDC labor groups are generally smaller in size, in low supply and high demand, and, significantly, are less threatened by a surplus labor population. In fact, the recruiting grounds for labor organizations in most LDCs have historically occurred in the skilled industries (e.g., heavy industries, white-collar workers) (Manning, 1998; Deyo, 1989). South Korea represents an important example of how a growing skilled labor population can affect labor strength. Even though labor faced a long history of repression in Korea, the labor movement flourished in the early 1980s alongside the success of the heavy and chemical industries that promoted a skilled workforce. Ultimately, the higher the numbers of skilled laborers relative to low-skilled laborers, and the lower the surplus in a country, the greater the chance that labor will be stronger in the marketplace and able to forge the type of broader coalitions discussed by Esping-Andersen (1990).

Combining H-O and Olson's theory of collective action suggests that labor in the lower-income LDCs will be the most vulnerable to employer and government hostilities as openness occurs. It is often overlooked that all LDCs do not have the same factor endowments. According to Wood (1997, p. 40), "analysts devote insufficient attention to variations among developing countries in the skill intensity of exports, which theory implies should be higher in better educated countries." Based on the logic

[11] Surplus labor is called "casual labor" in India.

outlined above, the low-income LDCs, which are primarily exporters of labor-intensive goods, are likely to experience growing numbers of low-skilled workers, persistently large pools of surplus labor, and declining bargaining power *under conditions of globalization*.[12] The opposite result is expected in the higher-income LDCs since their most abundant factor is high-skilled labor. These LDCs not only have a larger percentage of workers formally employed in the manufacturing sectors, but they also have a more skilled labor force. Literacy rates and school completion rates tend to be higher in the richer LDCs, suggesting that better bargaining arrangements for labor are more likely. In addition, many middle- and high-income countries have histories of state corporatism and continue to maintain political parties with ties to unions. Paradoxically, it is possible that governments in these countries may have indirectly aided the growth of labor movements by setting up confederations that were originally meant to control and preempt radical labor movements.[13] Given these significant differences between richer and poorer LDCs, it is a serious mistake to consider labor in developing countries as a monolithic group confronted by the challenges of globalization.

4 The Evidence

Trends in Labor Market Conditions

To obtain an initial sense of the ways in which labor in LDCs is being affected by globalization, I present trends in employment, surplus labor, and potential labor power (PLP), which is a more direct measure for labor's marketplace bargaining power and may also indicate labor's overall political power (see Appendix 2 for details). Trends in employment and wages, also constructive for evaluating H-O, are not included here because cross-country annual time-series data on these two variables are sparse for developing countries.

Scholars generally agree that although some significant economic reforms were undertaken by LDCs in the 1970s, most developing countries began opening their trade and capital markets in the early to mid-1990s (World Bank, 2000; Yusuf, 1999; Montiel, 1994; Dean, 1995). We would then expect that the impacts of globalization would be

[12] See, ILO (2002) for more details on growing levels of surplus labor.
[13] See, for example, Posusney's (1997) analysis on labor in Egypt.

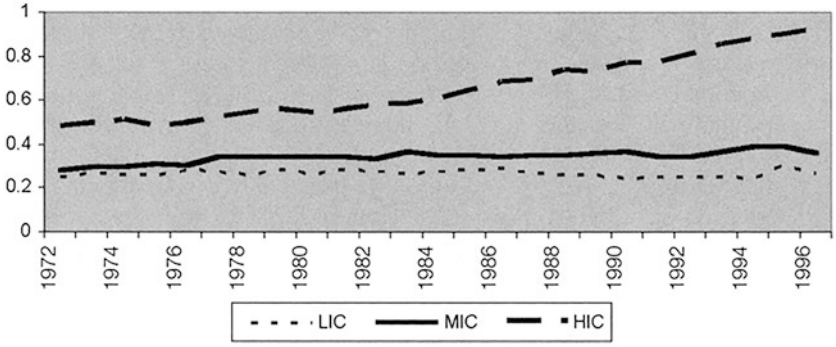

Fig. 1 Ratio of skilled labor employment/low-skill labor employment. (Source: Industrial Statistics Database, 1963–1998 (Vienna, Austria: United Nations Industrial Development Organization, 2000); Notes: See Appendix 1 for a detailed explanation of how skill ratios are calculated. "Low," "mid," and "high" refer to low-income, middle-income, and high-income LDCs as classified by the World Development Indicators, CD ROM [Washington, DC: World Bank, 2002])

most prominent after the mid-1980s. Figure 1 presents comparative trends in the ratio of high-skill employment relative to low-skill employment in low-income countries (LIC), middle-income countries (MIC), and high-income countries (HIC). Figure 1 reveals that the trend is slightly declining in the LICs, suggesting that over time, the employment in skilled labor is less than the employment in low-skilled labor. The trend for the MICs reveals that the skill/low-skill ratio begins to gradually increase only after the mid-1980s. Finally, trends in the HICs, which are generally more abundant in high-skilled labor, exhibit increasing levels of skilled-labor employment. It is interesting that the "gap" between the richest group of developing nations and the MICs and LICs began to widen *after* globalization pressures hit most LDCs in the mid-1980s.

Significantly, these trends are consistent with H-O model predictions and seem to bode well for labor in all LDCs. Employment appears to be increasing in the sectors associated with their most abundant factors, underscoring the structural differences between the three sets of countries. In the LICs, nations with the comparatively large low-skilled labor populations, the slightly downward trend in the ratio of skilled to

low-skilled labor suggests that nations with very low per capita incomes are using their factor endowments efficiently by exporting labor-intensive products commensurate with international demand. Employment of low-skilled workers increases relative to high-skilled workers. In comparison, the average growth of the ratio of high-skill to low-skill labor in MICs is 30 percent greater than it is in the LICs. The contrast with the HICs is even more pronounced with the ratio of skilled to low-skilled labor *doubling* during the time period of this analysis.

Figure 2 presents another important labor market trend. This figure shows that surplus labor has slightly declined over time. The concept of surplus labor is drawn from the development of economics literature, which claims that large surplus labor populations exist in the Middle East, parts of Asia, Latin America, Eastern Europe, and Africa.[14] The concept refers to how much "hidden" unemployment is prevalent in the economy and suggests that the supply of labor to industry is unlimited. Along with others, Amartya Sen (1966) identifies this type of labor as "hidden" in the sense that it can be removed without reducing the total amount of output produced, assuming the remaining workers would work harder (see also Wellisz, 1968). Such individuals are considered to have low (or zero) marginal productivity and are not counted as part of the official unemployed.[15]

While the declining trends in surplus labor in Fig. 2 are encouraging, data in this graph should be interpreted with caution. Surplus labor will automatically decline with the slowing of population growth, which, according to a recent United Nations report, has been unexpectedly taking place in many developing countries.[16] It is then possible to treat the skill ratio in Fig. 1 and surplus labor as independent categories. In other words, a shrinking (expanding) surplus labor pool *may or may not be* related to increasing (decreasing) employment of skilled and low-skilled labor.

In addition to the population growth rate, the surplus labor pool may vary independently of the skill ratio for two alternative reasons. The first is

[14] For more details, see Baer and Herve (1966).

[15] The logic holds that in overpopulated countries more people are employed than needed to produce output. As long as hidden unemployment prevails, its supply to industry is unlimited in the sense that industries can expand or be created without affecting the prevailing wage (See Wellisz, 1968).

[16] The United Nations Economic and Social Council Commission reports that fertility has declined in many nations since the 1970s, particularly in middle-income countries.

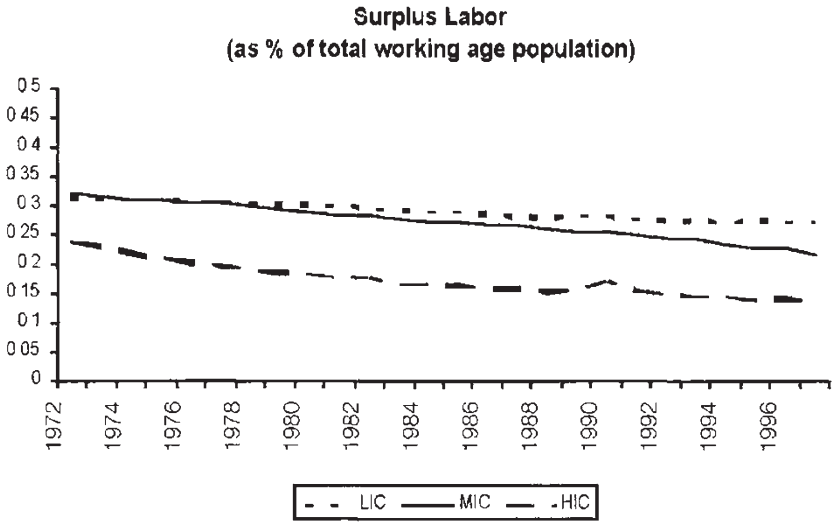

Fig. 2 Surplus labor (as % of total working age population). (Source: Industrial Statistics Database, 1963–1998) [Vienna, Austria' United Nations Industrial Development Organization, 2000]; Notes: Surplus labor is calculated as the ([working age population minus students enrolled in secondary education minus students enrolled in "post-secondary" education] minus [labor force] (/(working age population))

that reduced student enrollments in secondary and tertiary education can increase the level of surplus labor. Wood and Ridao-Cano's (1999) analysis offers insights into how and why this might occur during globalization. They demonstrate that enrollment in higher education decreases when countries begin to specialize in goods of low-skill intensity and individuals thereby see less economic advantage in advancing their education. It is feasible that the skill ratio can decrease (employing more low-skilled labor relative to high-skilled) while surplus labor is increasing. The second reason is that surplus labor will not change if the "officially" unemployed are the only ones finding the jobs.[17] In other words, if those who are already part of the labor force are filling the low-skilled or skilled positions, the skill ratio will change, but surplus labor will not.

[17] The labor force, which includes the employed and unemployed, is part of the formula for surplus labor.

Figure 2 further reveals that the average *level* of surplus is still high (i.e., 22 percent by the late 1990s, compared to 14 percent in the HICs) in both low- and middle-income LDCs.[18] It is also interesting that the level of surplus labor in the middle-income countries is only slightly lower than the low-income LDCs. This is not surprising since many researchers argue that the persistence of high amounts of surplus labor continues to be a serious problem throughout the developing world (Loayza, 1997; Kuchta-Helbling, 2000; Bangasser, 2000; Gallin, 2001; Stone et al., 1996; UN, 1992/1993). Noteworthy is that the difference between surplus labor in MICs and LICs begins to widen after globalization forces hit the LDCs in the mid-1980s, which suggests that the MICs are marginally better at absorbing excess labor under globalization conditions.

Figures 1 and 2 provide some indication that the economic conditions of labor in LDCs are improving. But what do they say about labor's bargaining situation? How do we assess if labor's ability to organize and demand better living and working conditions is similarly expanding? Measuring bargaining power is challenging in LDCs. The most common method of assessing labor power is by unionization rates (see, for example, Deverajan et al., 1997; Western, 1997; Galenson, 1962, 1994). A fundamental problem with this indicator is that, unlike the developed countries, union density (percent of the working population that is unionized) is not comparable across LDCs. Many LDC governments mandate compulsory membership in corporatist unions and impose constraints on labor's demands, leadership, and internal governance. China, for example, has the highest union density in the developing world, but labor has very little bargaining power (Frenkel and Peetz, 1998; Chan and Senser, 1997). In general, unionization rates exaggerate labor's independent political strength in LDCs.[19]

Given the unreliability and weakness of direct organizational measures, I establish PLP that gives a sense of labor's marketplace bargaining power by combining two direct measures of structural conditions in labor markets. The index is motivated by the observation that the bargaining potential of labor is likely to increase with the ratio of skilled to unskilled workers,

[18] This can be compared to an average of 7 percent of surplus labor in OECD countries and 13 percent in the HICs.

[19] See for example, Valenzuela, 1989; Banuri & Amadeo, 1991. McGuire, 1997 adds that unreliability of union data can result in huge discrepancies in existing cross-country compilations of union-density estimates.

given the greater labor's capacity for collective action,[20] and decreasing with the size of "surplus" labor. PLP is based on Silver's (2003) *marketplace bargaining power*, which is the power that "results directly from tight labor markets" and Olson's (1971) *Logic of Collective Action*. Based on Olson, we know that size and incentive matter for collective action and, building on Silver, labor's marketplace bargaining power in LDCs is influenced by the proportion of skilled and low-skilled workers and surplus labor.

If labor is in a better position *vis-à-vis* the market, can we assume that they have more bargaining power in policy debates? Appendix 2 illustrates in detail how and why PLP can also be used to make inferences about labor's political power. Most important, PLP shows a fairly strong correlation (0.61) with James McGuire's (1999) labor strength index (LSI).[21] To provide a *direct* measure of political power, PLP would need to include other measures such as unions' connections to parties or government. This is an effort reserved for a future study on labor's political bargaining power.

To create an index, each country's score was divided by the highest value in my larger data sample (i.e., Sweden = 87) and multiplied by 100. Assuming that there is always some surplus labor and some low-skilled laborers, the PLP measure is:

$$\mathrm{PLP} = \left[\frac{\left(\text{Number of skilled workers} / \text{Number of low-skilled workers}\right) \times \left(1 / \text{Surplus labor as\% of working age population}\right)}{87} \right] \times 100$$

PLP falls as the ratio of low-skilled workers to skilled workers increases, *and* as surplus labor rises. As surplus labor shrinks and labor markets become tighter, PLP increasingly depends on the ratio of skilled to low-skilled workers. To summarize, *all other things being equal*, labor will be in a more favorable bargaining position under the following scenarios: (1)

[20] For more detailed hypotheses on why low-skilled labor groups in LDCs are difficult to organize, see Deyo (1989); Gereffi (1995); Ingerson (1984).

LSI covers mostly mid-1990s data.

[21] The decade dummies were dropped from the model if they were insignificant across models.

the percentage increase in high-skill workers is greater than the percentage increase in surplus labor (surplus labor may also be decreasing or unchanging); (2) surplus labor decreases and the skill ratio remains relatively constant (labor markets are tighter); and (3) the percentage increase in low-skilled workers is accompanied by the equal or greater percentage decrease in surplus labor.

This assessment of PLP is limited to the manufacturing sector, since data are not available for most countries outside this sector. Significantly, although there have been notable exceptions (e.g., banana workers in Honduras), research has shown that most labor-organizing activities began to occur in this sector. This pattern is common to both developed and developing countries.

Tables 1, 2, and 3 reveal how countries rank on PLP, yet the measure of PLP should be viewed with some caution. It does not capture institutional and other political factors that may mediate between the economic variables and labor's capacity for collective action. A country may have high PLP, for example, but mobilization may be discouraged by a

Table 1 Potential labor power in low-income countries

	PLP	*PLP*	*PLP*	Δ*PLP*
Country	1970s	1980s	1990s	1970s–1990s
Kenya	2.37	1.95	1.72	-0.65
India	2.24	2.77	3.65	1.41
Ghana	1.72	2.05	2.13	0.41
Zambia	1.33	1.62	1.31	-0.02
Nicaragua	1.24	1.11	1.30	0.06
Cameroon	0.98	0.61	0.34	-0.64
Indonesia	0.90	1.19	1.26	0.36
Zimbabwe	0.89	1.11	1.05	0.15
Tanzania	0.82	0.75		
Pakistan	0.82	0.97	0.52	-0.30
Mozambique	0.77	1.11	1.32	0.54
Bangladesh	0.58	0.68	0.43	-0.15
Malawi	0.57	0.81	0.94	0.37
Nigeria	0.56	0.98	1.02	0.46
Liberia	0.42	1.83		
Mali	0.38	0.40	1.19	0.81
Nepal	0.28	0.16	0.85	0.57
Lesotho		0.28	0.11	
Average	0.99	1.13	1.20	0.23

Table 2 Potential labor power in middle-income countries

	PLP	*PLP*	*PLP*	Δ*PLP*
Country	1970s	1980s	1990s	1970s–1990s
China	11.05	11.56	12.08	1.03
Mexico	2.60	4.47	5.72	3.12
Argentina	2.33	2.53	3.12	0.79
Turkey	2.23	1.91	2.10	-0.12
Malaysia	2.03	3.20	4.84	2.81
South Africa	2.03	2.62	3.20	1.17
Brazil	1.69	1 92	2.80	1.12
Trinidad and Tobago	1.63	1.90	1.96	0.33
Paraguay	1.61	1.55	1.48	-0.13
Philippines	1.56	1.73	4.02	2.46
Chile	1.45	1.19	1.43	-0.03
Venezuela	1.39	1.47	1.55	0.15
Thailand	1.39	2.14	6.57	5.18
Sri Lanka	1.19	0 46	0.53	-0.66
Jordan	1.09	0.95	0 94	-0.15
Colombia	1.05	1 46	2.22	1.17
Uruguay	1.02	1.47	2.54	1.52
Iran	0.94	1.25	1.80	0.86
Egypt	0.93	1.42	1.99	1.06
Ecuador	0.91	1.28	1.32	0.40
Mauritius	0.89	0.27	0.61	-0.28
Morocco	0.84	0.92	0.85	0.01
Tunisia	0.79		1.21	0.42
Fiji	0.78	0.69	0.41	-0.37
Panama	0.72	1.02	0.89	0.16
Dominican Republic	0.67	0.93		
Guatemala	0.66	0.95	0.99	0.33
El Salvador	0.59	0.79	0.81	0.22
Bolivia	0.58	0.75	0.96	0.37
Honduras	0.38	0.48	0.29	-0 09
Guyana	0 32			
Syrian Arab Republic	0.30	0.88	0.82	0.52
Botswana	0.08	0.33	0.63	0.55
Peru		1.57	1.39	
Costa Rica		0.94	1.17	
Average	1.45	1.73	2.22	0.77

repressive regime, state measures to "buy off" labor, such as by offering higher wages and benefits, or even a more equitable distribution of income.

Nevertheless, the advantage of using this proxy is that it can capture variations in labor's marketplace bargaining power, irrespective of the type

Table 3 Potential labor power in high-income countries

	PLP	*PLP*	*PLP*	Δ*PLP*
Country	1970s	1980s	1990s	1970s–1990s
Singapore	7.41	11.67	13.16	5.75
Israel	2.63	3.80	4.26	1.63
Korea	2.60	5.64	10.45	7.85
Greece	1.64	1.73	2.13	0.49
Kuwait	1.58	2.49	2.83	1.25
Cyprus	0.76	1.04	1.70	0.94
Average	2.77	4.39	5.75	2.98

of state-labor relations. It abstracts from the historical complexities behind the relationship between LDC governments and labor, a relationship that ranges widely between state control of labor or state corporatism (such as in Brazil, Mexico, Egypt, Ghana, and Tanzania), state repression of labor (such as in Korea, Zambia, Taiwan, and Singapore), to relative autonomy of labor (such as in India and Costa Rica). Alternative, standardized cross-country, time-series measures of labor's bargaining power for many LDCs do not exist.

Figure 3 illustrates the correlation between unionization rates and PLP in 1995. As expected, the correlation is not very strong, but overall, it is fair to conclude that most LDCs have both low unionization rates and low PLPs. Several LDCs are excluded to avoid clustering and enhance readability of the graph.

Tables 1, 2, and 3 indicate that average PLP in the high-income countries is *more than five times greater* than the average PLP in the low-income countries, and almost twice as high as the middle-income countries (in the 1990s). This is significant, particularly since the high PLP values for China drive the total average upward for the middle-income countries. It also important that 13 LICs and MICs experienced a fall in PLP over the decades as compared to only positive PLP values in the high-income countries. Once again, the low level of PLP (compared to Sweden's 87 PLP value) in the three sets of LDCs should be emphasized. Most striking, in 25 years, the average increase in PLP for the low-income countries is not even close to half of one point (.23).

In sum, a first look at the data presents a mixed picture of worker conditions in LDCs. Workers seem to gain economically in LICs and

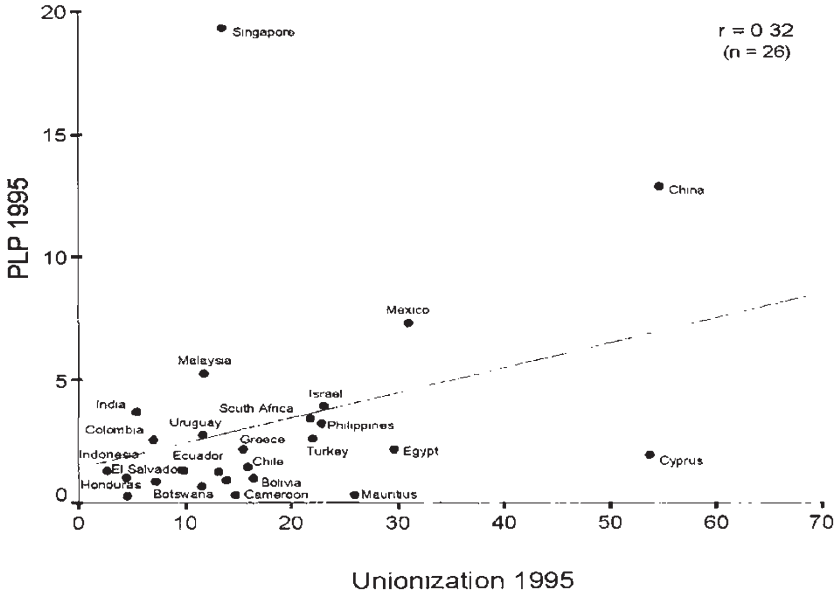

Fig. 3 Correlation between PLP and unionization (1995). (Source: International Labor Organization; Note: Unionization rates represent percent of the nonagricultural labor force that belongs to unions)

MICs, but not necessarily in bargaining terms (low PLP). However, labor in countries at relatively higher levels of development appears to be in a comparatively better economic position and marketplace bargaining power. Specifically, workers in LDCs at all income levels appear to gain significant economic benefits over time, such as greater employment, and even a minor reduction in surplus labor. Yet the absolute level of surplus in both middle- and low-income LDCs remains disturbingly high. While increases in overall PLP in MICs and LICs occur, this improvement is slight. Labor's marketplace bargaining power in the HICs seem to be the most encouraging. How much is globalization affecting these trends? Are the trends improving or worsening as a consequence of integration? Does globalization have a differing effect depending on the income category of the LDC? An econometric test will provide some answers to these questions.

5 The Model

A pooled time-series model that includes both economic and political variables affecting labor enables a more comprehensive picture of labor outcomes. I use both country dummy variables and decade dummies to control for country-specific and time-specific fixed effects.[22] Based on econometric techniques advocated by Beck and Katz (1995), I correct for both panel heteroskedasticity and spatial contemporaneous autocorrelation. In addition, problems of potential serial autocorrelation within each panel are addressed by estimating and adjusting for a panel-specific AR(1) process. This model follows Christopher Achen's (2000) recommendation against applying the standard practice of using a lagged dependent to correct for serial autocorrelation. These results provide Prais-Winsten coefficients with panel corrected standard errors (PSCE).

The lack of data limits the sample size to 59 developing countries. Nevertheless, the sample is regionally diverse and includes six high-income LDCs, 35 middle-income LDCs, and 18 low-income LDCs. The LDC labor models are as follows:

The LDC Labor Models

$$
\begin{aligned}
&\mathrm{Skill}_{it} = b_1 \mathrm{Xmanuf}_{it-1} + b_{2:}\mathrm{port}_{it-1} + b_3 \mathrm{fdi}_{it-1} \\
&+ b_4 \mathbf{Xmanuf}_{it-1}{}^{*}\mathbf{LIC}_{\mathbf{it}} + b_5 \mathbf{port}_{it-1}{}^{*}\mathbf{LIC}_{\mathbf{it}} \\
&+ b_6 \mathbf{fdi}_{it-1}{}^{*} + \mathbf{LIC}_{\mathbf{it}} + b_7 \mathbf{Xmanuf}_{it-1}{}^{*}\mathbf{MIC}_{\mathbf{it}} \\
&+ b_8 \mathbf{port}_{it-1}{}^{*}\mathbf{MIC}_{\mathbf{it}} + b_9 \mathbf{fdi}_{it-1}{}^{*}\mathbf{MIC}_{\mathbf{it}} \\
&+ b_{10} LIC_{it} + b_{11} MIC_{it} + \sum \left(b_j X_{jit} \right) \\
&+ \sum \left(b_k \mathrm{decade}_{kt} \right) + \mu_{it}
\end{aligned}
\tag{1}
$$

[22] Estimating a measure of first-order correlation (p) has the effect of making the time-series data stationary. This measure is used to transform all variables in the model according to the formula: $y^{*}_{t} = y_t - (\rho^{*} y_{t-1})$. This partial differencing reduces suspicions about spurious results, particularly the concern that the effects of potentially high degree of institutional inertia exhibited by the dependent variable are not captured.

$$\begin{aligned}\text{Surplus}_{it} &= b_1\text{Xmanuf}_{it-1} + b_{2:}\text{port}_{it-1} + b_3\text{fdi}_{it-1} + b_4\mathbf{Xmanuf}_{it-1}{}^{*}\mathbf{LIC_{it}} \\ &+ b_5\mathbf{port}_{it-1}{}^{*}\mathbf{LIC_{it}} + b_6\mathbf{fdi}_{it-1}{}^{*} + \mathbf{LIC_{it}} + b_7\mathbf{Xmanuf}_{it-1}{}^{*}\mathbf{MIC_{it}} \\ &+ b_8\mathbf{port}_{it-1}{}^{*}\mathbf{MIC_{it}} + b_9\mathbf{fdi}_{it-1}{}^{*}\mathbf{MIC_{it}} + b_{10}LIC_{it} + b_{11}MIC_{it} \\ &+ \sum\left(b_j X_{jit}\right) + \sum\left(b_k \text{decade}_{kt}\right) + \mu_{it}\end{aligned} \tag{2}$$

$$\begin{aligned}\text{PLP}_{it} &= b_1\text{Xmanuf}_{it-1} + b_{2:}\text{port}_{it-1} + b_3\text{fdi}_{it-1} + b_4\mathbf{Xmanuf}_{it-1}{}^{*}\mathbf{LIC_{it}} \\ &+ b_5\mathbf{port}_{it-1}{}^{*}\mathbf{LIC_{it}} + b_6\mathbf{fdi}_{it-1}{}^{*} + \mathbf{LIC_{it}} + b_7\mathbf{Xmanuf}_{it-1}{}^{*}\mathbf{MIC_{it}} \\ &+ b_8\mathbf{port}_{it-1}{}^{*}\mathbf{MIC_{it}} + b_9\mathbf{fdi}_{it-1}{}^{*}\mathbf{MIC_{it}} + b_{10}LIC_{it} + b_{11}MIC_{it} \\ &+ \sum\left(b_j X_{jit}\right) + \sum\left(b_k \text{decade}_{kt}\right)\sum + \mu_{it}\end{aligned} \tag{3}$$

Skilled-labor employment (ratio of skilled/low-skilled), surplus labor (as % of working age population), and PLP are the dependent variables that attempt to capture labor's economic and bargaining power, respectively. The *bs* are parameter estimates; *LIC*, *MIC*, and *HIC* are dummy variables that represent the income level of the countries; m is an error term; ΣX represents the vector of control variables. The globalization variables, that is, exports of manufactured goods (Xmanuf), portfolio flows (port), and FDI are lagged to account for the period of adjustments. Each of the globalization variables is interacted with the income dummies to disentangle the effects of international markets on labor in countries at different levels of economic development (*LICs, MICs, HICs*). See Appendix 1 for detailed explanations of the source and measurement of variables.

Including both FDI and exports of manufactured goods might cause endogeneity problems since researchers argue that FDI is likely to lead to greater exports and vice-versa. The conventional method for coping with this endogeneity issue and mitigating bias of the regression estimates is to use the instrumental variable approach. The difficulty is to find outside data (or instruments) that are uncorrelated with the error of the equation and, at the same time, highly correlated with the explanatory variables. Therefore, instead of using conventional variables as instruments, the Lewbel (1997) procedure of using higher moments of the FDI variable as the instrument is applied in this model.

6 Variables

The Dependent Variables: PLP, Ratiosk, and Surplus Labor

Assessing the effects of international market indicators on three labor variables presents a more comprehensive picture of how globalization affects workers in LDCs. Each component captures different labor effects. The ratiosk variable and the surplus labor variables indicate whether workers' economic conditions improve in response to globalization. The PLP variable is the rough proxy of labor's marketplace bargaining power and suggests the extent of labor's organizing potential.

Globalization: Xmanuf, Portfolio, FDI

The primary objective of this analysis is to test if and how deepening market integration affects labor in LDCs. To incorporate the primary international economic forces said to affect workers, I measure the degree of globalization by the exports of manufactured goods and portfolio and FDI flows (as percentage of GDP). I do not apply the conventional method for assessing trade openness by measuring exports plus imports relative to GDP for two reasons. First, exports of *manufactured* goods are a more appropriate test of H-0 in the current era, particularly since it is widely expected that the "export boom" in labor-abundant LDCs will occur in this sector (see Lall, 1998). Second, developing countries have increasingly focused on expanding their manufactured exports because compared to primary products, it is believed that the former is associated with greater spillover effects and contributes to superior growth performance (e.g., employment opportunities, spread of technology, skills). A closer look at the data confirms that Xmanuf is the fastest growing and largest component of the trade variable in developing countries. Emphasizing manufactured exports in this analysis may best capture LDC efforts to eliminate the anti-export bias that predated globalization.[23] The effects of capital flows in this model are disaggregated to account for the potential effect of different types of funds on labor. FDI, where foreign firms may start new production, is likely to have a more positive and direct

[23] As a robustness check, I ran the model using total exports of goods, services, and income in place of manufactured exports. The primary results were unaffected.

impact on labor than portfolio investment, which is more susceptible to herd instinct and panic.

Each of the international market variables is interacted with the LDC income variables to assess whether different levels of income matter (Xmanuf* *L/C*, Port**LIC*, *FDI***LIC* Xmanuf* *MIC*, Port**MIC*, *FDI***MIC*).[24] See Tables 4, 5, and 6 for a summary of the expected signs. Recall that the globalization optimists argue, based on the H-O model,

Table 4 Predicted signs of conditional coefficients for high-skill/low-skill ratio

Optimists				*Pessimists*			*Author*		
Income Level	Xmanuf	Port	FDI	Xmanuf	FDI	Port	Xmanuf	FDI	Port
LIC	–	–	–	0	0	0	–	–	–
MIC	- or +	- or +	- or +	0	0	0	- or +	- or +	- or +
HIC	+	+	+	0	0	0	+	+	+

Table 5 Predicted signs of conditional coefficients for surplus labor

Optimists				*Pessimists*			*Author*		
Income Level	Xmanuf	Port	FDI	Xmanuf	FDI	Port	Xmanuf	FDI	Port
LIC	–	–	–	+	+	+	+	+	+
MIC	–	–	–	+	+	+	- or +	- or +	- or +
HIC	–	–	–	+	+	+	–	–	–

Table 6 Predicted signs of conditional coefficients for PLP

Optimists				*Pessimists*			*Author*		
Income Level	Xmanuf	Port	FDI	Xmanuf	FDI	Port	Xmanuf	FDI	Port
LIC	*0*	*0*	*0*	–	–	–	–	–	–
MIC	*0*	*0*	*0*	–	–	–	- or +	- or +	- or +
HIC	*0*	*0*	*0*	–	–	–	+	+	+

Note: + represents an expected positive effect on the dependent variable; - represents an expected negative effect; 0 represents an expected insignificant or null relationship

[24] HIC interactions are excluded to avoid linear dependency.

that openness brings positive economic benefits to labor. The first column represents this optimistic view. Globalization is expected to reduce surplus labor in all LDCs and improve employment in sectors associated with their most abundant factors. If they are correct, the globalization variables will display a negative sign for skill ratios in the LICs (since low-skill populations are high and expected to increase with globalization), either a positive or negative sign in MICs (since there is a sizeable population of both types of workers, the direction of the sign is difficult to predict), and a positive sign for HICs (since there is a relatively large high-skill population). In Table 4, for example, a negative sign in the LICs confirms that international demand for low-skilled labor relative to skill labor is increasing and so H-O is confirmed (the optimists).

In the surplus labor model (Table 5), the optimists predict that globalization variables will reduce surplus labor in all countries, resulting in a negative sign regardless of income category. The expected impact of globalization on PLP is set at "0" in Table 6, which suggests no significant impact of the globalization variables on marketplace bargaining power since optimists do not hypothesize about the direct effects of international markets on labor's bargaining position.

The middle columns of Tables 4, 5, and 6 represent the pessimists' predictions. If the globalization pessimists are correct, then the conditional coefficients will reveal that globalization will reduce PLP and increase surplus labor in all LDCs. The effect of integration on the skill ratio is "0" for all LDCs because these studies tend to draw generalizations about all labor groups based on the effects of globalization on one group of workers, typically those that are part of the surplus population. In other words, if globalization increases demands for surplus labor, this tends to carry more emphasis in these analyses than the potential positive effects on formal sector employment.

Finally, the last column in Tables 4, 5, and 6 represents the effects of globalization as predicted in this analysis. If the arguments presented in this chapter are correct, in contrast with the positions of the optimists and pessimists, we can expect that the overall impact of globalization will depend on the income level of the LDC. Specifically, market expansion is likely to have beneficial *economic* effects in all LDCs, but decisively positive impacts on marketplace bargaining power in only the HICs. In LICs, with globalization, international demand for low-skilled labor is likely to encourage employment of low-skilled labor and, at the same time, either

expand or maintain the surplus labor population.[25] The latter occurs when employers have strong incentives to cut labor costs and there is a sizeable population willing to work for long hours, low wages, and minimal social protections.

At the same time, I anticipate collective action problems in LICs (represented by PLP) will be exacerbated. The effects of globalization on both the economic variables and PLP in MICs are more difficult to predict since the skill ratio is mixed and surplus labor trends show a steady decline after the mid-1980s, yet still remain at high levels (Fig. 2). There is less ambiguity about the HICs because the high-skill labor population is relatively large and surplus labor in HICs is proportionately smaller. It is easy to see why expanding job opportunities with globalization conditions could increase opportunities for higher-skilled labor in the HICs, substantially reduce the size of their surplus labor and thereby have a positive effect on PLP.

Control Variables: Democracy, Dependents, Growth, Urban, Human Capital Spending

Including control variables helps isolate the main relationship between globalization and labor while checking for other influences. PLP is expected to increase with democracy, lower dependents (suggesting that a larger percentage of the population is formally employable), higher growth, and the level of urbanization. Conversely, surplus is expected to increase with lower democracy, higher dependents, lower growth, and rapid urbanization. The controls for skill ratio are slightly different since there is no reason to expect that regime type or the number of dependents affects the skill composition of the workforce. Instead, human capital spending (per capita) is added as a control since higher government spending on education and health is apt to result in a more skilled labor force.[26]

[25] With globalization, both can simultaneously occur if incentives to work in the informal sector is greater than the incentive to enroll in school, and the increase in low-skill employment is drawn from the existing labor force.

[26] The per capita human spending is an instrumental variable (using the Lewbel procedure) in this model because of endogeneity—LDCs with large skilled labor populations are apt to invest in human capital. This variable is not included as a control for surplus labor since higher government spending on education and health in LDCs does not necessarily benefit the poor and tends to be disproportionately allocated to the middle and upper classes. See *World Development* 2000–2001.

Also, the percentage of youth (age 0 to 14) is substituted for dependents since countries with large youth populations are most likely to enjoy comparative advantage in low-skilled labor.

The Results

Equations (1), (2), and (3) were estimated for 59 LDCs, from 1972–1997, using the fixed effects procedure. The empirical findings confirm expectations in this analysis that the effects of globalization on labor are contingent upon the level of economic development. In sum, four interesting patterns emerge from the results. First, consistent with the predictions of the globalization optimists, labor's economic situation tends to improve in all LDCs, that is, the employment of workers associated with a nation's abundant factors increases with openness in countries at different levels of development. Second, the findings confirm that it is important to disaggregate the globalization variable. Exports and FDI flows have the greatest effect on workers in LICs and MICs, while portfolio flows have the strongest impact on workers in the HICs. This should not be surprising since many HICs are moving into the post-industrial stage and we can expect exports of manufactured goods to have proportionately less impact on workers.[27] The third finding, as the pessimists predict, is that international market expansion has exacerbated the surplus labor problem in the LICs and MICs. Finally, under globalizing conditions, PLP improves most decisively in the HICs. The results for PLP are less encouraging in the MICs and LICs.

Table 7 reports the regression coefficients. This model suggests that greater overall benefits should accrue to labor at higher levels of economic development. Because the globalization coefficients in Table 7 represent the relationship between market expansion and labor when MIC and LIC equal zero, it describes the situation of the high-income LDCs. The statistically significant and positive coefficients for the uninteracted portfolio and FDI variables are evidence that, as expected, marketplace bargaining power and economic conditions for workers improve with globalization in high-income LDCs.

Tables 8, 9, and 10 further exhibit tests of whether the globalization coefficients are significant at different levels of LDC income by calculating

[27] Portfolio flows in HICs are almost twice as high as flows in MICs, and almost four times the level of flows in LICs (averaged from 1972–1997).

Table 7 Fixed effects regression estimates: the relationship between globalization and labor in LDCs

Variables	*Skilled / Low skilled*	*Surplus labor*	*PLP*
Manufactures exports$_{t-1}$, * *LIC*	-0.001	-0.194	0.184
	(0.009)	(0.214)	(0.326)
FDI$_{t-1}$ **LIC*	-0.187**	5.182**	-7 903***
	(0.085)	(2.056)	(2.978)
Portfolio flows$_{t-1}$, * *LIC*	-0.032**	0.626*	-1.773***
	(0.017)	(0.354)	(0.419)
Manufactures exports$_{t-1}$ * *MIC*	-0.0005	-0.274	0.205
	(0.009)	(0.214)	(0.326)
FDI$_{t-1}$ * *MIC*	-0.177**	1.982	-7.699**
	(0.084)	(1.990)	(2.979)
Portfolio flows$_{t-1}$ * *MIC*	-0.040***	0.516^{+}	-1.756***
	(0.015)	(0.333)	(0.418)
Manufactures exports$_{t-1}$	0.003	0.238	-0.191
	(0.009)	(0 214)	(0.326)
Portfolio flows$_{t-1}$	0.039***	-0.521[a]	1 758***
	(0.015)	(0.333)	(0.418)
FDI-*$_{t-1}$	0.128	(0.089)	-2.767
(1.993)	7.716**	(2.980)	
Democracy	–	-0.068*	0.005
		(0.038)	(0.011)
Depend[b]	-0.004**	23 14***	-3 897***
	(0.002)	(2.179)	(0.588)
Urban	-0.003	0.064***	0.005
	(0.004)	(0.013)	(0.004)
Growth	-0.0003	-0.003	-0.003
	(0.0004)	(0.010)	(0.003)
Human capital spending	0.2444*	–	–
	(0.135)		
LIC	-0.027	1.154	5.046***
	(0.259)	(2 518)	(0.667)
MIC	-0.414	7.838***	3.969***
	(0.420)	(2.365)	(0.664)
HIC	-0.630	-24.63	22.70
	(0.988)	(19.35)	(29.06)
N	581	834	685
R^2	0.664	0.940	0.846

***$p < 0.01$; **$p < 0.05$; *$p < 0.10$; $^{+}p < 0.15$

Figures in parentheses are standard errors; intercept suppressed. Decade dummies are not shown here

[a]represents instrumental variables

[b]Note that the percentage of youths was used in place of dependents for the high-skill/low-skill model

Table 8 Conditional effects of exports of manufactured goods, portfolio flows, and FDI on *skilled / low-skilled* (*Calculated from Table 3*)

LDC income category	*Exports of manufactured goods*	*FDI*	*Portfolio flows*
LIC	0.002**	-0.069*	0.008
	(0.00079)	(0.032)	(0.008)
MIC	0.003***	-0.048*	-0.0007
	(0.0009)	(0.028)	(0.0008)
HIC	0.003	0.128†	0.039***
	(0.009)	(0.088)	(0.015)

Table 9 Conditional effects of exports of manufactured goods, portfolio flows, and FDI on *surplus (Calculated from Table 3)*

LDC income category	*Exports of manufactured goods*	*FDI*	*Portfolio flows*
LIC	0.044***	2 42***	-0.105
	(0.012)	(0.004)	(0.136)
MIC	0.036***	-0.784***	-0.0004
	(0.0088)	(0.156)	(0.014)
HIC	0.238	2.77	-5.21†
	(0.214)	(0.020)	(3.33)

Table 10 Conditional effects of exports of manufactured goods, portfolio flows, and FDI on *PLP* (*Calculated from Table 3*)

LDC income category	*Exports of manufactured goods*	*FDI*	*Portfolio flows*
LIC	-0.007***	-0.187**	-0.015
	(0.002)	(0.076)	(0.038)
MIC	0.014***	0.017	0.002
	(0.004)	(0.059)	(0.004)
HIC	-0.191	7.71**	1.76***
	(0.326)	(2.98)	(0.418)

Note: Tables 8, 9, and 10: Conditional coefficients with conditional standard errors are in parentheses
***$p < 0.01$; **$p < 0.05$; *$p < 0.10$., †$p < 0.15$

the conditional coefficients for each relevant LDC combination. By substituting the appropriate values of the income variables into Eqs. (1)–(3), we can assess how international market integration affects labor in low-, middle-, and high-income countries. For example, the conditional

coefficient for the effect of globalization variables on the skill ratio in LICs can be determined by substituting 1 for LIC and 0 for MIC.

As discussed earlier, the percentage of youths was used in place of dependents for the skill/low-skilled model

$$\begin{aligned}\text{Skill}_{it} &= b_1\text{Xmanuf}_{it-1} + b_{2:}\text{port}_{it-1} + b_3\text{fdi}_{it-1} + b_4\mathbf{Xmanuf}_{it-1}{}^{*}\mathbf{LIC}^{*}(\mathbf{1}) \\ &+ b_5\mathbf{port}_{it-1}{}^{*}\mathbf{LIC}^{*}(\mathbf{1}) + b_6\mathbf{fdi}_{it-1}{}^{*}\mathbf{LIC}^{*}(\mathbf{1}) + b_7\mathbf{Xmanuf}_{it-1}{}^{*}\mathbf{MIC}^{*}(\mathbf{0}) \\ &+ b_8\mathbf{port}_{it-1}{}^{*}\mathbf{MIC}^{*}(\mathbf{0}) + b_9\mathbf{fdi}_{it-1}{}^{*}\mathbf{MIC}^{*}(\mathbf{0}) + b_{10}LIC_{it} + b_{11}MIC_{it} \\ &+ \sum\left(b_j X_{jit}\right) + \sum\left(b_k decade_{kt}\right) + \mu_{it}\end{aligned}$$

If we want to know specifically how exports of manufactured goods affect the skill ratio in LICs, the above equation simplifies to:

$$\begin{aligned}&\partial\text{skill} / \partial\text{Xmanuf} = b_1 + \mathbf{b_4}^{*}(\mathbf{1}) + \mathbf{b_7}^{*}(\mathbf{0}) \\ &\text{or simply } b_1 + \mathbf{b_4}\end{aligned}$$

The impact of exports of manufactured goods that affects the skill ratio in MICs can be determined by:

$$\begin{aligned}&\partial\text{skill} / \partial\text{Xmanuf} = b_1 + \mathbf{b_4}^{*}(\mathbf{0}) + \mathbf{b_7}^{*}(\mathbf{1}) \\ &\text{or simply } b_1 + \mathbf{b_7}\end{aligned}$$

Finally, the effect of exports on HICs is expressed as:

$$\begin{aligned}&\partial\text{skill} / \partial\text{Xmanuf} = b_1 + \mathbf{b_4}^{*}(\mathbf{0}) + \mathbf{b_7}^{*}(\mathbf{0}) \\ &\text{or simply } b_1\end{aligned}$$

Estimated for each of the globalization variables in this way, Tables 8, 9, and 10 report the conditional coefficients and their associated standard errors based on the results in Table 7. It is interesting to compare these results to the predicted signs presented in Tables 4, 5, and 6 because the findings verify greatly the predictions of this analysis. Results based on each LDC income category are explained in more detail below.

Results for LICs

Globalization brings greater economic benefits for workers in LICs through exports of manufactured goods and FDI flows, but it weakens their marketplace bargaining power (or PLP). It is not surprising that portfolio flows showed no impact on workers since this type of capital flow still represents a very small percentage of GDP in the LICs. The negative coefficient for FDI in Table 8 indicates that this type of investment employs more low-skilled workers relative to high-skill labor. At the same time, as the pessimists predicted, increasing exports and FDI fuel the expansion of the surplus labor pool and dampen PLP. Recall, the pessimists posit that surplus labor will increase because with globalization, firms have greater incentives to avoid labor market regulations and seek lower labor costs (Portes, 1990). The positive coefficient for surplus labor in the LDCs lends some support to this hypothesis. PLP is consequently weakening because the increasing numbers of low-skilled workers and larger surplus labor pools negatively affect labor solidarity.

One unexpected finding is the positive coefficient for exports in Table 8. This positive coefficient defies the predictions of the H-O model. Why would this type of market integration increase the demand for skilled labor relative to low-skilled labor in low-skill labor abundant countries? We must emphasize that the effect of exports on the skill ratio is weak (i.e., size of the coefficient 0.002) in comparison to the impact of FDI (-0.07). A possible explanation is that the inclusion of India is biasing the results for exports of manufactured goods. India engaged in one of the longest periods of economic isolationism to protect and cultivate their high-skill sectors. Although its low-skill employment has recently expanded, the overall employment of skilled workers in India is high compared to other countries at comparable levels of development. To check this possibility, I dropped India from the sample and re-ran the regressions (results not shown here). The new results reveal that exports of manufactured goods no longer have a significant effect on the skill ratio, but FDI sustains its negative and significant impact.

Breakdown of Results for MICs

The statistical findings for the MICs suggest that overall labor is slightly better off under conditions of globalization than the LICs. Similar to the LICs, the effects of globalization on workers occur mainly through exports and FDI. Exports of manufactured goods increase employment of high-skilled

labor in middle-income countries compared to the employment of low-skilled workers. This makes sense because MICs have higher literacy rates, relatively greater access to technology, and higher levels of industrialization than the LICs. Similar to India, many countries in this group (e.g., Argentina, Brazil, Venezuela, Malaysia, Thailand) engaged in long periods of industrial substitution industrialization (ISI) where governments encouraged the development and exports of their more skill-intensive sectors. In contrast, the results suggest that FDI in the MICs tends to be concentrated in labor-intensive industries that lead to growing employment of low-skilled labor.

The effects of FDI and exports on surplus labor in MICs show contrasting results. The negative and significant coefficient for FDI indicates that foreign productive investment helps absorb much of the surplus labor population. Yet interestingly, increasing exports appear to encourage both higher-skill ratios and greater surplus labor pools. Predictably, if MICs do not provide sufficient job retraining and relocation programs, low-skilled workers will be out of work as the economy moves toward higher-skilled production. Nevertheless, the size of the export coefficients suggests that the positive impact of exports on surplus labor is small, particularly when compared to the negative effects of FDI on surplus. This finding is consistent with Fig. 2, which shows that surplus labor declined more rapidly in these countries after policies supporting globalization were adopted. Regardless, these contrasting findings raise interesting questions and deserve further future investigation.

Finally, the PLP findings in Table 10 are mildly encouraging. Exports have a positive effect on PLP, most likely because it encourages skilled labor. Disappointing is that increasing FDI has no effect on PLP. This suggests that the increase in low-skill labor by FDI is not enough to offset the effects of a large surplus labor population, even if the actual number of surplus workers is decreasing. The earlier discussion of PLP shows that gains in PLP may not always occur when low-skill labor increases and surplus labor decreases. Based on Olson's logic, even if FDI encourages the employment of low-skilled workers, this group is still hard to organize, particularly if the level of surplus is still high.

Breakdown of Results for HICs

The encouraging findings for skill ratios, surplus labor, and PLP in HICs confirm the primary argument in this chapter that national income level matters. Contrasting the LICs and MICs, portfolio flows, more than

exports and FDI, affect labor. These findings are consistent with research, revealing that private capital flows are more efficient in higher-income countries.[28] In addition, these economies are specializing in services and moving away from manufacturing (ILO, 1997). The data reveal that, compared to the other LDCs, exports of manufactured goods show a distinct decline in HICs since the mid-1980s while GDP growth has increased.

Overall these results indicate that the impact of portfolio flows is beneficial for workers in HICs. Portfolio flows and the savings and investment they generate, more than exports or FDI, encourage the employment of high-skilled labor. As expected, none of the globalization variables affect surplus labor because this population is already small in HICs. Finally, both FDI and portfolio flows lead to greater PLP.

7 Implications

Previous research has not attempted to conduct a comprehensive analysis on the factors affecting workers in the developing world in this era of globalization. We can hope that this study will help inform the views of researchers, politicians, and policy commentators about the effects of globalization on the overall situation of workers in LDCs. Contemporary debates have been polarized. One view is that globalization improves labor's conditions in the developing world because the production and exports of labor-intensive goods will increase, and employment will rise. The opposing view of many comparative and regional specialists is that globalization worsens the bargaining propensity of labor because LDC governments face increasing pressure to keep wages low, at all costs. This analysis suggests the possibility that globalization is improving the economic situation of workers in all developing countries, but it is not universally improving their marketplace bargaining power.

Results from this study challenge broad generalizations about the effects of globalization on labor in LDCs. Econometric analysis on 59 LDCs from 1972–1997 reveals that the effects of globalization on workers are ultimately contingent upon the level of LDC economic development. This analysis serves as a corrective to studies that neglect the importance of the level of economic development in considering the

[28] For a recent review of the literature that supports the hypothesis that private capital flows are more efficient in higher-income countries, see Eichengreen (2001).

domestic effects of globalization. The findings suggest that workers in LDCs at higher levels of economic development are the "winners" in the current era of globalization. Workers in these nations are well positioned to reap the benefits of globalization because of the growing population of skilled labor and the relatively small pools of surplus labor. Workers in middle- and low-income countries do better economically (i.e., greater access to employment opportunities), but are "losers" in the sense that PLP does not significantly increase with globalization.

What are the possible policy implications? This analysis postulates that progressive conditions for workers during globalization rest on their improved bargaining position, and not just pure economic gains. Governments of LICs and MICs must find strategies to reconcile the positive effects of trade on the employment of labor with the expansionary effects it can also have on the size of the informal sector. The most obvious and direct way to do this is to formulate policies that both increase the skill level of the workforce and control the surplus labor population. For instance, governments can provide incentives to firms to hire surplus workers by reducing the extensive labor market regulations that tend to protect privileged labor groups in LDCs. Greater access to training and education will also make workers more employable in the formal sector. Finally, workers themselves may find it more politically beneficial to form coalitions with informal labor groups, sacrificing short run gains (e.g., higher wages) for long-run benefits (greater PLP). Of course, political constraints such as personalistic dictatorships and even partisan politics can thwart the implementation of all these solutions, and the next step in this analysis is to explore such potential obstacles in greater detail. It is hoped that this chapter's findings raise important questions and provide fertile ground for further studies on labor and globalization in LDCs.

Appendix 1

Table 11 Data sources and definitions

*Concepts**	*Measurements*	*Definition*
Globalization [XMANUF] [KFLOW] [FD1]	The amount of total trade (exports + imports/GDP); and gross capital flows as a percentage of GDP; foreign direct investment flows as a percentage of GDP	Gross capital flows are the sum of all inflows and outflows, using the finest classifications to avoid netting
Labor power [PLP] [SKILL] [SURPLUS]	[The ratio of the numbers employed in skill—intensive manufacturing industries relative to numbers employed m low—skill manufacturing industries] times [1 divided by the number of surplus laborers in the economy]/ divided by 87	"Low-skilled" refers to those who have no more than a primary or secondary education, and are likely to be employed in labor-intensive manufacturing industries. "Skilled" are those with more than a basic general education and are usually employed in heavy and high-skill manufacturing industries. "Surplus labor" is the total working age population (between 15 and 65) minus the total labor force minus students enrolled in secondary and tertiary education This total is taken as a percentage of the economically active population. Note that in some poor countries, surplus labor took a negative value most likely because the official working age is much lower than 15 in LDCs. To address this, the number of children ages 10–14 is added to the working age population
Demographic variables [URBAN] [DEPEND]	Urban population as a percentage of total population, the age dependency ratio	"Urbanization" is the midyear population of areas defined as urban in each country. It is measured here as the percentage of the total population "Age Dependency ratio" is the number of persons over 60 divided by number of persons aged 20 to 59
Economic development [GDP] [GROWTH]	The gross domestic product per capita [GDP], GDP growth[GROWTH]	"GDP" is the total gross domestic product of a country divided by total population. "Growth" is the annual percentage growth rate of GDP at market prices based on constant 1987 local currency. Aggregates are based on constant 1987 US dollars

(*continued*)

Table 11 (continued)

*Concepts**	*Measurements*	*Definition*
Political development [DEMOC]	Indicator of democracy	Using scale 0–10, 10=strong democracy. This indicator is derived from the competitiveness of political participation codings, the openness and competitiveness of executive recruitment, and constraints on the chief executive
Socioeconomic development [HUMAN CAPITAL SPENDING]	Government spending on education and health per capita	Include public expenditures in health care and education measured in 1995 constant US dollars

* <.15

Table 12 Data sources, calculations, and estimations

HUMAN CAP:	IMF, **Government Finance Statistics.**
K FLOWS:	IMF, **Balance of Payments Statistics.** World Bank, **World Development Indicators.**
XMANUF:	World Bank, **World Development Indicators.**
SKILL:	Classification scheme developed by Wood and Mayer. Their export product classifications are based on the Standard International Trade Classification (SITC, Revision 2). The following list shows which International Standard Industrial Classification (ISIC) codes correspond to the SITC codes (also supplied by Wood). The employment statistics for each manufacturing sector came from **UNIDO Database of Industrial Statistics.** The final value of SKILL is based on the total numbers employed in high-skill manufacturing production/low-skill manufacturing production.
SURP:	World Bank, **World Development Indicators.**
GDP:	World Bank, **World Development Indicators.**
DEPEND:	World Bank, **World Development Indicators.**
GROWTH:	World Bank, **World Development Indicators.**
DEMOC:	Ted Robert Gurr's and Keith Jaggar's **Polity IV.**

Table 13 Manufactured exports (NM)

Low-skill manufactures	*SITC2 categories*
(1) Leather and rubber products	61–62
(2) Wood and paper products	63–64
(3) Textiles, clothing, footwear, and travel goods	65, 83–85
(4) Nonmetallic mineral products	66 (less 667)
(5) Iron and steel and metal products	67, 69
(6) Furniture and plumbing equipment	81–82
(7) Ships, bicycles, and trains	78 (less 781–4), 79 (less 792)
(8) Miscellaneous	89, 9 (less 941,971)
High-skill manufactures	
(9) Chemicals	5 (less 522.24, 522.56, 524)
(10) Cut diamonds	667.29
(11) Nonelectrical machinery	71–74
(12) Computers and office equipment	75
(13) Communication equipment	76
(14) Electrical machinery	77
(15) Motor vehicles and aircraft	781–784, 792
(16) Scientific instruments, watches, and cameras	87, 88

Note: The SITC 5–8 categories allocated to primary rather than manufactured exports are phosphorus pentoxide and phosphoric acids (522.24), aluminum hydroxide (522.56), radioactive material (524), pearls and precious stones, except cut diamonds (667 except 667.29), and nonferrous metals (**68**)

Table 14 Translated to manufactured production

Low-skill manufacturing production	*ISIC1 categories*
(1) Leather and rubber products	323, 355
(2) Wood products, except furniture Paper and paper products	331, 341
(3) Textiles	321, 323, 322, 324
Leather products	369, 362, 361
Wearing apparel, except footwear	
Footwear, except rubber or plastic	
(4) Other nonmetallic mineral products	
Glass and products	
Pottery, china, and earthenware	
(5) Iron and steel	371, 381
Fabricated metal products	
(6) Furniture, except metal	332
(7) —	
(8) Plastic products	356, 390
Other manufactured products	
High-skill manufacturing production	

(*continued*)

Table 14 (continued)

Low-skill manufacturing production	*ISIC1 categories*
(9) Industrial chemicals Other chemicals Misc. petroleum and coal products Plastic products	351, 352, 354, 356
(10) —	
(11) Fabricated metal products Machinery, except electrical Machinery, electric	381, 382, 383, 384
(12)	—
(13)	—

Appendix 2

Table 15 Comparing PLP and LSI[a]

Countries	*PLP*	*LSI (McGuire)*
Argentina	high	High
Bangladesh	low	Low
Bolivia	med-low	Low
Botswana	low	Low
Brazil	high	High
Cameroon	low	med-high
Chile	med-high	Low
China	high	med-high
Colombia	med-high	med-low
Costa Rica	med-high	med-high
Cyprus	med-high	High
Ecuador	med-low	med-low
Egypt, UAR	med-high	med-high
El Salvador	Low	Low
Ghana	med-high	med-low
Greece	med-high	High
Guatemala	med-high	med-low
Honduras	Low	Low
India	med-low	med-low
Indonesia	med-low	Low
Israel	High	med-high
Kenya	med-high	med-high

(*continued*)

Table 15 (continued)

Countries	*PLP*	*LSI (McGuire)*	
Korea, Rep.	High	low	
Malaysia	High	low	
Mali	med-low	high	
Mauritius	Low	med-low	
Mexico	med-high	med-high	
Morocco	Low	low	
Nicaragua	med-low	med-high	
Nigeria	med-low	med-low	
Pakistan	Low	low	
Panama	Low	low	
Paraguay	med-low	low	
Peru	med-low	med-low	
Philippines	High	med-low	
Singapore	High	low	
South Africa	High	med-low	
Thailand	High	med-low	
Tunisia	med-low	low	
Turkey	med-high	med-high	
Uruguay	High	med-high	
Venezuela	med-high	med-low	
Zambia	med-low	med-high	
Zimbabwe	med-low	med-low	
Percentile Range			
Below 25th percentile	Low	25th percentile-50th percentile	med-low
50th percentile-75th percentile	med-high	above 75h percentile	high

[a]To facilitate direct comparison with McGuire (1999), the PLP values in Table 15 are averages for 1990–1997 only. Several LDCs had to be dropped from the comparison because they were not included in LSI data. Also, because McGuire's index additionally includes developed and Eastern European nations, I eliminated these countries from the sample, recalculated the percentiles, and rechecked the comparison. The results were almost identical to those reported above.

Assessing PLP

Few efforts have been made to measure and compare labor power across developing countries over time. Union density is the most commonly used cross-national indicator of labor power. As noted earlier, union density is more appropriately applied in the developed world than in the LDCs. Most LDCs are still far from attaining strong and independent unions. Even in LDCs with relatively high union density, labor is rife with

collective action problems and often subject to a broad range of government controls.

Given the unreliability of direct organizational measures, as Encarnation's analysis suggests, alternative assessments of labor's bargaining power tend to be tautological (Encarnation, 1989). According to Encarnation, bargaining power is generally defined by the outcome, making it difficult to tell which party had more bargaining power if negotiations are "won by those who win." It is virtually impossible to differentiate between power and negotiated outcomes using this approach. Encarnation (1989, p. 20) concludes that bargaining power must refer to the ability of laborers to "improve the range of plausible outcomes available to each [negotiator], and to improve the probability of securing the outcome that each prefers."

The measure of PLP used in this analysis attempts to avoid the tautology problem. It does so by acquiring some sense of labor's *propensity* for collection action rather than collective action per se. After all, since labor discontent can be costly for political leaders (and workers), governments often respond to labor demands before strikes or other militant actions occur. Offe and Wiesenthal (1985) argue that in such circumstances "the organization then has become strong enough to derive some power (i.e., control over its environment) from its recognized *potential* of power. In other words, concessions are likely to be made not because members have struck, but in order to avoid a strike."

To assess whether PLP serves as an indirect measure of labor's political power, additional steps must be taken. Comparing PLP to other nontautological assessments of labor's bargaining power is the most precise way to accomplish this. McGuire's (1999) labor strength index (LSI) represents the only other effort to assess the "real" magnitude of labor's bargaining power in LDCs and compare it across countries. Because of data limitations, it represents only one period of time (the 1990s). LSI is based on four dimensions: (1) union membership as a percent of the nonagricultural labor force; (2) proportion of formal-sector workers covered by collective contracts; (3) level of collective bargaining power—national/sectoral, enterprise, or both; (4) number of major International Labour Organization conventions ratified.[29] This is a multifaceted attempt to

[29] The number of ILO ratifications is arguably the weakest component of LSI, since ratification does not necessarily ensure enforcement. A detailed evaluation of the strengths and weaknesses of LSI is a subject for a future study.

capture several important dimensions of labor strength that are not directly measured by PLP.

The comparison of PLP and LSI in Table 15 significantly increases confidence in the PLP's reliability as an indicator of labor's bargaining power. The correlation coefficient, excluding the outliers, is 0.61 (see Chart 1). The correlation is actually higher than expected since LSI includes unionization data (and its inherent weaknesses), and because PLP captures some important nontraditional sources of labor's bargaining power.[30]

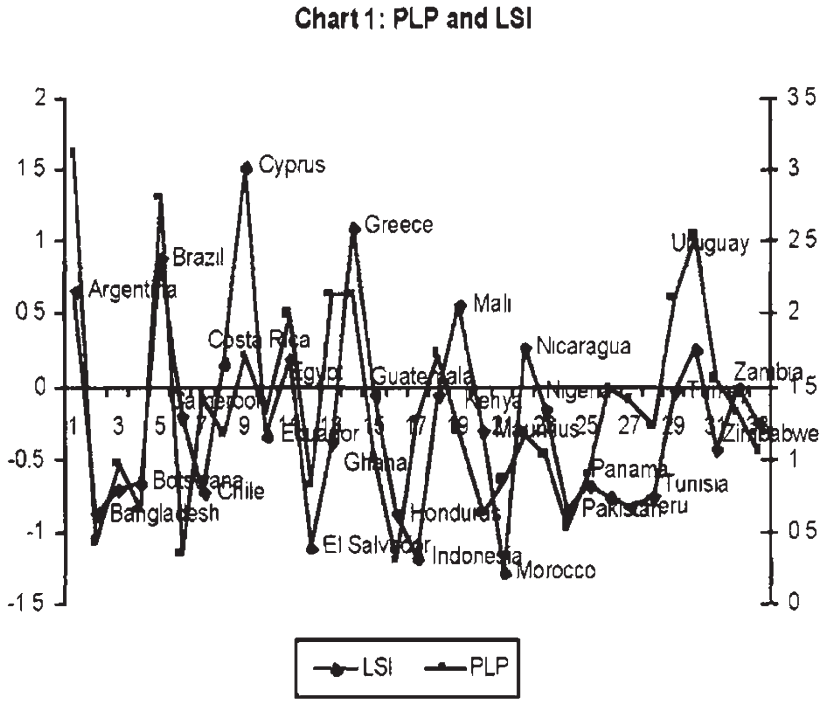

Chart 1 PLP and LSI. (*Note that some of the countries were dropped from the graph to reduce clustering)

[30] LSI closely resembles Silver's (2003, p. 13) reference to "associational power," or "the various forms of power that result from the formation of collective organization of workers" (most important, trade unions and political parties). The comparisons in Table 15 and Chart <InternalRef RefID="Figa">1 suggest that marketplace bargaining power and associational power are closely related.

For most cases, the PLP rankings are similar to LSI, and it is primarily the East Asian cases, for example, Singapore, Korea, Malaysia, and Thailand that show the most contrast. Their PLP score is "high," which contradicts conventional wisdom on labor in these nations.[31] Yet the PLP scores are consistent with more recent analyses by Yap (2003) and Brown (2004), which bring important new insights on labor in the East Asian countries and explain why labor's political influence in these authoritarian nations has been commonly misinterpreted.

According to both Yap and Brown, workers in these nations have been in a relatively unique position in the developing world because of the central economic role they have played in the nations' development. Repressive labor strategies have been part of the East Asian nations' export-oriented industrialization strategy for economic development. Yet paradoxically, precisely because of this dependence on labor, the state has had to accommodate labor in different ways.[32] Labor's collective political consciousness has thereby evolved differently in these countries while the more familiar signs of political power (e.g., strikes, unionization, centralization of bargaining power) have been conspicuously absent.[33] As Young (2004) argues, "in studies … where the forms of consciousness and organization are found not to conform to these [familiar] expectations, labor is deemed to be 'weak' or 'immature,' and seen to be peripheral to the development of state, society and the economy…. The outcome may not conform to

[31] LSI and PLP also differ in some of the African cases where LSI tends to be higher than PLP (Ghana and Mali). The reason is because data availability for all four components of LSI is apt to be scarce in these countries, biasing these scores upward. See McGuire (1999, p. 12).

[32] Yap (2003) for instance, discusses "credible apologies" that East Asian governments make to labor. They may dismiss, demote, or replace certain government officials deemed responsible for the policies that "hurt" labor, downsize or eliminate the relevant agency, or offer reparations. Representatives from academia, labor, or business also may be invited in to review, evaluate, or oversee changes to government.

[33] For example. Yap (2003) draws from Bates (1981) and argues that labor can withdraw economic resources (e.g., alter their production mix, engage in the black market) to protest the government's economic policies. In reference to workers in Thailand, Brown (2004) discusses the importance of taking account of industrial workers and their organization as *potential political actors*. He argues that "even when labor is invisible, in the sense of not being a public, organized actor overtly engaged in formal political processes, the politics of the working class is nonetheless there and is significant. For, behind the scenes, there has been a continual jockeying to channel and control workers and their struggles. This is to ensure that they either do not emerge as a public, organized force, or if they do, they are organized in a manner that is in keeping with the broader economic, ideological, and political interests of those dominating contests for state power" (Brown, 2004, p. 133).

very generalized theoretical expectations, but that calls for re-evaluation and refinement of theory, rather than a dismissal of the significance of working class struggles." One important advancement of the PLP indicator is that it can approximate labor movements that do not develop the familiar institutional forms.

The indicator applied in this study, PLP, offers three broad advantages: (1) it corresponds to conditions specific to the bargaining power of labor in developing countries; (2) it is comparable across LDCs; and (3) it has a time-series component that can capture the dynamic aspects of bargaining power. The first advantage is important because the logic of PLP is based on the particular circumstances faced by labor in LDCs. Desirability of the second two characteristics is more obvious. A standardized measure available over time and across countries greatly reduces the biases that can affect empirical analyses of labor in the developing world.

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