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**Informal employment in Latin
America: Movements over business
cycles and the effects of worker
rights**

Rossana Galli and David Kucera

P.O. Box 6
CH-1211 Geneva 22
Tel. 00 41 22 / 799 6128
Fax. 00 41 22 / 799 8542
E-mail: inst@ilo.org
<http://www.ilo.org/inst>

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Abstract

This paper addresses three central issues in the debates on informal employment: trends in informalization, informal employment as a macroeconomic buffer over business cycles, and the effects of higher labour standards and stronger *de facto* worker rights on informal employment. In particular, we address the hypothesis that stronger “civic rights” – such as freedom of association and collective bargaining rights – and higher wage shares in the formal sector reduce employment in that sector and thereby contribute to informalization. These issues are explored using panel data on specific categories of formal and informal employment for fourteen Latin American countries in the 1990s, evaluating both cross-country and time series variation. In the context of an increasing share of informal employment in the 1990s, we find evidence that informal employment acted as a cyclical buffer for formal employment. Regarding labour standards, our main finding is that countries with stronger “civic rights” tend to have higher shares of formal employment and lower shares of informal employment, even accounting for per capita income and other control variables.

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1. Introduction

This paper addresses three central issues in the debates on informal employment: trends in informalization, informal employment as a macroeconomic buffer over business cycles, and the effects of higher labour standards and stronger *de facto* worker rights in the formal sector on informal employment. The latter two issues are explored using panel data on specific categories of formal and informal employment for fourteen Latin American countries in the 1990s.

One reason for concern regarding the growing share of informal employment in Latin America is that such employment is often characterized by poor work conditions. We consider these trends in informalization in the context of both labour standards and broader structural factors, such as rural-urban migration, the transition from import substitution to export-oriented development policies, and economic growth.

The second issue we investigate is the widely-noted view that informal employment functions as a macroeconomic buffer, increasing in downturns by absorbing workers displaced from formal employment and decreasing in upturns as workers re-enter formal employment. To our knowledge, this paper provides the first systematic analysis of whether informal employment functions as a buffer, in particular whether the movement of informal employment is countercyclical. Evaluating the role of informal employment as a buffer is important as it enables insights into three issues regarding the relationship between formal and informal employment. First, the process of labour market adjustment, particularly regarding flexibility in hiring and firing for formal employment and the dampening of open unemployment in the economy. Second, the relative importance of the heterogeneous types of informal activities, for which we have different expectations regarding cyclical behavior. Third, the extent to which workers' movements into informal employment are voluntary and thus whether these workers regard such employment as desirable.

Regarding the effects of labour standards, we address the notion that improving labour standards in the formal sector will lead to a higher share of informal employment. One version of this view can be found in Singh and Zammit (2000). Because it touches on many of the issues addressed in this paper, it is worth quoting at length.

[I]f in accordance with the advanced countries' proposals, the two labour conventions under discussion [ILO Conventions 87 ("Freedom of Association and Protection of the Right to Organise") and 98 ("Right to Organise and Collective Bargaining")] are imposed in a "big bang" manner in a developing economy (through, for example, international trade sanctions), it is more than likely that this would lead not to conflict resolution, but rather to strikes and consequent economic disruption. Many developing country employers, including the largest ones, often have a feudal or paternalistic outlook and do not see any need for trade unions. It is not unusual for them to use violent methods to stop the formation of unions and their activities, much like the historical experience of advanced countries such as the US. On the side of the employees, in the early stages of unionization, there is also likely to be considerable inter-union competition for members, leading to populist positions being taken by union leaders. Further, attempts at violent suppression of trade union activity by employers invariably leads to counter-violence by unions. The consequent economic and social disruption discourages investment, both foreign and domestic, and therefore does not help the cause of economic development.... Further, to the extent that formal sector unions succeed in getting higher wages and employment guarantees for their members, this is likely to reduce, other things being equal, the demand for labour in that sector, forcing the unemployed to seek work in the informal sector... where labour standards hardly apply (*ibid.*: 32-33).

This quote from Singh and Zammit raises a number of questions regarding the relationships among labour standards – particularly regarding freedom of association and collective bargaining rights (FACB) – the extent of formal and informal employment, and economic development.¹ We know, for instance, that many advanced countries came to have both strong FACB rights and a large share of formal employment, suggesting a positive long-run relationship. However, Singh and Zammit's hypothesis suggests a negative short-run relationship between FACB rights and formal employment, with the direction of causality running from the former to the latter.

A further question to investigate is whether different labour standards may well have different effects on formal and informal employment. Useful in this respect are categories of labour standards proposed by Portes as regards "basic rights," "survival rights," "security rights" and "civic rights", elaborated in Table 1 (Portes 1994a). Our primary interest is with "civic rights," particularly regarding freedom of association and collective bargaining and civil liberties more generally. In contrast with Singh and Zammit, Portes' view is that while stronger "security rights" may result in increased informalization, stronger "civic rights" by themselves do not have this effect, even if stronger "civic rights" result in higher wages. Summarizing his view in reference to prior studies, Portes writes as follows:

Studies in several Latin American countries indicate that the drive to informalize by modern firms is motivated primarily by the desire to avoid adding to a regular plant of workers that, once hired, can seldom be let go. Hence, apart from basic and civic rights that may become amenable to internationally enforced standards, the implementation of others also requires fine tuning, lest they act as a brake on economic development or on the extension of minimum protection to greater numbers. There is reason to doubt the popular dictum that Third World economies function best when wages are allowed to sink to their "natural" levels. Firms relying on very cheap labor lack incentive to innovate technologically; their workers lack motive to remain with a particular firm or collaborate with management in increasing its efficiency; their paltry wages also add insignificantly to domestic demand. The Latin American studies cited previously indicate that it is not high wages per se, but rather high wages to an immobile labor force regardless of business conditions, that constitute the main incentive for widespread informalization (*ibid.*: 125).

Portes' perspective, therefore, is that the effects of "civic rights" on informalization depend on the specific context of "security rights" and thus that the effects of these two sets of rights are interactive.²

The remainder of this paper is structured as follows. Section 2 provides a survey of relevant empirical studies on informal employment in Latin America, including studies evaluating the effects of "civic rights" and "security rights" on informal employment. Section 3 discusses definitions of formal and informal employment and gives general information on data sources. Section 4 describes trends in formal and informal employment over the post-World War Two years. Section 5 evaluates whether informal employment functions as a macroeconomic buffer over business cycles, based on the estimation of output elasticities of employment for individual

¹ A similar point on the effects of employment conditions in the formal sector is made in a World Bank report, which argues that the extent of informal employment in Latin America is partly determined by "labor policies that overlooked the role of wages and working conditions as incentives and market signals, reducing the number of formal jobs and encouraging the development of the informal sector" (World Bank 1995: 6).

² Portes' hypothesis regarding "security rights" was formulated in a particular macro-economic context, during which there were more formal sector firms that could have been benefited from greater flexibility in employment protection regulations. The newer macroeconomic context is characterized by declining public sector employment and by export-oriented development strategies involving firms operating in export-processing zones. In this context, greater flexibility in employment protection regulation may mainly benefit firms in export-processing zones, which may create poor quality jobs such that workers prefer to remain informal (Portes 2002, personal correspondence).

categories of formal and informal employment. Section 6 presents our findings on the effects of labour standards on formal and informal employment, focusing on freedom of association and collective bargaining measures, including a measure of wage shares in formal employment. Section 7 concludes.

2. Prior empirical evidence for Latin America

Prior empirical evidence on formal and informal employment in Latin America has focused on four main issues, namely, differing returns to human capital in formal and informal employment, worker mobility between formal and informal employment, informal employment as a buffer over business cycles, and the effects of labour market regulations on formal and informal employment. Each of these is considered in turn.

2.1 Returns to human capital in formal and informal employment

A crucial policy question in Latin America is the extent to which there are barriers to mobility from informal to formal jobs, indicating that labour markets are segmented. The concern about labour market segmentation reflects that in Latin American countries informal workers make up a significant share of total employment, often more than half of total urban employment, and generally have the characteristics of disadvantaged workers. Informal workers tend to be less educated, work longer hours, and to be less well paid (with average earnings in informal employment ranging between half and three-fourths of that in formal employment). Moreover studies find that the educational and earnings differentials between formal and informal workers are larger for wage earners than for the self-employed and larger for females than males, suggesting that employment status and gender are important aspects of informal employment.³

A large number of studies have investigated the existence of barriers to mobility by looking at wage differentials between formal and informal workers with similar characteristics. This approach is based on the assumption that factors such as government intervention, unions, and private policies (e.g. payment of efficiency wages) place restrictions on entry into formal employment, and generate, by the rationing of formal jobs, a formal sector wage premium. In such a case, equally productive workers (i.e. with the same human capital, proxied by the same education and work experience) would be paid more in formal than informal jobs. For this reason, most empirical research on labour market segmentation is focused on the evidence for higher rates of return to human capital in formal employment.

These studies are based on evaluating separately for formal and informal workers models of individual wages controlling for workers' observable characteristics (particularly education and work experience), and comparing between models the estimated coefficients. Consistent with the hypothesis of labour market segmentation, these studies usually find statistically different coefficients between formal and informal employment, providing evidence of lower rates of

³ Saavedra and Chong (1999) note that in Peru the lower value of informal employment average earnings (estimated at 66% of that in formal employment in 1994) reflect a much larger gap for informal wage earners than for informal self-employed (whose earnings are respectively 49% and 77% the earnings of the corresponding formal workers group). In El Salvador (in 1991 and 1992) the average years of education for workers in informal employment was 66% that of workers in formal employment for males and only 44% for females, while average earnings in informal employment were 75% of that in formal employment for males and only 52% for females (Funkhouser 1997a). Similarly in Guatemala (in 1989) average education for informal workers was 45% that of formal workers for males and only 34% for females, while average earnings in informal employment were 52% of that in formal employment for males and 45% for females (Funkhouser 1997b). Analogous gender differences are found also in Honduras, Costa Rica, Peru and Mexico (Funkhouser 1996; Marcouiller *et al.* 1997).

return on education for informal workers, particularly for wage earners and women.⁴ Results on rates of return to work experience are somewhat different, as several studies find that returns to experience are higher in informal employment.⁵ Overall, returns to human capital in informal jobs are estimated to be substantial. The authors of these studies interpret this result as suggesting that informal employment is not necessarily a subsistence activity but may be of a more dynamic nature.

A correction for endogenous self-selection is usually introduced in these wage models to control for the possibility that unobservable differences in terms of quality of education or innate ability may determine the assignment of individuals to formal and informal jobs in a non-random way. If formal workers were positively selected out of the pool of all workers, the observed wage differential would be misleading because informal workers would not receive a higher wage were they to move to formal employment. Most studies find that the differences in earnings structure between formal and informal workers are robust with respect to self-selection bias.⁶

Taken together, the evidence provided by earnings differential studies shows that informal workers, particularly wage earners and women, receive lower rates of return to education, if not experience. However, as pointed out by Funkhouser (1997b), findings of earnings differentials between formal and informal workers do not necessarily imply the existence of barriers to mobility. Using data for Guatemala in 1989, Funkhouser shows that differences in earnings structures are found not only between formal and informal employment, but also between any two subgroups of the labour market: males and females, indigenous and nonindigenous, urban and rural, and even within formal employment (public sector and formal private sector) and within informal employment (among similar industries).⁷ Since there is little reason to believe, the author argues, that there are restrictions on mobility between similar industries within informal employment, it seems difficult to attribute differences in earnings structures to mobility barriers.

Moreover, Funkhouser argues that evidence in favor of labour market segmentation should show not only that earnings structures are different in formal and informal employment, but also that the pattern of difference is consistent with the proposed explanations of segmentation. These explanations address demand-side factors such as the role of government hiring in the formal sector, minimum wages, unionization, and industry-specific earnings differentials. As regards the role of government, Funkhouser shows that returns to education and experience in the public sector are lower than in the private-formal sector, so that public employment is not likely to be the cause for higher returns to human capital in formal employment. There is weak evidence in

⁴ Saavedra and Chong (1999) find that when controls for education and experience are introduced, earnings differentials between formal and informal self-employed become negligible for both male and female workers in Peru, but persist between formal and informal salaried workers. Marcouiller *et al.* (1997) find wage premiums are higher for formal female than male workers in El Salvador and Peru.

⁵ See Funkhouser (1996) for El Salvador, Guatemala, Honduras, Nicaragua and Costa Rica; Funkhouser (1997a) for El Salvador; and Marcouiller *et al.* (1997) for El Salvador, Mexico and Peru for examples. Related evidence is found in two other studies. Telles (1993) finds higher returns to experience for both male and female unprotected workers (self-employed and employees) than for self-employed protected by social security in Brazil; and Mohan (1986) finds higher returns to experience for male self-employed workers than for blue-collar and white-collar employees in Colombia.

⁶ See for instance Funkhouser (1997b) on Guatemala and Saavedra and Chong (1999) on Peru. One exception is the study on North East Brazil by Tannen (1991), who finds that excluding public and agriculture-related employment from urban labour force, and correcting for selection bias virtually eliminates the difference in earnings, standardized for skills, in the formal and informal sectors within the private non-farm urban economy. This study may not be directly comparable to others, however, in that it uses a single equation for both formal and informal sector wages with a dummy for informal employment (defined by the absence of social security coverage).

⁷ Informal employment is defined as that in firms with fewer than five workers and also non-professional self-employment. Funkhouser's result holds true even across industries within the informal sector that are likely to use similar technology and draw from similar pool of workers such as retail trade and restaurants.

favor of the minimum wages explanation of segmentation, since for the three industries where legal minimum wages are least binding (agriculture, commerce and industry) results still strongly support differences in earnings structures for formal and informal workers. The evidence is mixed on the relationship between unionization and formal-informal differences in earnings structures at the sectoral level. Among the most highly unionized sectors, returns to human capital are significantly higher for formal than informal workers in industry and services, consistent with the unionization explanation of segmentation, but are not significantly different in construction and transport. Finally the evidence is also mixed on the existence of industry-specific earnings differentials, since returns to human capital are found to be significantly different not only between informal workers and formal workers in modern industries, but also among informal workers working in similar industries, such as retail trade and restaurants. Given the weak evidence found in favor of demand-side explanations of earnings structure differences between formal and informal employment, Funkhouser argues that supply-side factors might explain the existence of these differences, even in the presence of perfect mobility between formal and informal employment.

Although Funkhouser does not develop this idea in his Guatemala study, other studies contain possible supply-side explanations, ranging from the desire for greater independence to higher returns to experience in informal employment to the existence of credit constraints. The latter two factors are particularly interesting and not fully developed in the literature. As noted above, several studies on earnings differentials find that while returns to education are higher in formal employment, returns to experience are higher in informal employment. A worker with less education may therefore prefer to work informally and by doing so maximize his lifetime income. Moreover, some studies find that the estimated intercept of earnings models is larger for informal workers while both returns to education and experience are higher in formal employment.⁸ This suggests that a worker without education or experience and facing a cash constraint may choose to work informally even though he would maximize his lifetime income as a formal worker.

Overall, Funkhouser concludes that findings of earnings differentials provide no definitive evidence of barriers to mobility from informal to formal employment. The same argument, for different reasons, is made by Maloney who states that lower informal earnings, controlling for workers' characteristics, could reflect factors such as the value of taxes evaded, implicit training costs or payments in kind. Thus wage comparisons not accounting for this information cannot provide definitive evidence of segmentation or of relative welfare between formal and informal employment (Maloney, 1998). In order to overcome these limitations of earnings differential studies, these authors carried out direct analyses of mobility among different employment categories.

2.2 Worker mobility between formal and informal employment

In his study of formal and informal employment in El Salvadoran urban areas, Funkhouser evaluates movements of individual male and female workers within and between formal and

⁸ See Basch and Paredes-Molina (1996) for Chile. A similar result on intercepts is found for Brazil by Telles (1993), who splits the informal sector into three categories (protected self-employed, unprotected workers including employees and self-employed, and domestic workers) and shows that the intercept of formal sector employment (protected employees) is lower than that of protected self-employment but higher than that of unprotected workers. Also Gong and van Soest (2002) find that the estimated intercept in a wage differential model for Mexico is lower for formal workers than for informal workers.

informal employment from 1991 to 1992, a period of rapid GDP growth in El Salvador, as well as how such movements are associated with changes in earnings (Funkhouser 1997a).⁹ The study finds a fair amount of mobility between formal and informal employment for males but considerably less for females, especially regarding movement from informal to formal employment. For males initially in informal employment, 7.3% moved into formal employment over the period; for males initially in formal employment, 4.7% moved into informal employment. For females initially in informal employment, only 2.1% moved into formal employment, well under the rate for males; for females initially in formal employment, 3.3% moved into informal employment.¹⁰ The author finds that those less likely to move are the better educated, those with more work experience, heads of households and married women, which is attributed to the greater ease with which these workers are able to achieve a match between jobs and their personal characteristics.

For those who changed jobs between 1991 and 1992, main results on changes in nominal earnings are as follows. For males, roughly the same earnings increases are observed for those moving from informal to formal employment as for those changing jobs within formal or informal employment. For males in formal employment in 1991, however, moving into informal employment resulted in much smaller earnings increases (about one-tenth) than males moving from informal to formal employment or changing jobs within formal or informal employment. As for females, moving from informal to formal employment resulted in much higher earnings increases than changing jobs within either formal or informal employment. And for females in formal employment in 1991, moving into informal employment resulted in very substantial earnings declines. For both males and females, then, moving from informal to formal employment resulted in much larger earnings increases than moving from formal to informal employment.¹¹

Taking these results on mobility and earnings together, the author argues that they do not provide strong evidence of labour market segmentation for males, whereas such evidence is stronger for females. The author also suggests that important aspects of segmentation are determined largely prior to entry into the labour market. He writes, "Though there may not be pervasive segmentation in the Salvadoran labor market within educational groups, it is likely that the ability to change one's educational status is restricted by educational policy or economic need. Indeed, segmentation within the labor market may be the result of restricted access to pre-labor-market characteristics. This finding is more pronounced for females" (*ibid.*: 151).

Maloney conducted a similar study of movements of individual workers between formal and informal employment in Mexican urban areas (Maloney 1999). In particular, Maloney looked at movements among formal salaried (meaning wage and salary earners), self-employed, informal salaried and contract workers (such as those doing piecework), with the latter three

⁹ With informal employment defined to include the self-employed, family workers, domestic workers, and employees in firms of four or fewer employees, excepting professional and technical employees, and with formal employment defined to other employees. Employers are excluded from both categories.

¹⁰ Looking at those who have changed jobs either within or between formal and informal employment, a similar picture emerges regarding male-female differences. For males, of the 19% of who were in informal employment in 1991 and subsequently changed jobs, 40% moved into formal employment (the rest moving within informal employment); of the 16% of who were in formal employment in 1991 and subsequently changed jobs, about 29% moved into informal employment. For females, of the 12% of who were in informal employment in 1991 and subsequently changed jobs, only 17% moved into formal employment; of the 12% of who were in formal employment in 1991 and subsequently changed jobs, 28% moved into informal employment.

¹¹ The study also finds, for both males and females, the highest earnings in 1992 for those who worked continuously between 1991 and 1992 at the same job within formal employment. For both males and females who worked in informal employment at some point in either 1991 or 1992 – including those staying within informal employment or moving in either direction between formal and informal employment – 1992 earnings were highest for those who worked continuously at the same job within informal employment.

categories making up informal employment.¹² Evaluated is a five-quarter period over 1991 and 1992, a period for which GDP growth was strong. Note that both this and Funkhouser's study of El Salvador evaluate worker mobility during business cycle upswings. Maloney looks exclusively at male workers, and only those with high school or less education. For males initially in informal employment, 20% moved into formal salaried employment; for males initially in formal salaried employment, 18% moved into informal employment. That is, there appears to be greater mobility between formal and informal employment in Mexico than in El Salvador, though the time period evaluated is three months longer for Mexico and definitions of formal and informal employment differ. In both cases, though, there are higher rates of movement from informal to formal employment than vice versa for males, though the opposite pattern holds for females in El Salvador.

The study characterizes self-employment as desirable compared to both other categories of informal employment and to formal salaried employment. For instance, movements into self-employment from informal salaried, contract or formal salaried employment are characterized by sizeable increases in hourly earnings as well as by decreases in the number of hours worked. Movements into formal salaried employment, in contrast, are characterized by declines in hourly earnings for those who were previously self-employed or contract workers, though by increases in hourly earnings for those who were previously informal salaried workers, as well as by increases in the number of hours worked, especially for those who were previously self-employed. Consistent with these results, the study finds that for workers moving from formal salaried employment into self-employment, fully 70% claimed that they moved voluntarily, with 36% citing greater independence as the reason for moving and 34% citing higher pay. Also revealing in this regard are three reasons listed by Maloney regarding why workers are willing to leave formal employment even if this appears to result in a loss of social security benefits. First, if medical benefits are provided for the family as a whole, then there are no marginal benefits to be had from having a second family member in formal employment. Second, administrative costs for social security tend to be high and the benefits to workers low and of poor quality. Third, high rates of turnover within formal employment mean that workers tend not to accumulate much seniority, and hence have less to lose in terms of seniority-related benefits (such as pensions and severance pay) from leaving formal sector employment.

In assessing flows of workers between formal and informal employment, the author emphasizes the importance of life-cycle changes. That is, informal salaried workers tend to be younger than average, with such employment providing a common entry point into the labour market. Self-employed workers, in contrast, tend to be older than average, and the author describes a scenario of workers continuing in wage employment until they have accumulated the financial and human capital to set up their own businesses. A similar demographic pattern of informal employment is also found in El Salvador, Peru and Mexico in a study by Marcouiller, de Castilla and Woodruff, to which the authors give a similar life-cycle interpretation as Maloney to movements between formal and informal employment (Marcouiller *et al.* 1997). Summarizing the findings of his study, Maloney writes, "Both earnings differentials and patterns of mobility indicate that much of the informal sector is a desirable destination and the distinct modalities of work are relatively well integrated" (Maloney 1999: 296). An important qualification, however, of this and the above study by Funkhouser is that both evaluate movements of workers during quite strong business cycle upswings. An important question is whether, for instance, worker movements between formal and informal employment occur in a similar manner during downturns.

¹² For the core of the analysis, informal salaried workers are defined those in firms of fewer than six workers and contract workers are "unsalaried workers who do piecework or other contract work" (Maloney 1999: 280).

A study by Calderon-Madrid addresses these issues by evaluating movements of individual workers between informal and formal employment for urban Mexico between the second and third quarters of 1993, 1995 and 1997, the first and last years having positive growth and 1995 having negative growth (Calderon-Madrid 2000).¹³ In contrast with Maloney, this study evaluates male and female workers together and includes all education levels. Given these differences in data and also time periods, the estimates of mobility are not directly comparable between the two studies. Nonetheless, the Calderon-Madrid study provides useful insights into how movements of workers between formal and informal employment changes over business cycles.

For movements from formal salaried to self-employment, there is no cyclical pattern, with between 2.4 and 2.5% of formal salaried workers making this transition in each of the three years. It may be the case, however, that within this stable pattern is a changing share of workers who enter self-employment involuntarily (no evidence is presented on this). For movements from formal salaried to contract work, there is also no cyclical pattern, with between 2.1 and 2.3% of formal salaried workers making this transition in each of the years. Neither is there a cyclical movement from formal to informal salaried employment, though there is a trend decline, from 8.8 to 7.4% overall. For movements from informal to formal employment, however, there are very clear cyclical patterns. Movements from all three informal employment categories – informal salaried employees, contract workers and the self-employed – into formal employment are lower in the recession year 1995 than in the positive growth years of 1993 or 1997. This evidence suggests countercyclical changes in informal relative to formal employment. Another interesting finding is that inflows into unemployment are higher in the 1995 downturn not only for formal salaried workers, as one would expect, but also for the three informal employment categories. For self-employed workers, for instance, inflows into unemployment were 1.3% in 1993, 2.8% in 1995 and 1.1% in 1997.¹⁴

Also revealing is a comparison of the share of those who remain within employment categories. For those in formal employment in the second quarter of each of the three years, between 80 and 83% were still in formal employment by the third quarter. For self-employment, the corresponding figures are 69 to 70%; for informal salaried employment, 50 to 55%; and for contract workers, 45 to 47%. In other words, roughly half of informal salaried and contract workers left these employment categories in just the span of two quarters, indicating very high job turnover. As suggested by the much higher percentage of formal employees who remained in formal employment, however, most worker movements were among categories of informal employment rather than between formal and informal employment.

The author also conducted a probability analysis of the characteristics associated with leaving formal employment, informal salaried employment and self-employment. Among the characteristics considered for the 1995 to 1998 period were sex, age, education, type of employment contract, work experience and firm size. The most important determinant of the probability of leaving formal employment was the type of contract. In particular, workers in formal employment having a written contract for an indefinite period or for a definite period longer than six months were only half as likely to leave formal employment as workers without such contracts. Workers in firms with fewer than fifteen workers were also more likely to leave formal employment, and in Mexico a firm must have twenty workers to organize a union. Taking the evidence on employment contracts and firm size together suggests that it is the more marginal of formal employees who have the greater probability of leaving formal employment.

¹³ Calderon-Madrid defines informal salaried employment to include wage earners who are not registered in social security institutions. This differs from Maloney, whose definition is based on firm size.

¹⁴ Portes (1989) also notes that during the 1980s crises open unemployment rose together with informal employment in Bogotá, Montevideo and Santiago, showing that the absorptive capacity of informal employment is limited.

The study also finds that the probability of leaving formal employment is less for better-educated workers. In addition, the probability of leaving self-employment and especially informal salaried employment is greater for better-educated workers. This finding is consistent with the view put forth by Funkhouser that labour market segmentation is partly determined by prior educational attainment.

A similar study was conducted by Gong and van Soest (2002), which evaluates movements of individual workers between formal and informal employment for urban Mexico over five quarters in 1992 and 1993, but that like Funkhouser for El Salvador (1997a), looks at males and females separately.¹⁵ The authors estimate the probability of working in formal or informal employment controlling for wages and worker characteristics and whether a worker was formal or informal in the previous quarter. They find that a larger wage differential between formal and informal employment leads to a greater probability of working in the formal sector. They also find that for males, working in either the formal or informal sector in the previous quarter does not affect the probability of working in the formal sector in the subsequent quarter. For females, in contrast, the sector previously worked in increases the probability of remaining in the same sector in the subsequent quarter. In the authors' view these results suggest that for males there are no costs of entry into the formal sector, at odds with the labour market segmentation hypothesis, whereas there is evidence of labour market segmentation for females. This difference between males and females is similar to that found by Funkhouser for El Salvador.

2.3 Informal employment as a buffer over business cycles

The evidence on different returns to human capital and worker mobility between formal and informal employment – in other words the extent of labour market segmentation – has implications regarding whether informal employment functions as a buffer for formal employment over business cycles, meaning that informal employment moves countercyclically. The point is well made by Maloney, who writes as follows:

The traditional view sees informality as the disadvantaged segment of a dualistic labor market segmented by legislated or union-induced rigidities and high labor costs in the protected or “formal” sector. The large size of the [informal] sector thus testifies to the extent of inefficiencies in labor allocation and the magnitude of required reforms. Downward formal wage rigidity also implies strong predictions about sectoral interactions over time. In cyclical downturns, the informal sector is thought to absorb displaced formal sector workers, informal earnings falling relative to those in the formal sector, and then contract during recoveries as the queue for good jobs shortens again.... Particularly during cyclical downturns, the informal sector is generally posited to serve as the reserve army of those unable, although willing, to take a job in the formal sector (Maloney 1997: 1, 15).

A number of other authors have referred to the countercyclical pattern of informal employment. For instance, Carneiro writes that “The usual view is that the dynamics of the informal sector follows an anti-cyclical behavior” (Carneiro 1997: 14). There is, however, little systematic evidence of the cyclical movement of informal employment, for Latin America at least. For instance, no studies were found that compared patterns across a sizeable number of countries. Neither do many studies evaluate an extended period of time and thus complete business cycles, limiting the ability to distinguish between cycle and trend. However, the

¹⁵ Gong and van Soest use two different definitions of informal employment, one based on firm size and the other based on job type, the latter including own-account workers, those who manage a firm without employees, and piece-workers. The authors only present results for the latter definition, but write that “Most of the results based upon the firm size definition are qualitatively similar” (*ibid.*: 517).

available studies, using varying definitions of formal and informal employment, suggest on balance a countercyclical pattern of informal employment. Some studies note the decrease in numbers of those formally employed and increase in those informally employed during the mid-1980s economic crisis in several Latin American cities.¹⁶ A study also evaluating the numbers of those formally and informally employed finds the same pattern for Sao Paulo during the late-1980s to early-1990s recession in Brazil (Carneiro and Henley 1998).¹⁷ A study of formal and informal employment shares in Peru for 1990 to 1995 found a generally countercyclical movement of informal employment shares, with the share increasing overall during the downturn up to 1992 and then declining for two of the three upturn years thereafter (Saavedra and Chong 1999). Another study for Peru also found a generally procyclical movement of both numbers of formal employees and shares of formal employment from 1987 to 1997 (Saavedra and Torero 2000). This movement was more strongly procyclical later in the period, which the authors attribute to weakening job security regulations in the 1990s.

Maloney examines employment shares of formal salaried, self-employed, informal salaried, contract and unpaid workers for urban Mexico from 1987 to 1993, during which 1990 was a peak year (Maloney 1997). Regarding categories of informal employment, Maloney finds a *procyclical* movement of self-employment shares, which provides evidence for his life-cycle view of self-employment, in which workers from other employment categories, including formal employment, would be expected to enter into self-employment when times are good. However, the movement of shares of contract and unpaid workers is countercyclical while the share of informal salaried workers shows an overall upward trend. Looking at the movements of shares of formal salaried employment provides a summary sense of the relative cyclicity of formal and informal employment. The share of formal salaried employment is quite flat over the 1987 to 1990 upturn but is downward over the 1991 to 1993 years of slower growth. This suggests that, on balance, the movement of formal employment tends to be procyclical and thus that of informal employment to be countercyclical. This is consistent with the evidence provided in the study by Calderon-Madrid (2000) noted in the previous section, which shows procyclical movements of workers from informal into formal employment.

2.4 Effects of labour market regulations on formal and informal employment

As discussed above, the available empirical evidence suggests, on balance, that formal employment tends to be procyclical and informal employment to be countercyclical. However, it is important to note that the cyclical behaviour of formal and informal employment is not intrinsic, but depends on institutional factors characterizing the country and time-period under analysis. In particular, “security rights” – namely employment protection and job security regulations – have a strong influence on the ability and willingness of formal firms to adjust to their desired employment levels over business cycles. As suggested by Bertola (1990), tight job security regulations may discourage formal firms from dismissing workers during downturns and from hiring workers during upturns, as they take into account the possibility of incurring high costs of dismissal in the following downturn. As a result, the variability of formal employment in response to output fluctuations is expected to be lower in periods and countries where job security regulations are tighter.

This prediction is confirmed by the previously mentioned study on Peru finding a more strongly procyclical movement of formal employment in the period following the reforms which

¹⁶ See for instance Portes (1989) on Bogotá, Montevideo and Santiago, and Franks (1994) and Pradhan and van Soest (1995) on urban Bolivia.

¹⁷ This study distinguishes between two categories of informal employment: the self-employed and those without labour cards. As the author writes, “Employment without a labour card means the avoidance of employer labour taxes, and denies the worker redundancy protection, paid holiday, and maternity leave rights” (*ibid.*: 136).

reduced workers' security rights starting in 1991 (Saavedra and Torero 2000).¹⁸ More generally, there is strong evidence that the reductions in job security regulations implemented in several Latin American countries in the 1990s led to higher turnover rates for formal workers (especially those with short job tenure), which suggests that formal employment may have become more strongly procyclical.¹⁹

The evidence is less conclusive regarding the effects of security rights on formal and informal shares of employment, most studies being concerned with the impact of job security regulations either on overall employment levels – without distinction between formal and informal employment – or on formal employment alone. Moreover, the little available evidence on the relation between job security and informal employment addresses only self-employment and provides inconclusive results. A cross-country study on Latin American and OECD countries by Márquez and Pagés finds a strong positive correlation between an index of employment protection (constructed by Márquez) and self-employment controlling for GDP per capita, suggesting that in highly protected labour markets more workers tend to be self-employed (Márquez and Pagés 1998). Commenting on this evidence the authors conclude that “[w]hether this is by choice – self-employment might be more attractive when dependent work is highly regulated – or by necessity – workers turn to self-employment because their entrance into the wage employment is limited – cannot be inferred from this analysis” (*ibid.*: 12).

More ambiguous results are found by Heckman and Pagés-Serra based on a sample of sixteen Latin American countries (Heckman and Pagés-Serra 2000). Consistent with Márquez and Pagés, they find a positive and statistically significant cross-country relationship between their index of job-security and self-employment (estimated by pooled OLS), but a negative and statistically significant relationship when only the time-series variability of the sample is evaluated (with the fixed effects estimator). Thus, while countries with weak job security regulations tend to have lower rates of self-employment, the weakening of job security regulations tends to be associated with increases in self-employment. The authors consider these contrary cross-country and over-time relationships a puzzle requiring more research.

These results can be reconciled, however, in that weakening job security regulations might involve an adjustment process and therefore have different effects in the short- and long-run, for instance as firms seek to restructure the skills composition of their workforces. That is, the immediate effect of weakening job security relations could be a greater increase in firing than hiring of formal sector employees and therefore in an increase in the share of informal employment. After this initial round of firing, the effect of reduced hiring and firing costs could result in a net gain in formal employment as hiring and firing rates adjust to their long-run equilibrium position. An analogous point is made by Kugler (2000: 3) regarding the *a priori* ambiguous effect of a reduction in firing costs on shares of formal and informal employment.

While there are a fair number of studies looking at the effects of “security rights” on formal and informal employment, we were able to find only one study concerned with the relationship between “civic rights” and informal employment. This is a study by Carneiro and Henley, which provides insights into how this relationship changed in Brazil as the wage bargaining process shifted in the mid-1980s from being state-determined to being bargained collectively by unions at an intermediate level of centralization (Carneiro and Henley 1998). The authors find that the

¹⁸ Based on firm-level surveys conducted in Lima bimonthly (quarterly since 1996). Data refer to a pseudo-panel of about 500 private non-agricultural formal firms employing more than nine workers, pooled into eleven industrial sectors. Output is defined at the sectoral level. Estimates include sector fixed effects and therefore pick up solely within sector variation. The period evaluated is 1987 to 1997.

¹⁹ See Kugler (2000) for Colombia, Hopenhayn (2000) for Argentina, Paes de Barros and Corseuil (2000) for Brazil (on the increase in job security beginning in 1988), Saavedra and Torero (2000) for Peru, and Márquez and Pagés (1998) for a multi-country study on Latin American and OECD countries.

relationship between the extent of informal employment²⁰ and formal manufacturing real wages changed from positive during the period of state-determined wages to negative during the more liberalized collective bargaining regime of the 1990s. They interpret this to result from a change in the direction of causality between formal wages and informal employment. During the period of state-determined wages, informal employment is argued to have been partly determined by the level of formal wages, on the grounds that if formal wages are set too high, workers will be displaced from their formal jobs and end up in informal employment. During the more liberalized collective bargaining regime of the 1990s, in contrast, informal employment is argued to influence formal wages because a larger share of informal employment weakens formal employees' fallback position and therefore their bargaining power. This effect of informal employment on formal wages is estimated to be smaller in the short run than the long run. Note that the authors' interpretation of both results implies that informal employment acts as a buffer workforce for formal employment. Carneiro and Henley argue that the shift from a state-regulated wage policy towards a more liberalized collective bargaining regime allowed the growth of powerful groups of wage bargainers at the sectoral level, reducing formal wage flexibility and causing a growing displacement of workers into informal employment. The authors conclude that "the liberalization of collective bargaining in a developing economy can be potentially damaging for economic performance in that this facilitates rent-seeking behaviour by powerful wage bargainers, leading to inflationary wage settlements. In developing countries, where unemployment insurance is sparse or non-existent, the consequences may be structural growth in the informal sector" (*ibid.*: 136).

In conclusion, the findings of the above four sets of studies can be summarized as follows.

1. Earnings differential studies show overall a higher rate of return to education in formal than informal employment, especially for females compared to males and for wage workers compared to the self-employed, but an often higher rate of return to experience for informal than formal employment. The evidence on returns to education is interpreted by some authors as evidence of barriers to entry into formal employment. However, different rates of return to human capital are also found within informal employment, for which there are no reasons to expect strong barriers to mobility.
2. The authors of worker mobility studies argue that there is fair degree of mobility between formal and informal employment in both directions, suggesting that there are not substantial barriers to entry into formal employment. However, studies that look at males and females separately find evidence of less mobility between informal and formal employment for females than males. One study also finds substantial earnings gains for females resulting from moving from informal to formal employment and substantial earnings losses resulting from the opposite movement.
3. On balance, the evidence on the cyclicity of formal and informal employment indicates that the former tends to move procyclically and the latter countercyclically, supporting the view that informal employment serves a buffer over business cycles.
4. Studies on the effects of job security regulations on job turnover show overall that a weakening of such regulations is associated with higher job turnover rates, particularly for formal workers with short tenure. The findings on the effects of job security regulations on the extent of self-employment are more ambiguous, indicating that across

²⁰ Measured by the number of workers without labour cards.

countries, weaker job security regulations tend to be associated with lower self-employment, but that within countries over time the weakening of job security regulations tends to be associated with increases in self-employment.

3. Definitions and data sources

Multiple contending definitions of formal and informal employment are used in the literature. Because of data availability, we have adopted the definition used by the ILO's PREALC (*Programa regional del empleo para America Latina y el Caribe*) as embodied in the publication *Panorama Laboral*. According to this definition, informality is associated with employment in small firms (fewer than five or ten workers, depending on the country-specific definition), with self-employment (own-account workers – excluding administrative, professional and technical workers – and unpaid family workers) and with domestic service. Formality is associated with employment in large private firms (five or more, or ten or more workers) and in the public sector. The following analysis considers each of these five employment categories separately, rather than aggregating them into formal and informal employment categories, thus enabling us to better address the heterogeneity of formal and informal employment.

Two of the most obvious shortcomings of this definition of formal and informal employment are that workers may actually belong to more than one employment category in a given period, and that many of those employed in large private firms may be informal in that, for instance, they are not covered by social security or do not have a written contract. If one were to employ a definition of informal employment based on a lack of social security coverage or a written contract, studies suggest that the share of informal employment would be larger than using the definition based on firm size, such as used by PREALC (Marcouiller *et al.* 1997; Saavedra and Chong 1999). For instance, Marcouiller *et al.* find 47.9% of the urban labour force in El Salvador to be informal as defined by firm size, compared with 62.8% as defined by social security coverage (in 1990), with corresponding figures of 57.5 and 61.8% for Peru (in the mid-1980s) and 30.8 and 43.2% for Mexico (in 1990). The authors nonetheless come to broadly similar conclusions using either definition of informality in their analysis of returns to human capital in formal and informal employment. For Peru from 1990 to 1995, Saavedra and Chong also come to similar conclusions based on two different definitions of informal employment regarding changes in shares of informal employment over business cycles.²¹ In a study of worker mobility in Mexico between formal and informal employment, Gong van Soest again come to similar conclusions defining informality by either firm size or job type (2002). Another shortcoming of these PREALC data is that they are measured as employment shares, which masks changes in the absolute number of workers among employment categories.

The data employed in this paper are taken from PREALC's publication *Panorama Laboral* (1998) and cover a period of eight years, from 1990 to 1997, for fourteen Latin American countries: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, Honduras, Mexico, Panama, Paraguay, Peru, Uruguay and Venezuela. These data are measured as employment shares and refer to total (versus urban) non-agricultural employment. The exceptions are Peru, where data are for the Lima metropolitan area, and Uruguay, where data are for Montevideo. Additional information on data sources is provided in an appendix.

²¹ The authors maintain that while there is a countercyclical movement of the shares of informal employment based on a "legal" definition of informality (determined, for example, on whether the work has a written contract and is entitled to social security benefits), there is no such movement based on a "traditional" definition of informality (largely determined by firm size). However, with the exception of the change from 1990 to 1991, year-to-year changes in the shares of informal employment based on either definition always move in the same direction.

4. Trends in formal and informal employment

A great deal of attention has been given to employment protection regulations and wage rigidities in the formal sector as causes of informality. Yet a number of other factors of a more structural and historical nature have also been advanced. Portes and co-authors provide a dynamic view of the growth of informal employment in the context of import substitution and export-oriented development strategies (Portes 1989; Portes and Schauffler 1993; Portes 1994b). These papers describe the rapid population and labour force growth in Latin America during the immediate post-World War Two years, largely a result of improvements in sanitation and preventive medicine. Alongside the growth of the labour force were the policies of import substitution industrialization, which “sought the rapid development of domestic industry through high tariff protection, heavy state investments in the sector, and domestic terms of trade that favored urban industry over agriculture” (Portes and Schauffler 1993: 34). Import substitution led to the concentration of industry in just one or two cities in each country in Latin America. Together with a lack of prospects in rural areas, the urban concentration of industrialization led to a massive rural to urban migration, with the share of the population living in urban areas increasing from less than half to three-quarters between 1950 to 1990. Though a large number of industrial jobs were created in cities, these were insufficient to provide formal employment for all migrants. It was this labour surplus that contributed to the rise to informal employment. In the 1980s, the debt-induced crises led countries in the region to implement export promotion strategies that had profoundly recessionary effects. The sharp decline in formal employment that followed was partly absorbed by informal employment as large formal firms decentralized production through sub-contracting to small firms, but also resulted in a steep rise in open unemployment, as “masses of citydwellers found themselves lacking access to even the meager earnings once drawn from odd-jobbing, street vending, and other informal activities” (Portes 1989: 25).²²

Portes emphasizes the heterogeneity of informality that arose alongside of import substitution policies, in particular as regards “survival,” “independent” and “subordinate” informal employment. These the author describes as follows.

The informal economy that grew in tandem with import-substitution industrialization in Latin America was not homogeneous, but featured distinct types of activities. In terms of their functions, at least three types of informal “sectors” could be distinguished. First, there was an informality of “survival”, most visible and best publicized, whose sole function was the physical reproduction of those involved. Invented self-employment at the margins of the urban economy such as begging, shoe shining and casual street vending represent examples of these activities. Second, there was a vast sector of independent informal enterprises catering to the needs of the low-income urban population. These activities stretched all the way from the production and sale of foodstuffs to the repair and reconditioning of TV sets, other appliances and even automobiles.... Indirect benefits in terms of lower formal sector wages and greater political stability trickled up to the owners and managers of large formal firms. Third, there was a sector of enterprises subordinate to formal firms through various subcontracting arrangements which helped supply the high-income market.... Although best concealed from public view, this sector played a central role during the period of import-substitution industrialization.... [T]hese subcontracting chains benefited directly the large formal producers by increasing their labour flexibility and lowering their costs (Portes 1994b: 165-167).

²² Portes makes clear that “this kind of unemployment should not be equated with that endured by workers in advanced countries in view of the fact that Latin American workers have little or no recourse to government relief” (Portes 1989: 38).

The description of “independent” and “subordinate” informal employment provides a sense of the linkages (indirect and direct, respectively) between formal and informal employment emphasized in the “structural articulation” view, in which the activities of the formal and informal sectors are seen as interacting. That is, the “structural articulation...approach describes unified systems encompassing a dense network of relationships between formal and informal enterprises” (Portes and Schauffler 1993: 48). Another form of informal employment described is off-the-books hiring of workers directly by formal enterprises which provides an additional sense of the “structural articulation” between formal and informal employment.

The authors go on to describe the switch in the 1980s from import substitution to export-oriented development strategies, the latter characterized by lower tariffs, the privatization of state enterprises, and other policies designed to improve competitiveness in international markets and to attract foreign direct investment. With the export-oriented model, the authors write of the persistence of the above forms of informal employment but also of an important change in “subordinate” informal employment, with subcontractors increasingly producing for export markets. With export-oriented development strategies have also arisen export-processing zones (EPZs), in which there are exemptions to tax and labour regulations that apply elsewhere in the country. Describing the importance of this development, Portes writes that “National States ‘informalize’ themselves vis-à-vis their own laws in their quest for even more foreign investment. The end result of this process is not a larger informal sector as under the piecemeal violation strategy, but the breakdown of the formal-informal distinction” (Portes 1994b: 168).²³

Other studies similarly describe the linkages between export-oriented and multinational firms and informal employment through, for instance, subcontracting arrangements and export-processing zones, and thus the linkages more generally between globalization and informality (de Oliveira and Roberts 1994; Maloney 1997; Carr and Chen 2001). Among the other factors of a structural nature argued to contribute to growing informal employment are the decline in public sector employment (related to export-oriented development strategies), the increase in the female supply of labour, and the growth of the service sector, in which a large share of informal workers are employed (Carr and Chen 2001; de Oliveira and Roberts 1994; Saavedra and Chong 1999, respectively).²⁴ Also of obvious importance are the range of factors affecting formal employment growth and macroeconomic growth more generally, including macroeconomic policies and economic crises.

The data employed in this paper cover a period of only eight years, from 1990 to 1997, not sufficient to evaluate long-term trends in informalization but providing a sense of the most recent developments. Figure 1 shows employment shares for a total of fourteen Latin American countries from 1990 to 1997. The ranking of employment shares does not change over these years, with employment in large firms representing the largest share, followed by self-employment, small firms, the public sector and domestic service. If one measures informal employment as the sum of self-employed, small firms and domestic service shares, this is larger than formal employment as the sum of large firms and the public sector. For 1997, for instance,

²³ A similar description of the breakdown between the formal and informal distinction is provided by Itzigsohn regarding export-processing zones in Costa Rica and the Dominican Republic. The author writes that “in this informalized formal economy, labor toils under strict control and with minimum or no protections. In this context, the informal microenterprise could even be a desirable alternative, both in terms of income and in terms of control of the labor process by workers” (2000: 149).

²⁴ Several studies note the concentration of informal employment in the service sector as well as light manufacturing and construction (Portes, Blitzer and Curtis 1986; Marquez 1994; Marcouiller *et al.* 1997). For instance, Marcouiller *et al.*, in their study of El Salvador, Mexico and Peru, write “Five industries account for roughly two-thirds of informal-sector employment in each country: retail trade, construction, clothing and footwear manufacturing, transportation, and personal services” (*ibid.*: 372).

the informal share is 57.7% compared with 42.3% for the formal share. Note that even leaving out domestic service from the definition of informal employment yields larger shares for informal than formal employment. There was, moreover, a relative decline in formal employment and increase in informal employment over the 1990s. This was driven by the four- and three-percentage point declines in employment shares for large firms and the public sector, respectively, and the reverse image three- and two-percentage point increases for small firms and self-employment, respectively, with domestic service showing only a slight overall increase.

Table 2 provides average growth rates of employment shares over the period for each of the fourteen countries considered and for the total of these countries (implicitly an average weighted by total non-agricultural employment in each country) as well as the unweighted mean growth rates. For small firms, average growth of employment share was highest for Peru (3.30%), Bolivia (1.83%) and Argentina (1.57%) and positive for all countries except two. For self-employment, growth was highest for Venezuela (1.88%) and Paraguay (1.72%) and positive in all but four countries. For domestic service, growth patterns were quite varied, ranging from 1.50% in Brazil to -3.32% in Venezuela. For large firms, growth patterns were also quite varied, ranging from 1.77% in Panama to -2.38% in Paraguay.²⁵ For public sector employment, growth was negative in all but two countries, and lowest in Peru (-2.96%), Argentina (-2.60%), Bolivia (-2.46%), Panama (-2.38%) and Honduras (-2.29%). Annual employment share data are shown in appendix table A.1 for each of the fourteen countries as well as for the fourteen-country total.

Figure 2 shows gender breakdowns in urban (rather than non-agricultural) employment shares for the total of twelve Latin American countries in 1990, 1995 and 1999. Employment shares are considerably larger for males than females in small firms and large firms and the public sector (the latter two combined in this data) over the period. Employment shares are roughly equal for men and women in self-employment, and there is a very disproportionately high share of female employment in domestic service. Note that employment shares for males closely parallel the trends shown in Figure 1. Female employment shares move somewhat differently. In particular, from 1995 to 1999, there was a decline in the female share of self-employment and an increase in the female share of large firm and public sector employment.

A longer time perspective on informalization is provided by data in appendix table A.2, showing PREALC employment share data by decade for the 1950 to 1980 period (PREALC 1982). These data, however, combine employment shares in small and large firms as well as the public sector. For this reason, informal employment is best represented by the share of self-employment (and indeed is defined as such in the data source). As a share of non-agricultural employment for the total of seventeen countries, there are no strong trends in informal employment over the four decades. However, from 1970 to 1980, there is increase from 20.3 to 21.6% for the country totals as well as increases within nine of the thirteen countries shown in the table (and thirteen of the seventeen making up the total). Since the years 1970 and 1980 were both roughly midpoint phases in business cycles, this suggests that the increase in informal employment represents a trend rather than a cyclical effect. Based on annual data for Argentina, Brazil, Chile, Columbia, Costa Rica, Mexico and Venezuela, shown in table 3, there is a particularly strong increase in informal employment in the 1980s (PREALC 1988). This source defines informal employment to include non-professional own-account workers, unpaid family workers and owners and employees in firms with fewer than five employees (*ibid.*: 42). There is an overall increase in the share of informal employment from 25.6% in 1980 to 30.8% in 1987 for these seven countries. Particularly strong was the increase from 1980 to 1982 of over three percentage points. This suggests that the economic crises of the 1980s in Latin America is a

²⁵ Note that much of the decline in employment share for large firms in the fourteen-country total results from the decline in Brazil, the most populous country in Latin America.

candidate for explaining the informalization of employment. We see then that the increase in informal employment in the 1990s is part of a longer-run trend.

5. Cyclical patterns of formal and informal employment

In this section we present our evidence on the buffer hypothesis, based on estimated GDP elasticities for each employment category. The buffer hypothesis suggests that informal employment serves as a macroeconomic buffer for formal sector employment over the course of business cycles, with informal employment expanding during downturns and contracting during upturns. As discussed above, there is little systematic evidence on the cyclical movement of informal employment, but the available studies tend to confirm the expectation of a countercyclical pattern.

However, the heterogeneity of informal employment makes it difficult to have an *a priori* expectation about the cyclical behaviour of informal employment. For instance, we consider several categories of informal employment, namely that in small firms and domestic service as well as self-employment, each of which might be expected to have different cyclical behavior. Moreover, even within these employment categories are different types of informal activities with potentially different cyclical behavior. Consider for instance the “survival”, “independent” and “subordinate” types of informal activities proposed by Portes (1994b) and described in the previous section. While survival activities are likely to have a countercyclical pattern, and are closest to the traditional view of informal employment as a buffer, autonomous informal employment is likely to have procyclical pattern and is closest to the idea of voluntary self-employment. Informal activities subordinate to the formal sector could be either countercyclical, if firms make more use of sub-contracting and outsourcing during recessions, or procyclical, if subordinate informal activities are reduced together with formal sector production. As a result, estimates of the cyclical movements of informal employment as a whole derive from the relative importance as well as the sign and the magnitude of the output elasticities of employment of different kinds of informal employment. Moreover, within informal employment, we expect the employment share in domestic service to be relatively stable, given that those employing domestic servants are likely to have relatively stable incomes and wealth over business cycles. Within formal employment, we also expect public sector employment share to be less sensitive to business cycle volatility, with changes resulting more from public policy considerations.

We examine the evidence for the buffer hypothesis in our sample of Latin American countries by estimating the output elasticities for each employment share, with a negative coefficient estimate on output indicating countercyclicity. Table 4 shows GDP elasticities of employment shares based on panel data regressions estimated by incorporating country-specific fixed effects, with and without time dummies (dropping fixed effects yields essentially the same results).²⁶ Data are transformed as the difference between the log of variables and the Hodrick- Prescott trend of the log of variables, and thus represent short-term fluctuations around the trend. Consistent with the buffer hypothesis, elasticities are significantly negative for both small firms and self-employment and significantly positive for large firms. For fixed effects with

²⁶ We use fixed effects rather than random effects for two reasons. First, our country sample is all drawn from Latin America and is thus not randomly chosen from a larger population. Second, random effects models evaluate both cross-country and within-country variation and we are interested in addressing these types of variation separately. Also, since employment shares sum to 100, a system of equations might yield more precise estimates. For example, one could use the SUR/Parks estimation method. However, this requires a larger number of years than cross-sections, which our data do not satisfy. Therefore throughout this paper we run separate regressions for each employment share.

time dummies, representing within-country variation over time, elasticities are estimated to be quite similar for small and large firms, indicating a roughly half percentage point change in employment shares for a given percentage point change in GDP. With both model specifications, elasticities are smaller for self-employment than for small and large firms. Elasticities are not significantly different from zero for employment shares in domestic service and the public sector.

Given that the employment data refer to the non-agricultural sector, we re-estimated the elasticities of employment shares with respect to non-agricultural GDP, using the same model specifications and estimation method. The lower panel of table 4 shows that results remain consistent with the buffer hypothesis, with positive and significant elasticities for large firms and negative but not always significant elasticities for small firms and self-employment.

As a test of robustness, appendix table A.3 shows employment share elasticities with respect to total GDP (including time dummies) dropping one country at a time from the sample. For our three employment categories of main interest (small firms, self-employed and large firms), the signs of elasticities are robust with respect to the exclusion of any given country. For small firms, statistical significance drops below 5% (to 10%) only when Venezuela is excluded from the sample. For self-employed, the elasticity becomes statistically insignificant in three cases, when dropping Panama, Peru or Venezuela from the sample and also drops to 10% significance in three other cases. For large firms, the elasticity is always significant at least at the 5% level, providing a very robust result. The general robustness of results is also confirmed by estimating country-specific GDP elasticities, as shown in table 5. For small firms and self-employment, elasticities are negative for ten of fourteen countries; for large firms, elasticities are positive for eleven of fourteen countries; for domestic service and the public sector, elasticities are roughly evenly spread between positive and negative values. Note that these last regressions are, however, based on only eight annual observations.

Our evidence largely supports the buffer hypothesis, indicating a strongly robust procyclical behaviour of private formal employment shares, and a quite robust countercyclical behaviour of employment shares in small firms and self-employment. Note that our raw data is based on employment shares, not absolute numbers of employment. As a consequence, a positive GDP elasticity does not necessarily imply a decrease in absolute employment during a downturn. In other words, our results do not necessarily imply that a decline in the absolute number of employees in formal employment is associated with an increase in the absolute number of employees in informal employment. For example, if all employees laid-off by large firms enter into unemployment and there are no changes in informal employment, this will result in a relative increase in informal employment. However the above studies by Funkhouser (1997a) for El Salvador and Maloney (1999) and Calderon-Madrid (2000) for Mexico show that there are substantial flows of workers back and forth between formal and informal employment. This provides a micro-foundation for the expectation that relative movements in employment shares are driven to a significant extent by actual flows of workers between formal and informal employment categories.

The relatively countercyclical pattern of informal employment is not consistent with the view that movements from formal to informal employment are largely voluntary. Our evidence does not argue against the existence of voluntary movements into informal employment, for which there is credible empirical evidence. Rather it suggests that “survival” and countercyclical “subordinate” aspects of flows into informal employment dominate the “independent” and procyclical “subordinate” aspects. It should be remembered, in addition, that the informal sector’s absorptive capacity is limited and can become saturated during profound recessions, as happened during the 1980s crises (Portes 1989). Moreover GDP elasticities might well change over time, especially regarding changes in employment protection regulations. This is particularly relevant for Latin America in the 1990s, for which employment protection weakened in several countries (Heckman and Pagés-Serra 2000).

6. Labour standards and formal and informal employment

This section shifts to a consideration of the effects of labour standards on formal and informal employment. These rights changed substantially in most Latin American countries since the 1980s, making the region particularly interesting for studying the impact of changing labour standards. As a component of this research project, these changes were mapped from the 1980s for each of our fourteen countries, focusing on three categories of “civic rights” – namely, the right to unionize, the right to bargain collectively, and the right to strike – and on “security rights” (Frisoni and Kongolo 2002). A wide range of materials, including national and international sources as well as country legislation, were used to map these changes in labour legislation.

The main findings are summarized in appendix table A.4.²⁷ For “civic rights,” we observe a strengthening in most countries in the past two decades. For “security rights,” in contrast, there was a weakening in several countries, as is confirmed by the job security index constructed by Heckman and Pagés-Serra for Latin American countries for the 1990s (Heckman and Pagés-Serra 2000). In general, for countries experiencing a strengthening of “civic rights,” this tended to be concentrated in the 1980s, reflecting the resurgence in democracy in these countries.²⁸ This suggests the political nature of “civic rights,” for which changes in Latin America were discontinuous rather than gradual. For “security rights,” in contrast, changes were concentrated in the 1990s. As described in section 4 of this paper, during the 1980s and 1990s there was a steadily increasing share of informal employment.

In order to explore these relationships across countries and over time, we make use of various indicators of “civic rights” and “security rights” and look at their relationship to categories of formal and informal employment. Table 6 shows various measures of interest for fourteen countries as period averages for 1990 to 1997, whenever the data permit (with exceptions described in the notes to the table). Columns 1 through 5 show employment shares in our five employment categories. Columns 6 through 13 provide measures related to labour standards. Columns 14 through 19 show measures related to labour markets and economic development.

Among “civic rights” measures, columns 6 and 7 provide civil liberties and political rights indices as constructed by the non-profit organization Freedom House. The civil liberties index is partly based on a consideration of freedom of association and collective bargaining rights. Of the fourteen sets of questions addressed in the construction of the index, one is: “Are there free trade unions and peasant organizations or equivalents, and is there effective collective bargaining? Are there free professional and other private organizations?” (Freedom House 1999: 548). These questions come under the category of “association and organizational rights,” and the other three categories considered in the construction of the civil liberties index are “freedom of expression and belief,” “rule of law and human rights,” and “personal autonomy and economic rights.” The political rights index addresses questions relating to free and fair elections, the competitiveness of political parties, self-determination, and discrimination.

Additional “civic rights” measures are presented in columns 8 through 10. Column 8 shows the number of union members as a percentage of the non-agricultural labour force. Columns 9 and 10 provide indices of violations of freedom of association and collective bargaining (FACB),

²⁷ Additional information in this table on civil servants is from Hodges Aeberhard (2001).

²⁸ This general pattern is also observed in the Freedom House civil liberties indices, which are described below.

based on coding textual sources for thirty-seven evaluation criteria that address *de jure* as well as *de facto* problems, leaning in emphasis toward the latter.²⁹

Columns 11 and 12 show two “security rights” measures, the employment protection and job security indices drawn from Marquez and Pagés (1998) and Heckman and Pagés-Serra (2000), respectively. Column 13 shows UNIDO data on manufacturing wages as a percentage of manufacturing value-added. We take this as a proxy for wage shares in the formal sector to address the hypothesized effects of “civic rights” on formal and informal employment through wages.

Among labour market and development indicators, columns 14 and 15 provide PREALC data on urban labour force participation rates and urban unemployment rates. Columns 16 through 18 provide World Bank (*World Development Indicators*) data on female labour force participation and urbanization rates as well as GDP per capita in PPP terms. Finally, column 19 shows each country’s GDP per capita as a percentage of Argentina, which had the highest GDP per capita in this period. This shows that countries in the sample vary considerably in terms of per capita income, with Bolivia, Honduras and Ecuador having the lowest per capita incomes, ranging between 20 and 30% that of Argentina.

Table 7 shows correlation coefficients for the above measures, with critical values of the correlation coefficients for two-tailed statistical significance (at the 10, 5 and 1% levels) shown in the notes to the table. In discussing Table 7, we focus on correlations that are statistically significant or are otherwise of interest. Shaded areas indicate more direct relevance to issues of labour standards and formal and informal employment, in that they address relationships between our measures of labour standards and self-employment and employment in small and large firms. We leave aside employment in domestic service and the public sector, as we have no *a priori* reason to expect labour standards to affect employment in these sectors. Among our three employment categories of main interest, we would expect labour standards to have the most direct effect on formal employment in large firms, with less direct effects on informal employment in small firms and self-employment, largely a consequence of formal employment effects.

For employment shares in large firms and the civil liberties and political rights indices, there is a positive relationship, though statistically significant at the 10% level only for the political rights index, indicating that countries with stronger rights by these measures tend to have higher shares of formal employment. A similar result holds for the FACB indices, with stronger positive and statistically significant correlations. These results suggest that stronger “civic rights” are associated with more formal employment.

For employment shares in small firms and self-employment, we see a roughly mirror image of the relationship between employment shares in large firms and our measures of “civic rights.” That is, we see negative correlations with the civil liberties and political rights indices and the FACB indices, a number of which are statistically significant.

For the employment protection and job security indices, the strongest relationships are with self-employment, with positive and statistically significant correlation coefficients of 0.60 and 0.74 respectively. These strong positive correlations are consistent with studies by Marquez and Pagés-Serra (1998) and Heckman and Pagés-Serra (2000), who find a strong significantly

²⁹ These evaluation criteria are based on ILO Conventions 87 (“Freedom of Association and Protection of the Right to Organise”) and 98 (“Right to Organise and Collective Bargaining”) and related ILO jurisprudence, as well as problems noted in textual sources. The measures are constructed in unweighted (that is, equally weighted) and weighted form, scaled from 0 to 10, with 0 indicating the worst possible score (most violations observed) and 10 indicating the best (least violations observed) possible score. For the weighted measures, each of the evaluation criteria is assigned a weight of 1, 1.25, 1.5, 1.75 or 2, with greater weights indicating what are judged to be more severe problems. The construction of these measures is described more fully elsewhere (Kucera 2001).

positive cross-country relationship between these same measures and self-employment shares in a sample of Latin American and OECD countries.

The last row of table 7 shows the relationship between our measures and GDP per capita. For employment shares, the most noteworthy result is for self-employment, for which there is a statistically significant negative correlation, showing that poorer countries tend to have higher shares of self-employment. On the flip side, there are weakly positive, statistically insignificant correlations for employment in large firms and the public sector, with the positive sign consistent with more formal employment in richer countries. Similarly, countries with higher urbanization rates tend to have higher shares of employment in large firms, consistent with the strongly positive and statistically significant correlation between urbanization rates and GDP per capita. All measures of “civic rights” as well as manufacturing wage shares are positively correlated with GDP per capita, though generally insignificantly, with the positive signs suggesting that richer countries generally enjoy stronger rights by these measures. However the two measures of “security rights” are negatively correlated with per capita income, significantly so for the job security index, indicating weaker employment protection regulations in richer countries. As with correlations with employment shares, we see that “civic rights” and “security rights” have broadly opposite patterns.

As a last observation on table 7, note the negative, though not statistically significant, relationship between female labour force participation rates and the shares of self-employment. This appears at odds with the hypothesis that women’s increased labour force participation is a cause of informalization (Oliveira and Roberts 1994). This observation holds in pooled OLS estimation regressing the share of self-employment on female labour force participation rates and GDP per capita, where a highly significant negative coefficient estimate is found on female participation rates. These are regressions with and without time dummies and without country-specific fixed effects, driven primarily by cross-country variation, and are fairly robust with respect to dropping one country at a time from the sample (the weakest result excludes Argentina, where statistical significance drops just below ten percent).³⁰

We more fully explore the relationships between employment shares and those measures of labour standards for which time series are available, that is, the Freedom House indices and manufacturing wage shares, in econometric panel data models of formal and informal employment. We first investigate these relationships by running panel data regressions for each of the five employment categories on the civil liberties index controlling for GDP per capita. Though both Freedom House indices on civil liberties and political rights are available as time series, we use the former as it is more closely tied to freedom of association and collective bargaining rights and Portes’ notion of “civic rights.” We first address the trend relationship between civil liberties and employment shares by transforming the data as the Hodrick-Prescott trend of the variables. There are two reasons for this transformation. First, the civil liberties indices are highly volatile for these countries over the period. Second, we do not expect changes in civil liberties to have a direct immediate effect on employment shares, but to operate in a more roundabout manner, such as through increasing wage shares (a result found in a study by Rodrik 1999). Given the transformation of the data, what we call trend regressions in the paper are driven by cross-country variation. We include GDP per capita in the model to control for

³⁰ If we include in the model country-specific fixed effects and time dummies (and so address variation over time within countries) and evaluate differences in shares of self-employment in relation to log differences in female labour force participation rates and GDP per capita, we find a negative and insignificant coefficient estimate on contemporaneous female participation rates (35% significance) and a positive and insignificant estimate on lagged female participation rates (18% significance, with GDP per capita also lagged, both for one-year). Thus we find no robust relationship as regards variation over time within countries.

certain income-related aspects of “civic rights,” suggested by the positive correlation between GDP per capita and our “civic rights” indicators.

Table 8 shows the results of pooled OLS regressions described above estimated in two model specifications, with and without time dummies. For small firms and self-employment, we find highly significant negative coefficient estimates on the civil liberties index in both model specifications. For large firms, we find the opposite, a highly significant positive coefficient estimate on the civil liberties index in both model specifications. This confirms the findings in table 7, even while controlling for GDP per capita, that stronger civil liberties are associated with less informal employment and more formal employment. For these three sectors of main interest, the sign and significance of the coefficient estimates on the civil liberties index is robust with respect to the exclusion of one country at a time from the sample (as shown in appendix table A.5).³¹ In domestic service employment regressions, not surprisingly, coefficient estimates on the civil liberties index are statistically insignificant for both model specifications. In public sector employment regressions, coefficient estimates on the civil liberties index are stably positive, but not consistently statistically significant with respect to excluding one country at a time from the sample (appendix table A.5).

We also test these regressions including six additional control variables, introduced into the regressions one at a time, addressing labour market tightness and structural aspects of the economy. These variables are the urban unemployment rate, urban population as a percentage of total population, and value-added as a percentage of GDP for agriculture, industry, manufacturing and services. Introducing these variables does not substantively alter coefficient estimates on the civil liberties index, which remain significantly negative for small firms and self-employment and significantly positive for large firms.³²

The finding that stronger civil liberties are associated with less informal employment and more formal employment might be thought to result from reverse causality, particularly given that we define formal employment as employment in large firms. That is, “civic rights” for workers might tend to be stronger in large firms because organizing costs are lower, given the spatial concentration of workers, and thus the collective power of workers might tend to be greater. Moreover, “civic rights” for workers established by legislation are likely to be more easily monitored and enforced in large firms.³³ We address the possibility of reverse causality by re-evaluating the above relationships using the political rights index as an instrument for the civil liberties index in two-stage least squares regressions. The political rights index appears to be a suitable instrumental variable in that it is strongly correlated with the civil liberties index but does not directly address worker rights. These results are shown in the lower panel of table 8. Results remain substantively the same for employment in large firms and self-employment, with a significantly positive coefficient estimate on the civil liberties index for the former and a significantly negative coefficient estimate for the latter. However, for employment in small firms, the coefficient estimates on the civil liberties index remain negative but fall in value by roughly half and are no longer statistically significant. Overall, then, we do not find substantive evidence that the positive relationship between “civic rights” and formal employment results from reverse causality.

Based on the same model specification, estimation methods and variable construction, table 9 presents the results of trend regressions of employment shares on manufacturing wage shares and GDP per capita. Because there are a number of missing observations for manufacturing wage shares, these data are shown in appendix table A.6. Regressions for small firms and

³¹ Coefficient estimates on the civil liberties index are also robust to the inclusion in the sample of Paraguay (as shown in appendix table A.5), which was excluded from the benchmark sample of thirteen countries for the sake of comparability with results in tables 9 and 10, given that wage share data are unavailable for Paraguay.

³² Results available from the authors upon request.

³³ Thanks to Lucio Baccaro for making these points.

self-employment show a highly significant negative coefficient estimate on the wage share in both model specifications, similar to the results for the civil liberties index. Regressions for large firms yield positive but not strongly significant coefficient estimates on the wage share in both model specifications. This is consistent with the results for the civil liberties index, but may be surprising since it is contrary to the expectation that higher manufacturing wage shares, a proxy for formal sector wage shares, have a negative impact on formal sector employment. Regressions for domestic service and public sector employment yield a highly significant positive coefficient on the wage share in both model specifications. Given that we had no *a priori* expectations about the effects of manufacturing wage shares on employment in domestic service and the public sector, these results are somewhat surprising. For all employment categories except employment in large firms, the sign and the statistical significance of these estimated coefficients are robust with respect to excluding one country at a time from the sample (appendix table A.7).

As with the regressions using the civil liberties index, we also test these wage share regressions introducing the same six control variables, one at a time. For employment in small firms, coefficient estimates on wage shares remain significantly negative at the 1% level in all cases. For self-employment, coefficient estimates on wage shares remain negative but become statistically insignificant when controlling for the urbanization rate. For employment large firms, coefficient estimates on wage shares remain positive but become statistically insignificant when controlling for the agricultural share of value-added or the urban unemployment rate.³⁴

We also explore shorter-run relationships between employment shares and manufacturing wage shares, by regressing the difference in employment shares on the log difference of manufacturing wage shares and GDP.³⁵ These regressions more directly address the short-run effects of higher wage shares – possibly resulting from strengthening worker rights in the formal sector – on formal and informal employment. The upper panel of table 10 presents the results of these regressions estimated in two fixed effects model specifications, with and without time dummies. Fixed effects regressions with time dummies reflect variation over time within countries whereas fixed effects regressions without time dummies reflect overall variation over time (with neither of the two reflecting cross-country variation). The results are generally quite different from those obtained from the trend regressions described in table 9. Regressions for small firms do not yield a statistically significant coefficient estimate on the wage share in any of the two model specifications, and regressions for self-employment now show a positive and significant coefficient on the wage share (the significance being stronger in the specification including time dummies). Regressions for large firms, in turn, yield negative coefficient estimates on the wage share, though significant only in the model with time dummies. Regressions for domestic service and public sector employment yield negative coefficients on the wage share in both model specifications, significant only in the case of domestic service.

These results are consistent with the view that there might be a trade-off in the short run between formal wage shares and formal employment shares within countries, with self-employment increasing as the share of formal employment decreases. The statistical significance of these relationships is not, however, robust with respect to excluding one country

³⁴ Results available from the authors upon request. There is also the possibility of reverse causality in the above trend regressions regarding wage shares. This is suggested by Carneiro and Henley, who argue that having a larger share of informal employment weakens the bargaining power of workers in the formal sector, leading to lower wage shares for formal employment (1998). Our results do not allow us to exclude this possibility, and therefore this remains a plausible interpretation. We do not further explore this possibility, however, because trend regressions for wage shares tend not to be robust, except for employment in small firms.

³⁵ We do not explore the shorter-run relationships between employment shares and the civil liberties index because, as explained above, we do not expect changes in civil liberties to have an immediate effect on employment shares.

at a time from the sample (appendix table A.8). For self-employment, the coefficient on the wage share is consistently positive, but becomes statistically insignificant when Ecuador is excluded from the sample. For large firms, the coefficient on the wage share is consistently negative, but becomes statistically insignificant in two cases and significant at only the 10% level in three additional cases. In the case of excluding Ecuador, for instance, we see that the t -statistic falls to less than one.

It might be the case that the results on contemporaneous changes in employment and wage shares derive to some extent from reverse causality. For instance, exogenous declines in large firm employment shares would be associated with higher wage shares if lower paid workers are laid-off first. Consequently, we evaluate the model with one-year lags on the independent variables in an attempt to better isolate causality from wage shares to employment shares, as shown in the lower panel of table 10. We find that the positive statistical significance for self-employment and negative statistical significance for large firms is not robust when independent variables are lagged one year. For self-employment, in fact, the coefficient estimate on wage shares changes from positive to negative and is also significant in this opposite direction. This negative statistical significance is not robust, however, with respect to excluding one country at a time from the sample, as shown in the last row of appendix table A.8. For large firms, the coefficient estimate remains negative, but is no longer close to significant, with a t -statistic of 0.54. Therefore, causality from wage shares to employment shares is not strongly supported by our findings.

The above evidence on the relationships between labour standards and formal and informal employment can be summarized as follows. Regarding trend regressions, we see a pattern that countries with stronger civil liberties and higher wage shares tend to have higher shares of employment in large firms and lower shares of employment in small firms and self-employment. That is, countries with stronger “civic rights” and higher manufacturing wage shares (our proxy for formal sector wage shares) tend to have higher shares of formal employment and lower shares of informal employment. The trend regression results evaluating “civic rights” are more strongly robust than results evaluating wage shares with respect to adding additional control variables and dropping one country at a time from the sample.

Regarding shorter-run relationships within countries over time between employment shares and formal sector wage shares, we find that increases in wage shares are in some model specifications significantly associated with contemporaneous declines in employment shares in large firms and contemporaneous increases in self-employment. In contrast, we find that lagged increases in formal sector wage shares are not significantly associated with declines in employment shares in large firms, and are significantly associated with *declines* in self-employment. However, the signs and statistical significance of the coefficients of interest are not robust with respect to model specifications and sample variations in these short-run regressions. Therefore, we have greater confidence in the trend regression results, which are driven by variation across countries.

In sum, we find robust evidence that countries with stronger “civic rights” have higher shares of formal employment and lower shares of informal employment, even accounting for GDP per capita and other control variables, and no conclusive evidence on the nature of these relationships within countries over time. The process through which countries reach their long-run position therefore remains unclear.

7. Concluding remarks

This paper addressed three prominent issues in the debates on formal and informal employment in the context of Latin America in the 1990s. The first regards trends in informalization. As widely noted in the literature, the available data for Latin America show fairly steady trend

increases in the share of informal employment. This pattern is particularly evident for the 1980s and 1990s, but may extend back to earlier years.

As regards the second issue – informal employment functioning as a buffer for formal employment – we find solid evidence that employment in small firms and self-employment acted as a buffer for employment in large firms. Because our data are employment shares, we can only determine that informal employment served as a buffer in a relative sense, not necessarily demonstrating flows from one employment category to others. However, other studies based on tracing movements of individual workers over time find substantial flows between formal and informal employment (Calderon-Madrid 2000; Funkhouser 1997a; Maloney 1999). Our finding of a countercyclical pattern of informal employment shares suggests that movements from formal to informal employment do not appear largely voluntary. Though this result may be unsurprising, it is particularly interesting as regards self-employment in that prior studies indicate that an important share of self-employment is voluntary and is considered by workers a desirable destination.

The relatively countercyclical pattern of informal employment also suggests that “survival” and countercyclical “subordinate” aspects of flows into informal employment dominate “independent” and procyclical “subordinate” aspects. There may be in this regard a compositional shift in the nature of informal employment over business cycles. In particular, an increasing share of informal employment might be “subordinate” to formal firms in upswings, during which these firms draw on reserve labour in the informal sector such as through subcontracting. In downswings, in contrast, an increasing share of informal employment may be of a “survival” nature as those in informal employment lose their relationships to formal firms. This suggests that important changes may be taking place within informal employment over business cycles. More refined data or alternative research methods would be required to shed light on such qualitative changes within informal employment over business cycles.

The third issue we address is the relationship between “civic rights” and formal sector wages, on the one hand, and formal and informal employment on the other hand. We find that countries with stronger “civic rights” have higher shares of formal employment and lower shares of informal employment, even accounting for GDP per capita and other control variables and addressing the possibility of reverse causality.

Results driven by variation over time within countries are somewhat in contrast to cross-country results but are not found to be statistically robust. In other words, we find evidence that countries can reach a long-run position of stronger “civic rights” and more formal and less informal employment, but we cannot exclude the possibility of short-run trade-offs such as hypothesized by Singh and Zammit (2000). Both our findings and the hypothesis of Singh and Zammit lead us, then, to a complex set of questions. For instance, by what adjustment process can countries reach their long-run position in the face of a hypothesized short-run trade-off between “civic rights” and formal employment? Is the short-run trade-off inevitable or does it depend on the pace at which “civic rights” are introduced? Given the political nature of “civic rights”, often associated in Latin America with a change from dictatorship to democracy, can countries choose the pace at which “civic rights” are implemented or is this process inherently discontinuous? Do countries achieve the long-run position in a sequential process in which stronger “civic rights” follow economic development and the growth of formal employment? Might the hypothesized short-run negative microeconomic effect of higher wages on demand for formal employment be offset by a positive macroeconomic dynamic, such as in a scenario of wage-led growth? Might policy interventions, such as growth-promoting macroeconomic policies, be able to overcome the hypothesized short-run trade-off?

Resolving these issues would involve historical investigation that is beyond the scope of this paper. We therefore interpret our findings cautiously and suggest that these cross-country results do not represent a direct causal effect of “civic rights” on formal and informal

employment. That is to say, an exogenous increase in “civic rights” would not necessarily result in higher shares of formal employment. Rather stronger “civic rights” and higher shares of formal employment may represent different qualitative aspects of economic development for which the causal relationship is dynamic and complex. As such, policies aimed at increasing the share of formal employment may need to consider not only the strengthening of “civic rights” but also broad developmental considerations, particularly policies promoting economic growth and creating the conditions for employment growth in the formal sector.

Data sources

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Table 1: Types of labour standards

Type	Examples
Basic rights	Right against use of child labour Right against involuntary servitude Right against physical coercion
Survival rights	Right to a living wage Right to accident compensation Right to a limited work week
Security rights	Right against arbitrary dismissal Right to retirement compensation Right to survivors' compensation
Civic rights	Right to free association Right to collective representation Right to free expression of grievances

Source: Portes, 1994a.

Table 2: Average log growth rates (%) of non-agricultural employment shares for 14 Latin American countries, 1990-1997

	Small firms	Self-employed	Domestic service	Large firms	Public sector
14 country total	1.93	1.32	1.17	-1.57	-2.51
Argentina	1.57	0.44	0.16	0.06	-2.60
Bolivia	1.83	-0.39	-2.92	1.20	-2.46
Brazil	0.75	0.91	1.50	-1.22	-1.04
Chile	1.06	-0.16	-1.27	-0.22	0.17
Colombia	-0.10	0.33	-1.86	0.33	-0.98
Costa Rica	1.28	0.24	-0.44	0.09	-1.60
Ecuador	0.92	-0.60	0.73	0.85	-1.45
Honduras	1.01	0.30	-1.08	0.41	-2.29
Mexico	0.88	0.18	0.00	-0.23	-0.88
Panama	0.10	0.33	-0.09	1.77	-2.38
Paraguay	0.38	1.72	-0.49	-2.38	0.52
Peru	3.30	-0.07	0.00	-0.55	-2.96
Uruguay	-0.06	0.25	0.10	0.35	-1.11
Venezuela	1.40	1.88	-3.32	-1.04	-0.99
Mean	1.02	0.38	-0.64	-0.04	-1.43
Standard deviation	0.88	0.71	1.34	1.05	1.03
Coeff. of variation	0.86	1.85	-2.08	-25.00	-0.72

Source: *Panorama Laboral*, 1998.

Table 3: Non-agricultural employment shares for 7 Latin American countries, 1980-1987

	Year	As shares of non-agricultural employment		
		Informal	Private formal	Public sector
7 country total*	1980	25.6	58.8	15.6
	1981	27.6	56.7	15.7
	1982	29.0	55.2	15.9
	1983	28.9	55.1	16.0
	1984	30.0	53.3	16.7
	1985	30.5	53.3	16.2
	1986	30.1	53.9	16.0
	1987	30.8	53.3	15.9

Source: PREALC, 1988.

Note: "*" = Includes data for Argentina, Brazil, Chile, Columbia, Costa Rica, Mexico and Venezuela.

Table 4: Regression-estimated elasticities of employment shares relative to output for 14 Latin American countries, 1990-1997

With GDP as the measure of output

Estimation method	Small firms	Self-employed	Domestic service	Large firms	Public sector
Fixed effects	-0.4913 * (0.2185)	-0.4662 * (0.1806)	0.1698 (0.1479)	0.7150 ** (0.1796)	-0.1378 (0.1660)
Fixed effects with time dummies	-0.5663 * (0.2165)	-0.3431 * (0.1648)	0.1382 (0.1668)	0.5753 ** (0.1695)	-0.0083 (0.1894)

With non-agricultural GDP as the measure of output

Estimation method	Small firms	Self-employed	Domestic service	Large firms	Public sector
Fixed effects	-0.3102 (0.2115)	-0.4607 * (0.1995)	0.2742 # (0.1453)	0.5668 ** (0.1845)	-0.1203 (0.1551)
Fixed effects with time dummies	-0.3774 * (0.1829)	-0.3091 # (0.1793)	0.2724 # (0.1548)	0.3874 * (0.1695)	-0.0105 (0.1681)

Notes: #, * and ** indicate significance at 10, 5 and 1% levels, respectively.

White heteroskedasticity-consistent standard errors in parentheses.

Data are transformed as the difference between the log of variables and the Hodrick-Prescott trend of the log of variables.

Hodrick-Prescott trend is based on the years 1990-1997 and a smoothing parameter of 100.

Dropping fixed effects does not affect the statistical significance nor substantively change the magnitude of the above coefficient estimates.

Output is measured in constant terms (yielding identical results based on local currency or U.S. dollars).

**Table 5: Regression-estimated elasticities of employment shares relative to GDP
for 14 Latin American countries, 1990-1997**

	Small firms	Self-employed	Domestic service	Large firms	Public sector
Argentina	-0.0291 (0.1958)	0.2078 (0.1427)	-0.1507 (0.2360)	-0.1107 (0.0705)	0.1752 (0.2766)
Bolivia	-8.1804 (5.4755)	-0.3389 (1.5462)	-1.8416 (4.4462)	2.1214 (3.4267)	4.5527 (2.8314)
Brazil	0.0013 (0.1154)	-0.3184 (0.3162)	0.6494 (0.6682)	-0.1520 (0.2480)	0.3994 (0.4048)
Chile	0.3856 (0.4041)	-0.9655 (0.7005)	-1.4397 (1.1842)	0.2284 (0.3319)	1.8733 (1.1270)
Colombia	-0.4125 (0.5136)	0.1469 (0.5272)	-2.2833 # (0.9854)	0.7232 ** (0.1487)	-0.9008 (0.5636)
Costa Rica	-0.6986 (1.0365)	-0.3057 (0.5911)	-1.2957 # (0.6172)	0.6319 (0.5006)	0.4037 (0.3769)
Ecuador	8.6902 * (2.7159)	-0.2546 (1.4909)	-0.5711 (2.2805)	-2.5367 (2.3385)	-4.0872 # (1.8427)
Honduras	-2.5106 (3.1388)	-3.8169 # (1.8582)	0.5503 (1.1124)	3.3118 # (1.4036)	1.7329 (1.6172)
Mexico	-0.1901 (0.1102)	-0.6018 ** (0.1061)	0.1424 (0.1944)	1.1366 ** (0.2365)	0.0256 (0.1723)
Panama	0.5545 (0.4456)	-1.4279 ** (0.2200)	1.8898 ** (0.3047)	1.6258 ** (0.1232)	-1.4059 ** (0.2683)
Paraguay	-0.8338 (3.1487)	1.3530 (2.7540)	-1.2331 (3.2813)	4.4398 (3.7020)	-6.7291 (3.3908)
Peru	-0.3539 (0.5524)	-0.2250 (0.3320)	0.3733 (0.6561)	0.2207 (0.3757)	0.0236 (0.8099)
Uruguay	-0.3452 (0.5919)	0.0916 (0.5021)	1.0734 * (0.3440)	0.3521 (0.3139)	-1.1310 (0.6075)
Venezuela	-2.3501 # (0.9970)	-0.7951 * (0.2699)	0.1771 (0.7918)	1.6155 * (0.4655)	-0.5089 (0.3620)
Mean coefficient	-0.4481	-0.5179	-0.2828	0.9720	-0.3983

Negative sign

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Notes: #, * and ** indicate significance at 10, 5 and 1% levels, respectively.

Standard errors in parentheses.

Data are transformed as the difference between the log of variables and the Hodrick-Prescott trend of the log of variables.

Hodrick-Prescott trend is based on the years 1990-1997 and a smoothing parameter of 100.

GDP is measured in constant terms (yielding identical results based on local currency or U.S. dollars).

Table 6: Non-agricultural employment shares and labor market and development indicators for 14 Latin American countries, 1990-1997

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
	Small firms	Self-employed	Domestic service	Large firms	Public sector	Civil liberties*	Political rights*	Unionization rate	FACB unweighted*	FACB weighted*	Employment protection index#	Job security index#	Manuf. wage share	Urban LFPR	Urban unemployment	Female LFPR	Urbanization rate	GDP per capita (PPP, current)	GDP per capita, % of Argentina		
1	Argentina	17.1	26.3	7.8	33.0	15.8	6.7	8.7	25.4	2.4	2.6	24.0	2.977	40.9	42.7	11.5	22.8	87.8	10324.2	100.0	Argentina
2	Bolivia	16.2	37.5	5.7	27.2	13.4	6.5	8.5	16.4	0.5	1.4	35.5	4.756	11.1	53.0	4.9	29.5	58.3	2072.6	20.1	Bolivia
3	Brazil	24.8	22.6	8.8	33.9	10.0	5.6	7.9	32.1	3.3	3.8	13.0	1.785	19.8	60.0	5.0	31.4	77.2	6255.9	60.6	Brazil
4	Chile	20.3	23.2	7.1	41.9	7.6	8.3	8.3	15.9	4.8	5.9	25.5	3.380	18.6	54.5	6.5	24.2	84.1	6832.3	66.2	Chile
5	Colombia	26.3	24.2	4.6	36.2	8.7	5.0	6.7	7.0	0.0	0.0	34.0	3.493	16.8	59.8	10.1	30.3	71.1	5519.7	53.5	Colombia
6	Costa Rica	21.1	18.2	5.3	36.2	19.2	9.0	10.0	13.1	2.4	2.6	27.0	3.121	41.4	52.6	5.3	22.8	46.5	6277.5	60.8	Costa Rica
7	Ecuador	18.6	32.7	5.0	28.1	15.7	6.7	8.1	9.8	2.4	2.8	31.0	4.035	19.1	56.2	8.5	19.1	58.7	3078.1	29.8	Ecuador
8	Honduras	11.9	34.4	6.2	33.9	13.6	6.7	7.5	4.5	2.4	3.1	33.0	3.530	47.6	51.4	5.9	20.8	45.8	2303.6	22.3	Honduras
9	Mexico	21.0	31.1	5.5	19.2	23.3	5.4	5.2	31.0	1.9	2.6	30.0	3.126	20.2	54.4	3.9	23.8	73.1	7168.2	69.4	Mexico
10	Panama	13.4	19.9	7.7	33.8	25.3	7.1	6.9	14.2	4.8	5.2	n.a.	2.718	39.9	61.2	17.3	27.1	54.6	4858.1	47.1	Panama
11	Paraguay	30.4	23.2	10.8	23.2	12.4	6.7	5.6	9.3	1.9	2.3	21.0	2.168	21.8	63.9	5.9	21.1	51.3	4354.1	42.2	Paraguay
12	Peru	14.5	35.6	4.8	35.7	9.5	4.6	4.2	7.5	1.4	2.0	32.0	3.796	16.2	59.8	8.3	20.3	70.3	3914.6	37.9	Peru
13	Uruguay	10.7	20.4	6.1	45.0	17.8	8.3	9.4	11.6	8.6	8.6	19.5	2.232	23.5	60.3	9.9	34.9	89.6	7554.4	73.2	Uruguay
14	Venezuela	14.1	25.4	3.1	37.5	20.0	6.7	7.9	14.9	6.7	6.9	37.0	2.955	17.3	60.4	9.8	25.3	85.0	5806.1	56.2	Venezuela
	Mean	18.6	26.8	6.3	33.2	15.2	6.7	7.5	15.2	3.1	3.6	27.9	3.1	25.3	56.4	8.1	25.2	68.1	5451.4	52.8	
	Standard deviation	5.75	6.30	1.96	6.89	5.44	1.26	1.64	8.61	2.36	2.32	7.05	0.79	11.74	5.49	3.55	4.74	15.52	2242.20	21.72	
	Coeff. of variation	0.31	0.24	0.31	0.21	0.36	0.19	0.22	0.57	0.76	0.65	0.25	0.25	0.46	0.10	0.44	0.19	0.23	0.41	0.41	

Notes: "*" = indices range in value from 0 to 10, worst to best, respectively.

FACB = freedom of association/collective bargaining.

"#" = higher index values mean greater employment protection and job security.

Table 7: Correlation coefficients for non-agricultural employment shares and labor market and development indicators for 14 Latin American countries, 1990-1997 period averages

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	Small firms	Self-employed	Domestic service	Large firms	Public sector	Civil liberties*	Political rights*	Unionization rate	FACB unweighted*	FACB weighted*	Employment protection index#	Job security index#	Manuf. wage share	Urban LFPR	Urban unemployment	Female LFPR	Urbanization rate	GDP per capita
1 Small firms	1.00																	
2 Self-employed	-0.27	1.00																
3 Domestic service	0.46	-0.33	1.00															
4 Large firms	-0.42	-0.43	-0.24	1.00														
5 Public sector	-0.38	-0.21	-0.16	-0.23	1.00													
6 Civil liberties*	-0.21	-0.54	0.12	0.43	0.26	1.00												
7 Political rights*	-0.23	-0.38	-0.07	0.47	0.11	0.76	1.00											
8 Unionization rate	0.20	-0.12	0.24	-0.30	0.22	-0.13	0.08	1.00										
9 FACB unweighted*	-0.49	-0.50	-0.05	0.60	0.36	0.55	0.39	0.04	1.00									
10 FACB weighted*	-0.51	-0.44	-0.03	0.58	0.33	0.55	0.36	0.07	0.99	1.00								
11 Employment protection index#	-0.34	0.60	-0.76	-0.14	0.16	-0.25	-0.20	-0.44	-0.31	-0.30	1.00							
12 Job security index#	-0.26	0.74	-0.56	-0.17	-0.16	-0.17	-0.03	-0.34	-0.51	-0.46	0.80	1.00						
13 Manuf. wage share	-0.28	-0.27	0.22	0.12	0.39	0.40	0.29	-0.09	0.08	0.05	-0.13	-0.21	1.00					
14 Urban LF participation rate	0.23	-0.27	0.08	0.07	-0.04	-0.18	-0.41	-0.28	0.26	0.24	-0.13	-0.37	-0.46	1.00				
15 Urban unemployment	-0.39	-0.34	-0.03	0.36	0.36	0.05	0.02	-0.21	0.35	0.30	0.12	-0.14	0.29	0.14	1.00			
16 Female LF participation rate	-0.07	-0.38	0.02	0.40	0.00	0.08	0.33	0.25	0.37	0.35	-0.32	-0.32	-0.27	0.28	0.16	1.00		
17 Urbanization rate	-0.15	-0.18	-0.15	0.43	-0.13	-0.06	0.11	0.44	0.49	0.48	-0.24	-0.27	-0.37	-0.06	0.16	0.43	1.00	
18 GDP per capita (PPP, current)	0.08	-0.57	0.15	0.27	0.18	0.22	0.26	0.57	0.36	0.31	-0.47	-0.53	0.18	-0.32	0.20	0.24	0.70	1.00

Notes: *** = indices range in value from 0 to 10, worst to best, respectively.

FACB = freedom of association/collective bargaining.

"#" = higher index values mean greater employment protection and job security.

Shaded areas indicate direct relevance to labor standards and informalization.

In terms of two-tailed statistical significance, the critical values for 14 observations are 0.458, 0.532 and 0.661 for the 10, 5 and 1% levels, respectively;

the critical values for 13 observations (regarding the employment protection index) are 0.476, 0.553 and 0.684 for the 10, 5 and 1% levels, respectively.

Table 8: Trend regressions of employment shares on Freedom House indices and GDP per capita for 13 Latin American countries, 1990-1997

Estimation method		Small firms	Self-employed	Domestic service	Large firms	Public sector
Pooled OLS	Civil liberties	-1.3026 ** (0.4044)	-1.8598 ** (0.3001)	0.0425 (0.1120)	2.1994 ** (0.4959)	0.9195 * (0.4409)
	GDP per capita	3.8520 ** (0.7012)	-7.8697 ** (0.8024)	0.6733 * (0.2655)	2.5416 * (1.1254)	0.8144 (0.7767)
	Adj. R-squared	0.1809	0.5643	0.0271	0.2398	0.0342
Pooled OLS with time dummies	Civil liberties	-1.2297 ** (0.4274)	-1.7483 ** (0.3143)	0.0151 (0.1140)	2.1981 ** (0.5184)	0.7645 # (0.4379)
	GDP per capita	3.5436 ** (0.6866)	-8.3409 ** (0.8165)	0.7889 ** (0.2506)	2.5473 * (1.1811)	1.4694 * (0.6943)
	Adj. R-squared	0.1389	0.5584	-0.0186	0.1832	0.0267

Estimation method		Small firms	Self-employed	Domestic service	Large firms	Public sector
Pooled 2SLS with Political rights as an instrumental variable for Civil liberties	Civil liberties	-0.5755 (0.3606)	-1.9969 ** (0.3333)	0.1764 (0.1225)	2.2124 ** (0.4484)	0.1807 (0.4486)
	GDP per capita	3.4331 ** (0.9706)	-7.7907 ** (0.8974)	0.5961 # (0.3297)	2.5341 * (1.2071)	1.2400 (1.2075)
	Adj. R-squared	0.1465	0.5636	0.0155	0.2398	0.0076
Pooled 2SLS with Political rights as an instrumental variable for Civil liberties with time dummies	Civil liberties	-0.5552 (0.3723)	-1.9715 ** (0.3394)	0.1706 (0.1268)	2.2121 ** (0.4693)	0.1412 (0.4531)
	GDP per capita	3.1077 ** (1.0161)	-8.1967 ** (0.9263)	0.6884 * (0.3462)	2.5383 * (1.2810)	1.8722 (1.2368)
	Adj. R-squared	0.1077	0.5563	-0.0352	0.1832	0.0067

Notes: #, * and ** indicate significance at 10, 5 and 1% levels, respectively.

White heteroskedasticity-consistent standard errors in parentheses.

Data are transformed as the Hodrick-Prescott trend of the variables.

Hodrick-Prescott trend is based on the years 1984-1997 and a smoothing parameter of 100.

GDP per capita is measured in PPP current international dollars in log form.

Paraguay is excluded from the sample for the sake of comparability with wage share results (see tables 9 and 10), but is included in the appendix tables.

Lags of 1, 2 or 3 years on the civil liberties and GDP per capita variables do not significantly affect the results.

Table 9: Trend regressions of employment shares on wage share and GDP per capita for 13 Latin American countries, 1990-1997

Estimation method		Small firms	Self-employed	Domestic service	Large firms	Public sector
Pooled OLS	Wage share	-0.1223 ** (0.0304)	-0.1451 ** (0.0386)	0.0389 ** (0.0101)	0.0580 # (0.0331)	0.1708 ** (0.0436)
	GDP per capita	3.4254 ** (0.7759)	-9.2971 ** (0.9921)	0.3553 (0.2204)	4.5274 ** (1.3139)	1.0024 (1.0080)
	Adj. R-squared	0.1586	0.5400	0.1065	0.0903	0.1198
Pooled OLS with time dummies	Wage share	-0.1235 ** (0.0306)	-0.1501 ** (0.0377)	0.0394 ** (0.0102)	0.0603 # (0.0343)	0.1743 ** (0.0432)
	GDP per capita	3.0430 ** (0.7502)	-9.9589 ** (0.9825)	0.4758 * (0.2163)	4.8327 ** (1.3718)	1.6185 (0.9942)
	Adj. R-squared	0.1111	0.5467	0.0669	0.0222	0.0924

Notes: #, * and ** indicate significance at 10, 5 and 1% levels, respectively.

White heteroskedasticity-consistent standard errors in parentheses.

Data are transformed as the Hodrick-Prescott trend of the variables.

Hodrick-Prescott trend is based on the years 1984-1997 and a smoothing parameter of 100.

GDP per capita is measured in PPP current international dollars in log form.

Paraguay is excluded from the sample due to data unavailability.

Lags of 1, 2 or 3 years on the wage share and GDP per capita variables do not significantly affect the results.

Table 10: Difference regressions of employment shares on wage share and GDP for 13 Latin American countries, 1990-1997

Estimation method		Small firms	Self-employed	Domestic service	Large firms	Public sector
Fixed effects	Wage share	-0.0544 (0.6313)	1.0368 # (0.5667)	-0.3467 * (0.1603)	-0.5845 (0.6760)	-0.0092 (0.4194)
	GDP	-7.1684 (4.3273)	-20.9559 ** (6.0043)	1.4996 (1.1570)	32.3597 ** (6.4341)	-5.9820 (3.7859)
	Adj. R-squared	-0.1455	0.0225	0.0130	0.1462	0.0212
Fixed effects with time dummies	Wage share	-0.1281 (0.7438)	2.4794 ** (0.6435)	-0.4245 * (0.1854)	-1.7821 * (0.8301)	-0.0959 (0.5245)
	GDP	-7.3221 (4.7382)	-21.9377 ** (5.5215)	1.7768 (1.2509)	31.0928 ** (6.8004)	-3.9293 (4.1236)
	Adj. R-squared	-0.1028	0.1902	0.0013	0.2142	0.0203

Estimation method		Small firms	Self-employed	Domestic service	Large firms	Public sector
Fixed effects	Wage share (-1)	1.2062 (0.7808)	-1.3447 # (0.7506)	-0.1079 (0.1819)	-0.0875 (1.1380)	0.2624 (0.5217)
	GDP (-1)	-3.5963 (4.3170)	0.2363 (4.1315)	-0.3656 (1.3789)	7.0657 (7.0983)	-3.1389 (3.8562)
	Adj. R-squared	-0.1412	-0.1029	0.0159	-0.0787	0.0191
Fixed effects with time dummies	Wage share (-1)	1.1396 (0.7285)	-1.4102 * (0.6805)	-0.1710 (0.1819)	-0.5251 (0.9675)	0.8890 # (0.4865)
	GDP (-1)	-5.4757 (4.9923)	0.5092 (4.2953)	0.4961 (1.3789)	7.7849 (6.5699)	-3.1716 (3.4746)
	Adj. R-squared	-0.0534	-0.0235	-0.0116	0.0088	0.1099

Notes: #, * and ** indicate significance at 10, 5 and 1% levels, respectively.

White heteroskedasticity-consistent standard errors in parentheses.

Paraguay is excluded from the sample due to data unavailability.

Based on differencing of employment share variables and log growth rates of wage share and GDP.

GDP is measured in constant terms (yielding identical results based on local currency or U.S. dollars).

Controlling for inflation (GDP deflator) does not affect the statistical significance nor substantively change the magnitude of the above coefficient estimates.

Table A.1: Non-agricultural employment shares for 14 Latin American countries, 1990-1997

		Small firms	Self-employed	Domestic service	Large firms	Public sector
14 country total	1990	20.1	24.7	7.0	32.7	15.5
	1991	20.6	25.1	6.9	32.3	15.2
	1992	20.7	25.6	6.9	32.0	14.8
	1993	21.4	25.4	7.3	32.0	13.9
	1994	21.8	25.9	7.3	31.4	13.5
	1995	22.2	26.7	7.4	30.4	13.4
	1996	22.7	27.3	7.4	29.4	13.2
	1997	23.0	27.1	7.6	29.3	13.0
Argentina	1990	14.9	24.7	7.9	33.2	19.3
	1991	15.4	25.3	7.9	32.9	18.5
	1992	15.9	25.9	7.8	32.7	17.7
	1993	16.3	26.6	7.9	32.4	16.8
	1994	18.1	27.0	7.4	33.2	14.3
	1995	18.5	27.2	7.6	32.9	13.8
	1996	18.7	27.1	7.8	33.2	13.2
	1997	19.2	26.5	8.1	33.5	12.7
Bolivia	1990	12.8	37.7	6.4	26.6	16.5
	1991	11.5	37.8	6.8	26.8	17.1
	1992	12.5	38.2	5.9	27.9	15.5
	1993	18.3	36.4	6.5	26.1	12.7
	1994	19.0	37.1	5.2	27.3	11.4
	1995	18.6	39.6	5.4	25.0	11.4
	1996	19.9	37.7	5.5	25.8	11.1
	1997	17.2	35.4	4.0	32.3	11.1
Brazil	1990	23.3	21.0	7.7	36.9	11.0
	1991	23.8	21.7	7.7	36.1	10.7
	1992	24.0	22.5	7.8	35.2	10.4
	1993	24.7	21.9	8.9	34.8	9.7
	1994	25.0	22.4	9.2	33.8	9.7
	1995	25.2	23.0	9.4	32.8	9.6
	1996	26.0	23.8	9.5	31.1	9.6
	1997	26.3	24.3	9.8	30.3	9.3
Chile	1990	18.3	23.6	8.1	43.0	7.0
	1991	19.1	23.1	7.8	42.3	7.8
	1992	19.6	22.7	7.3	42.3	8.0
	1993	20.6	22.6	6.6	42.3	7.9
	1994	20.6	24.2	6.7	40.8	7.7
	1995	20.8	23.9	6.5	41.1	7.7
	1996	21.4	22.7	6.8	41.5	7.6
	1997	21.7	23.0	6.6	41.5	7.2
Colombia	1990	26.3	23.5	5.4	35.2	9.6
	1991	26.7	23.7	5.3	35.0	9.3
	1992	27.0	23.6	5.2	35.2	9.0
	1993	26.7	23.8	4.9	36.0	8.6
	1994	26.5	23.9	4.4	36.9	8.3
	1995	26.0	24.7	4.1	37.0	8.2
	1996	25.2	25.6	3.8	37.2	8.2
	1997	25.9	24.8	4.0	37.1	8.2
Costa Rica	1990	18.4	18.1	5.8	35.7	22.0
	1991	20.0	19.0	5.6	35.1	20.3
	1992	18.6	17.6	5.2	38.1	20.5
	1993	20.1	18.6	5.0	36.2	20.1
	1994	23.1	17.8	5.3	35.4	18.4
	1995	21.5	18.1	5.0	37.6	17.9
	1996	24.7	17.4	5.2	35.5	17.2
	1997	22.6	18.8	5.4	36.2	17.0
Ecuador	1990	15.0	33.5	4.8	27.9	18.7
	1991	20.1	32.5	5.2	24.7	17.5
	1992	19.5	34.3	4.5	26.0	15.7
	1993	19.3	33.2	4.8	27.8	14.9
	1994	19.5	31.5	5.1	29.1	14.7
	1995	18.7	32.9	5.1	29.1	14.2
	1996	18.9	33.0	5.1	28.1	14.8
	1997	17.4	30.4	5.4	32.0	14.8

Table A.1: Non-agricultural employment shares for 14 Latin American countries, 1990-1997

		Small firms	Self-employed	Domestic service	Large firms	Public sector
Honduras	1990	10.8	36.3	6.9	31.0	14.9
	1991	9.0	35.0	6.7	32.7	16.6
	1992	8.9	35.1	6.7	32.9	16.4
	1993	11.6	27.5	6.2	40.0	14.6
	1994	13.4	32.5	5.9	35.9	12.4
	1995	15.1	34.0	5.4	33.1	12.5
	1996	13.8	36.5	6.0	32.3	11.4
	1997	12.7	38.1	5.8	33.1	10.3
Mexico	1990	19.6	30.3	5.6	19.6	25.0
	1991	19.8	30.5	5.5	19.5	24.7
	1992	20.0	30.5	5.5	19.5	24.5
	1993	20.9	30.6	5.5	20.0	23.0
	1994	20.9	30.7	5.4	20.1	22.9
	1995	21.7	32.3	5.4	18.1	22.5
	1996	22.3	32.5	5.4	17.8	22.0
	1997	22.6	31.2	5.6	18.9	21.7
Panama	1990	12.8	20.4	7.2	27.5	32.0
	1991	13.6	19.7	7.9	31.3	27.5
	1992	14.0	19.0	8.5	33.3	25.2
	1993	13.7	18.2	8.0	35.5	24.6
	1994	12.9	19.5	7.9	35.4	24.4
	1995	13.2	20.5	7.6	35.4	23.4
	1996	13.9	20.7	7.0	35.3	23.1
	1997	13.0	21.5	7.1	36.6	21.8
Paraguay	1990	29.4	21.2	10.7	26.4	12.2
	1991	29.0	23.0	10.0	26.7	11.3
	1992	29.0	22.2	11.0	23.2	14.6
	1993	29.5	21.5	11.6	25.2	12.2
	1994	34.9	22.3	11.7	19.3	11.8
	1995	29.7	25.3	10.6	22.6	11.9
	1996	31.0	26.9	10.0	19.0	13.1
	1997	n.a.	n.a.	n.a.	n.a.	n.a.
Peru	1990	11.4	35.3	5.1	36.6	11.6
	1991	12.1	34.9	4.8	36.3	11.9
	1992	12.4	37.2	4.9	35.5	10.0
	1993	14.9	34.7	4.6	35.7	10.1
	1994	14.1	35.1	4.6	38.3	7.9
	1995	15.2	35.1	4.7	35.9	9.1
	1996	16.3	37.4	4.2	33.9	8.2
	1997	19.4	34.9	5.1	33.5	7.2
Uruguay	1990	11.0	19.3	6.0	43.6	20.1
	1991	10.6	20.1	6.0	45.2	18.1
	1992	10.2	20.1	6.3	45.9	17.5
	1993	10.9	20.5	6.1	44.4	18.2
	1994	10.7	20.9	6.3	45.2	16.9
	1995	10.8	21.0	5.9	44.6	17.7
	1996	10.3	21.3	6.3	45.1	17.0
	1997	10.9	20.1	6.1	46.1	16.8
Venezuela	1990	12.6	22.1	4.1	38.9	22.3
	1991	12.2	22.2	3.9	40.1	21.6
	1992	11.8	22.2	3.4	42.4	20.2
	1993	11.1	24.1	3.2	42.8	18.8
	1994	14.5	27.3	3.0	35.9	19.3
	1995	17.6	27.0	2.3	33.6	19.5
	1996	17.2	28.1	2.4	33.2	19.1
	1997	15.8	29.9	2.4	32.9	19.0

Definitions (as translated from *Panorama Laboral*, 1998):

Small firms includes those employed in establishments with less than 5 or 10 workers, depending on available information.

Self-employed includes own-account workers (excluding administrators, professionals and technicians) and family workers.

Source: *Panorama Laboral*, 1998.

Note: Peru corresponds to Lima metropolitan area; Uruguay corresponds to Montevideo.

Table A.2: Non-agricultural employment shares for 13 Latin American countries, 1950-1980

	Year	As shares of economically active population				As shares of non-agricultural employment		
		Total (non-agric. emp.)	Self-employed	Domestic service	Small and large firms, public and private sectors	Self-employed	Domestic service	Small and large firms, public and private sectors
17 country total*	1950	43.5	8.7	4.7	30.1	20.0	10.8	69.2
	1960	50.5	10.6	5.0	34.9	21.0	9.9	69.1
	1970	56.7	11.5	5.4	39.8	20.3	9.5	70.2
	1980	64.0	13.8	5.6	44.6	21.6	8.8	69.7
Argentina	1950	72.0	9.5	5.7	56.8	13.2	7.9	78.9
	1960	77.6	8.8	5.4	63.4	11.3	7.0	81.7
	1970	81.6	9.5	6.1	66.0	11.6	7.5	80.9
	1980	84.8	12.1	7.3	65.0	14.3	8.6	76.7
Bolivia	1950	24.1	10.5	4.5	9.1	43.6	18.7	37.8
	1960	28.8	12.2	4.8	11.8	42.4	16.7	41.0
	1970	35.0	14.5	5.1	15.4	41.4	14.6	44.0
	1980	41.1	18.1	5.1	17.9	44.0	12.4	43.6
Brazil	1950	39.2	6.9	3.8	28.5	17.6	9.7	72.7
	1960	47.2	10.8	4.6	31.8	22.9	9.7	67.4
	1970	53.5	9.3	5.6	38.6	17.4	10.5	72.1
	1980	62.1	10.7	6.2	45.2	17.2	10.0	72.8
Chile	1950	62.9	13.8	8.3	40.8	21.9	13.2	64.9
	1960	65.0	12.3	8.2	44.5	18.9	12.6	68.5
	1970	69.8	11.5	5.2	53.1	16.5	7.4	76.1
	1980	74.2	13.9	6.2	54.1	18.7	8.4	72.9
Colombia	1950	39.2	8.5	6.8	23.9	21.7	17.3	61.0
	1960	45.1	10.4	6.7	28.0	23.1	14.9	62.1
	1970	56.4	11.5	6.2	38.7	20.4	11.0	68.6
	1980	64.9	16.3	6.0	42.6	25.1	9.2	65.6
Costa Rica	1950	42.0	6.3	6.0	29.7	15.0	14.3	70.7
	1960	47.8	6.9	5.8	35.1	14.4	12.1	73.4
	1970	57.0	7.3	5.6	44.1	12.8	9.8	77.4
	1980	65.3	7.1	5.3	52.9	10.9	8.1	81.0
Ecuador	1950	33.2	7.7	4.0	21.5	23.2	12.0	64.8
	1960	37.5	14.0	4.4	19.1	37.3	11.7	50.9
	1970	40.9	13.7	10.0	17.2	33.5	24.4	42.1
	1980	48.1	15.4	10.0	22.7	32.0	20.8	47.2
Honduras	1950	18.9	4.5	3.0	11.4	23.8	15.9	60.3
	1960	28.4	6.7	5.0	16.7	23.6	17.6	58.8
	1970	35.6	9.8	4.0	21.8	27.5	11.2	61.2
	1980	42.8	14.0	3.2	25.6	32.7	7.5	59.8
Mexico	1950	34.5	9.7	3.2	21.6	28.1	9.3	62.6
	1960	45.7	10.0	3.5	32.2	21.9	7.7	70.5
	1970	52.1	14.5	3.7	33.9	27.8	7.1	65.1
	1980	61.5	18.3	3.7	39.5	29.8	6.0	64.2
Panama	1950	46.7	6.3	5.5	34.9	13.5	11.8	74.7
	1960	49.7	6.8	6.3	36.6	13.7	12.7	73.6
	1970	59.6	10.4	5.4	43.8	17.4	9.1	73.5
	1980	66.2	12.1	8.8	45.3	18.3	13.3	68.4
Peru	1950	36.0	9.8	7.1	19.1	27.2	19.7	53.1
	1960	41.6	12.8	5.1	23.7	30.8	12.3	57.0
	1970	50.5	17.0	3.7	29.8	33.7	7.3	59.0
	1980	58.8	20.4	3.4	35.0	34.7	5.8	59.5
Uruguay	1950	77.8	9.0	5.5	63.3	11.6	7.1	81.4
	1960	79.2	10.0	5.6	63.6	12.6	7.1	80.3
	1970	81.0	11.1	5.7	64.2	13.7	7.0	79.3
	1980	82.3	13.0	6.0	63.3	15.8	7.3	76.9
Venezuela	1950	51.1	11.4	5.0	34.7	22.3	9.8	67.9
	1960	63.1	14.1	5.9	43.1	22.3	9.4	68.3
	1970	71.3	16.0	6.4	48.9	22.4	9.0	68.6
	1980	79.0	12.2	4.2	62.6	15.4	5.3	79.2

Source: *Mercado de Trabajo en Cifras. 1950-1980*, 1982.

Note: *** = In addition to the 13 shown countries, includes data for the Dominican Republic, El Salvador, Guatemala and Nicaragua.

Table A.3 : Regression-estimate elasticities of employment shares relative to GDP: robustness with respect to dropping one country at a time from the sample

Small firms

	14 countries	NO ARG	NO BOL	NO BRA	NO CHL	NO COL	NO CRI	NO ECU	NO HND	NO MEX	NO PAN	NO PRY	NO PER	NO URY	NO VEN
Fixed effects with time dummies	-0.5663 *	-0.7219 *	-0.4715 *	-0.5899 *	-0.5975 **	-0.5231 *	-0.5222 *	-0.5998 **	-0.5336 *	-0.6337 **	-0.6797 **	-0.5350 *	-0.6133 *	-0.5632 *	-0.3745 #
	(0.2165)	(0.2757)	(0.2003)	(0.2358)	(0.2234)	(0.2192)	(0.2210)	(0.2199)	(0.2204)	(0.2354)	(0.2255)	(0.2198)	(0.2645)	(0.2236)	(0.1996)

Self-employed

	14 countries	NO ARG	NO BOL	NO BRA	NO CHL	NO COL	NO CRI	NO ECU	NO HND	NO MEX	NO PAN	NO PRY	NO PER	NO URY	NO VEN
Fixed effects with time dummies	-0.3431 *	-0.5907 **	-0.3347 *	-0.3221 #	-0.3149 #	-0.3543 *	-0.3481 *	-0.3375 *	-0.2889 *	-0.3425 #	-0.2559	-0.3924 *	-0.3182	-0.3625 *	-0.2700
	(0.1648)	(0.1759)	(0.1665)	(0.1732)	(0.1695)	(0.1669)	(0.1713)	(0.1629)	(0.1354)	(0.1813)	(0.1780)	(0.1653)	(0.1924)	(0.1688)	(0.1835)

Domestic service

	14 countries	NO ARG	NO BOL	NO BRA	NO CHL	NO COL	NO CRI	NO ECU	NO HND	NO MEX	NO PAN	NO PRY	NO PER	NO URY	NO VEN
Fixed effects with time dummies	0.1382	0.2606	0.1472	0.1073	0.1295	0.2006	0.1940	0.1233	0.1165	0.1755	-0.0363	0.1975	0.0557	0.1030	0.1603
	(0.1668)	(0.1948)	(0.1589)	(0.1758)	(0.1742)	(0.1696)	(0.1697)	(0.1700)	(0.1719)	(0.1828)	(0.1477)	(0.1667)	(0.2019)	(0.1718)	(0.1845)

Large firms

	14 countries	NO ARG	NO BOL	NO BRA	NO CHL	NO COL	NO CRI	NO ECU	NO HND	NO MEX	NO PAN	NO PRY	NO PER	NO URY	NO VEN
Fixed effects with time dummies	0.5753 **	0.8683 **	0.5604 **	0.5997 **	0.5714 **	0.5524 **	0.5836 **	0.5957 **	0.5453 **	0.5467 **	0.4952 **	0.5129 **	0.6368 **	0.5862 **	0.4542 *
	(0.1695)	(0.1610)	(0.1676)	(0.1812)	(0.1760)	(0.1724)	(0.1789)	(0.1696)	(0.1559)	(0.1830)	(0.1808)	(0.1636)	(0.2130)	(0.1737)	(0.1804)

Public sector

	14 countries	NO ARG	NO BOL	NO BRA	NO CHL	NO COL	NO CRI	NO ECU	NO HND	NO MEX	NO PAN	NO PRY	NO PER	NO URY	NO VEN
Fixed effects with time dummies	-0.0083	-0.1187	-0.0680	-0.0506	-0.0016	-0.0133	-0.0619	-0.0085	-0.0242	-0.0269	0.1240	0.0684	-0.0700	0.0106	0.1011
	(0.1894)	(0.2264)	(0.1850)	(0.2080)	(0.1930)	(0.1979)	(0.1971)	(0.1916)	(0.1921)	(0.2030)	(0.1876)	(0.1773)	(0.2014)	(0.1972)	(0.2085)

Notes: #, * and ** indicate significance at 10, 5 and 1% levels, respectively.

White heteroskedasticity-consistent standard errors in parentheses.

Data are transformed as the difference between the log of variables and the Hodrick-Prescott trend of the log of variables.

Hodrick-Prescott trend is based on the years 1990-1997 and a smoothing parameter of 100.

GDP is measured in constant terms (yielding identical results based on local currency or U.S. dollars).

**Table A.4: Labour Law Changes
in 14 Latin American Countries since the 1980s.**

	Right to unionise (RU)	Right to bargain collectively (RBC)	Right to strike (RS)	Employment protection (EP)
ARGENTINA	<p>↑ 1980s. Restored democracy (1983), restored RU. 1983: removal of military officers from unions. 1988: a law enhanced RU. Nevertheless, unions still denounce the existence of restrictions on RU: only one union per firm/industry can enjoy full trade union status (<i>personalidad gremial</i>), bargain collectively, call strikes, etc.</p>	<p>↑ 1980s. Restored democracy (1983), restored RBC. 1984: a law restored RBC. 1988: a new law governed the collective bargaining process, also limiting Government interference. ↑ 1990s. 1991 and 1995: two laws strengthened RBC at the plant level, rather than at the national level, in order to create more flexible job contracts. As a result Government's role in BC has decreased.</p>	<p>↑ 1980s. Restored democracy (1983), restored RS. 1983: RS guaranteed by the Constitution. However, RS is still governed as it was before the military regime, as few changes have been made to the 1958 law concerning RS. ↓(s) 1990s. 1990: a law restricted strikes in essential public services. Unions still denounce the presence of many restrictions on RS (see RU) .</p>	<p>↓ 1990s. 1991: a law introduced fixed term contracts (especially for workers employed in new establishments) and training contracts. Nevertheless, employers complained that the procedures to use these contracts were too troublesome. 1995: a law strengthened the 1991 reform, also introducing special contracts for small firms.</p>
BOLIVIA	<p>↑ 1980s. Restored democracy (1982), restored RU. However, RU is still governed as it was before the military regime, because few changes have been made to the 1939 Bolivian Labour Code. Many restrictions on RU still exist but these are not always enforced. A 1999 law bans freedom of association for civil servants, and hence bans their RU, RBC and RS.</p>	<p>↑ 1980s. Restored democracy (1982), restored RBC. Government still played a large role, however. ↑ 1990s. Government's role in collective bargaining decreased as a consequence of the privatisation process. Direct bargaining activities between workers and employers in individual enterprises began to increase. See RU regarding civil servants.</p>	<p>↑ 1980s. Restored democracy (1982), restored RS. However, RS is still governed as it was before the military regime, because few changes have been made to the 1939 Bolivian Labour Code. Many restrictions on RS still exist but these are not always enforced. See RU regarding civil servants.</p>	<p>↑(s) 1990s. Law concerning EP dates back to 1939, and few changes have been made in recent decades. Nevertheless, in the 1990s the EP was strengthened: probationary period was restricted, dismissal notice period was increased, and severance payments were extended to all workers, whether voluntarily retired or dismissed.</p>
BRAZIL	<p>↑ 1980s. Restored democracy (1986), restored RU. 1988: Ministry of Labour no longer allowed to intervene in unions' affairs by Constitution. Nevertheless, unions still denounce the existence of restrictions on RU: law on <i>Unicidade Sindacal</i> (one union per occupational or industrial category) is still in effect, though usually not enforced.</p>	<p>↑ 1980s. 1988: RBC recognized in the Constitution. However, a different attitude towards labour conflicts (fewer appeals to labour courts), rather than law revision, was the main cause of RBC's strengthening in the 1980s. ↑ 1990s. Government encouraged collective bargaining between employers and employees, but its role is still important. A law bans RBC for civil servants.</p>	<p>↑↓ 1980s. Restored democracy (1986), restored RS through the Constitution. 1989: strike laws became more permissive. Nevertheless, some restrictions on RS still exist, especially for civil servants both through the Constitution and through a 1989 law limits RS in essential public services.</p>	<p>↑ 1980s. 1988: Constitutional revision, following the restoration of democracy in 1986, strengthened EP. ↓ 1990s. 1998: a law aimed at facilitating the use of temporary contracts was approved. The law makes it possible to hire an employee for up to 2 years without paying social security contributions and states that time off can compensate for overtime payments.</p>

CHILE	RU eliminated by the military regime in 1973. ↑ (s) 1979 : Labour Plan restored RU under strict limitations. ↑ 1990s . Restored democracy (1989), restored RU entirely. 1991: Labour Code relaxed the procedure to create unions; nevertheless, RU was still denied to civil servants. 1995: a law provided RU to civil servants, except for the police and military.	RBC eliminated by the military regime in 1973. ↑ (s) 1979 : Labour Plan restored RBC under strict limitations. ↑ 1990s . Restored democracy (1989), restored RBC entirely. 1989: RBC guaranteed by the Constitution. 1991: Labour Code strengthened RBC for private sector workers, though not for civil servants who are still denied this right.	RS eliminated by the military regime in 1973. 1979 Labour Plan did not restore RS. ↑ 1990s . Restored democracy (1989), restored RS. 1991: Labour Code removed some severe restrictions on RS. However, RS was still denied to civil servants. 1995: a law provided RS for civil servants' associations, except police and military.	EP eliminated by the military regime in 1973. 1979 Labour Plan did not restore EP. ↑ 1990s . Restored democracy (1989), restored EP. 1990-1991: different laws were approved to strengthen EP, defining the causes that justify dismissals, reducing the maximum period for fixed term contracts, and increasing severance payments.
COLOMBIA	↑ 1990s . 1990: a law relaxed the procedure to create a union. 1991: Constitution guaranteed RU for all workers, except for the military, the police and those civil servants working in essential public services as defined by law. Nevertheless, unions still denounce the existence of restrictions on civil servants' RU.	↑ (s) 1990s . 1990: a law reduced Government's role in the bargaining process in the private sector and favoured negotiations at the plant level rather than at the industry level, in order to make job contracts more flexible. 1991: RBC guaranteed by the Constitution. Civil servants are still denied RBC, though.	↓↑ 1990s . 1990-1991: labour law reform restricted civil servant's RS, but, at the same time, strengthened private workers' RS. Nevertheless, unions still denounce the existence of many restrictions on RS. The authorities have often sentenced strikers to prison.	↓ (l) 1990s . 1990-1991: two laws modified Labour Code to facilitate the use of temporary contracts and relax procedures to hire and fire workers. Severance payments were reduced, the definition of "just dismissal" was widened, the use of temporary contracts was extended, and advance notice for collective dismissal was shortened.
COSTA RICA	↑ 1990s . 1993: Labour Code weakened the status of <i>solidarista</i> associations. Nevertheless, the law's enforcement is weak and <i>solidarista</i> associations are still widespread. The Constitution and Labour Code restrict freedom of association rights for civil servants.	↑ 1990s . 1993: Labour Code attempted to reduce the recourse to direct agreements between employers and employees through <i>solidarista</i> associations and to promote collective negotiations in the private sector. Nevertheless, the law's enforcement is weak and <i>solidarista</i> direct agreements are still widespread. The Constitution establishes that collective agreements have the force of law. RBC is still denied to public sector workers.	↑ 1990s . RS guaranteed by the Constitution. 1993: Labour Code relaxed the procedure to call a strike in the private sector. Nevertheless, the enforcement of the law is weak, and it is still difficult to call a strike. RS is still denied to public sector workers by the Constitution, but in 1993, the legislature repealed the sections of the penal code that stated fines and prison terms for striking public sector workers.	↑ 1990s . 1993: Labour Code stated that employers could fire union leaders only for just cause as established by labour courts. Advocacy of collective action was no longer considered a legitimate cause for dismissals as it was in the past.
ECUADOR	↓ 1990s . 1991: Labour Code increased the number of workers required to start a union. Unions continue to denounce the existence of restrictions on RU, especially for civil servants. The Constitution permits only one trade union in the public sector and other laws ban trade unions for civil servants.	↓ 1990s . 1991: Labour Code increased the minimum firm size that required to undertake collective bargaining. 1997: new Constitution introduced some limitations on civil servants' RBC. Presently, civil servants cannot be represented by more than one union to be allowed to bargain collectively.	= RS is guaranteed by the Constitution and has not substantively changed in recent decades. Civil servants are still denied to strike, but the enforcement of the law is weak and there are frequent "illegal strikes" of public sector workers.	↓ 1990s . 1990: <i>Maquila Law</i> introduced special more flexible conditions for hiring and firing temporary workers in <i>maquila</i> industries. 1991: a law reduced severance payments and introduced new temporary contracts.
HONDURAS	= Law protecting RU dates back to 1959 Labour Code. Nevertheless, these provisions are not sufficient to protect trade unionists, and serious violations against them often occur.	n.a. RBC is guaranteed by law. However, civil servants are not allowed to bargain collectively.	= Law protecting RS dates back to 1959 Labour Code. Private sector workers are given RS under strict Labour Ministry supervision. RS is denied to civil servants.	↓↑ 1980s . 1989: a law introduced more flexibility in firing workers, while at the same time a decree increased severance payments for unjustified dismissals.

MEXICO	= 1917 Constitution and 1931 Federal Labour Law recognize and still govern RU. Even though labour law has not changed, the strength of enforcement has changed along with different Governments' policies. Unions still denounce the existence of restrictions on RU, mainly because they have often been denied registration.	= 1931 Federal Labour Law recognizes and still governs RBC. The Constitution does not recognize RBC. Only in the 1970s several changes were made to the Federal Labour Law in order to strengthen RBC.	= 1917 Constitution and 1931 Federal Labour Law recognize and still govern RS. A law places tight restrictions on RS for civil servants.	= 1931 Federal Labour Law still governs EP. Even though labour law has not changed, the strength of its enforcement has changed along with different Governments' policies (e.g. EP was reduced during the 1980s because of the implementation of a economic liberalization programme).
PANAMA	<p>↑(s) 1980s. 1986: Labour Code restored RU, suspended by military regime since 1976. Nevertheless, some restrictions still remain for civil servants and other categories of workers.</p> <p>↑(l) 1990s. Restored democracy (1989), restored RU entirely. 1994: Civil Service Law allowed public sector workers to associate. 1995: labour law reform relaxed the procedure to create unions.</p>	<p>↑ 1980s. 1981 and 1989: Labour Code restored RBC, suspended since 1976. However, these reforms did not entirely restore the regime established under the 1971 Labour Code, which, in any case, did not recognize RBC to civil servants. In 1989 RBC was suspended for a short time allegedly because of the sanctions imposed by US on Panama.</p> <p>↑ 1990s. 1993: US sanctions were removed and RBC was restored for private sector workers. 1994: Civil Service Law introduced RBC for public sector workers.</p>	<p>↑ 1980s. 1986: Labour Code restored RS, suspended by military since 1976. Nevertheless, some restrictions still remained for civil servants and other workers.</p> <p>↑ 1990s. Restored democracy (1989), restored RS entirely. 1994: Civil Service Law allowed public sector workers to strike, though with a number of tight restrictions.</p>	<p>↓↑ 1980s. 1981: an amendment to the Labour Code restored employees' right of reinstatement in case of unjustified dismissals. 1986: probationary period was extended, but at the same time a long-service bonus was introduced.</p> <p>↓↑ 1990s. 1992: a law reduced EP in the free-trade zones. 1995: Labour Code introduced more flexibility in hiring and firing, but at the same time some amendments to the Code strengthened EP.</p>
PARAGUAY	<p>↑ 1990s. Restored democracy (1989), restored RU. 1992: new Constitution guaranteed RU for all workers, also to civil servants, who were not allowed to unionise under 1971 Labour Code. 1993 and 1995: Labour Code relaxed the procedure to create unions.</p>	<p>↑ 1990s. Restored democracy (1989), restored RBC. 1992: new Constitution guaranteed RBC. 1993 and 1995: Labour Code strengthened RBC. Nevertheless, many public sector workers are still denied RBC and collective negotiations are exceptions even in the private sector.</p>	<p>↑ 1990s. Restored democracy (1989), restored RS. 1992: new Constitution guaranteed RS to all workers, also for those in the public sector, who were not allowed to strike under the 1971 Labour Code. 1995: Labour Code established that strikes could be declared illegal only by labour courts, no longer by the Labour Ministry.</p>	<p>↑ 1990s. Restored democracy (1989), strengthened EP. 1992: an EP system was introduced for the first time, but it remains weak.</p>
PERU	<p>↓ 1990s. Restored democracy (1986), restored RU. 1993: Constitution guaranteed RU, as governed by law before the military government. Nevertheless, in general RU weakened in the 1990s. 1992: two laws, aimed at facilitating hiring and firing of temporary workers, imposed severe restrictions on RU.</p>	<p>↓ 1990s. Though the 1993 Constitution, adopted after the restoration of democracy in 1986, guaranteed RBC, in general RBC weakened in the 1990s. 1992: two laws, aimed at facilitating hiring and firing of temporary workers, weakened RBC.</p>	<p>↓ 1990s. Although the 1993 new Constitution, adopted after the restoration of democracy in 1986, guaranteed RS, in 1992 two laws, aimed at facilitating hiring and firing of temporary workers, imposed severe restrictions on RS, especially in essential public services.</p>	<p>↑(s) 1980s. Restored democracy (1986), somewhat strengthened EP. 1986: probationary period was reduced.</p> <p>↓ 1990s. 1991, 1992, 1995 and 1996: different laws or decrees reduced EP (the main reform occurred in 1991-1992). These laws facilitated the hiring and firing of temporary workers, reduced severance payments and other benefits and abolished the right of reinstatement.</p>

URUGUAY	<p>↑ 1980s. Restored democracy (1985), restored RU, as governed by 1967 Constitution. Uruguay lacks a national labour law concerning unions, but it has ratified many international agreements (as ILO Conventions N. 87 and N. 98) that do not need to be turned into national law to be enforceable in Uruguay.</p>	<p>↑ 1980s. Restored democracy (1985), restored RBC as before the military regime. Uruguay lacks specific legislation concerning RBC, but it has ratified many international agreements (such as ILO Conventions N. 98, N. 151 and N. 154) that are directly enforceable in the country.</p> <p>↑ 1990s. In the 1990s the Government reduced its role in the collective bargaining process.</p>	<p>↑ 1980s. Restored democracy (1985), restored RS, as governed by the 1967 Constitution. Uruguay national labour law concerning strikes and labour disputes is weak, but this country has ratified many international agreements (as ILO Conventions N. 87 and N. 98) that do not need to be turned into national law to be enforceable. The Constitution recognizes RS for civil servants, but law can restrict this right when the functioning of essential public services is endangered.</p>	<p>n.a. Uruguay lacks specific legislation concerning EP. Law does not govern temporary contracts, probationary periods, or unfair dismissals. EP exists but it is governed by agreements between employers and employees. Nevertheless, temporary contracts are not frequently used in Uruguay.</p>
VENEZUELA	<p>↑(s) 1990s. Since the return of democracy in 1958, after the military regime, RU is guaranteed for all workers both in the Constitution and in the Labour Code. Some strengthening of RU occurred in the 1990s through the 1990 Labour Code and the 1997 Constitutional revisions.</p>	<p>↑(s) 1990s. Since the return of democracy in 1958, after the military regime, RBC is guaranteed both in the Constitution and in the Labour Code. 1990: Labour Code revision encouraged collective bargaining.</p>	<p>↑ 1990s. Since the return of democracy in 1958, after the military regime, RS is guaranteed for all private sector workers both in the Constitution and in the Labour Code. 1990: Labour Code revision guaranteed RS also for public sector workers except for the military.</p>	<p>↑(l) 1990s. 1990: Labour Code strengthened EP as the allowable duration of temporary contracts was shortened and the right of reinstatement after unfair dismissals was introduced. 1997: Labour Code strengthened EP again: all workers are entitled to severance payments, not only those unfairly dismissed. However, the 1990 and 1997 Labour Code revisions also attempted to reduce the overall cost of severance payments.</p>

LEGEND	↑: strengthening	↓: weakening	↑↓: simultaneous strengthening and weakening of different aspects	=: no substantive changes	n.a. : information on changes not available
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Note. This table provides an assessment of qualitative changes. Arrows indicate the direction of labour law's changes. When information on the magnitude of change is available, we identify this with a (s) or (l) after the arrows to indicate small or large changes, respectively. Indicators have been chosen based on information in the sources listed in the bibliography of Frisoni and Kongolo (2002). The four categories of workers' rights addressed (RU, RBC, RS and EP) are fairly general, and in some cases there were changes in opposite directions. In these cases, we use the symbol ↑↓ and explain the contents of the opposite changes. Finally, we try to point out whether a change derives from a Constitutional revision or from other legislation (in this case we write "Labour Code", "a law", "a decree" etc.). Precise legislative references are available in Frisoni and Kongolo (2002). Additional information in this table on civil servants is from Hodges Aeberhard (2001).

Table A.5 : Trend regressions of employment shares on civil liberties index and GDP per capita: robustness with respect to dropping one country at a time from the sample

Small firms

	13 countries	NO ARG	NO BOL	NO BRA	NO CHL	NO COL	NO CRI	NO ECU	NO HND	NO MEX	NO PAN	NO PER	NO URY	NO VEN	Plus PRY
Civil liberties	-1.3026 ** (0.4044)	-1.3141 ** (0.3938)	-1.3302 ** (0.4037)	-0.9820 * (0.4235)	-1.6303 ** (0.4679)	-0.6646 * (0.3976)	-2.2003 ** (0.4776)	-1.3696 ** (0.4114)	-1.2053 ** (0.4027)	-1.2634 ** (0.4464)	-1.3473 ** (0.4003)	-1.8375 ** (0.4338)	-0.6516 * (0.3351)	-1.2802 ** (0.3961)	-1.4205 ** (0.4057)
GDP per capita	3.8520 ** (0.7012)	4.8460 ** (0.8459)	4.6338 ** (0.8721)	3.1892 ** (0.6948)	3.4999 ** (0.6826)	3.2629 ** (0.7148)	3.7177 ** (0.6514)	4.4969 ** (0.7263)	2.6699 ** (0.6971)	3.7397 ** (0.7778)	3.7909 ** (0.7110)	3.6239 ** (0.6959)	4.7059 ** (0.7381)	4.0260 ** (0.7239)	3.3657 ** (0.7546)

Self-employed

	13 countries	NO ARG	NO BOL	NO BRA	NO CHL	NO COL	NO CRI	NO ECU	NO HND	NO MEX	NO PAN	NO PER	NO URY	NO VEN	Plus PRY
Civil liberties	-1.8598 ** (0.3001)	-1.7954 ** (0.3025)	-1.9373 ** (0.2989)	-2.1393 ** (0.3168)	-2.0703 ** (0.2908)	-2.3772 ** (0.3027)	-1.3856 ** (0.3346)	-1.9150 ** (0.3000)	-1.8993 ** (0.3015)	-1.4498 ** (0.3158)	-1.9674 ** (0.3035)	-1.4738 ** (0.3414)	-1.8447 ** (0.3281)	-1.8175 ** (0.3020)	-1.7024 ** (0.3103)
GDP per capita	-7.8697 ** (0.8024)	-9.8240 ** (0.7411)	-6.3073 ** (1.0055)	-7.2923 ** (0.7733)	-8.1092 ** (0.8338)	-7.3924 ** (0.7563)	-7.8092 ** (0.7581)	-7.4368 ** (0.8889)	-7.3903 ** (1.0383)	-8.8578 ** (0.8920)	-8.0231 ** (0.7044)	-7.7484 ** (0.8550)	-7.9066 ** (0.8430)	-7.9353 ** (0.8112)	-7.6459 ** (0.8670)

Domestic service

	13 countries	NO ARG	NO BOL	NO BRA	NO CHL	NO COL	NO CRI	NO ECU	NO HND	NO MEX	NO PAN	NO PER	NO URY	NO VEN	Plus PRY
Civil liberties	0.0425 (0.1120)	0.0524 (0.1143)	0.0275 (0.1118)	0.2510 ** (0.0725)	0.0012 (0.1147)	-0.1101 (0.1218)	0.1852 (0.1317)	0.0579 (0.1147)	0.0153 (0.1111)	-0.0164 (0.1337)	0.0641 (0.1107)	-0.0709 (0.1334)	0.0621 (0.1202)	0.0350 (0.1176)	-0.0209 (0.1272)
GDP per capita	0.6733 * (0.2655)	0.2094 (0.3007)	0.8886 ** (0.3209)	0.2729 (0.2560)	0.6345 * (0.2763)	0.8396 ** (0.2646)	0.6981 ** (0.2612)	0.5272 # (0.2678)	1.0034 ** (0.3095)	0.8126 ** (0.3063)	0.7039 * (0.2799)	0.6376 * (0.2514)	0.7004 * (0.2743)	0.8527 ** (0.2418)	0.4841 # (0.2581)

Large firms

	13 countries	NO ARG	NO BOL	NO BRA	NO CHL	NO COL	NO CRI	NO ECU	NO HND	NO MEX	NO PAN	NO PER	NO URY	NO VEN	Plus PRY
Civil liberties	2.1994 ** (0.4959)	2.2002 ** (0.5138)	2.3083 ** (0.4960)	2.2560 ** (0.5701)	1.9828 ** (0.5238)	2.8017 ** (0.5800)	2.7826 ** (0.5894)	2.3412 ** (0.4963)	2.1360 ** (0.5050)	1.0376 ** (0.3023)	2.1811 ** (0.5009)	2.9248 ** (0.5745)	1.5619 ** (0.4563)	2.1583 ** (0.4981)	2.2094 ** (0.4949)
GDP per capita	2.5416 * (1.1254)	3.6861 * (1.4303)	0.4499 (1.3303)	2.4005 # (1.2253)	2.3325 * (1.1221)	1.9234 # (1.0979)	2.5527 * (1.1534)	1.4142 (1.1963)	3.3122 * (1.3161)	5.2765 ** (0.9779)	2.5116 * (1.1222)	2.8081 ** (1.0162)	1.7214 (1.0953)	2.4638 * (1.1279)	2.9010 ** (1.0823)

Public sector

	13 countries	NO ARG	NO BOL	NO BRA	NO CHL	NO COL	NO CRI	NO ECU	NO HND	NO MEX	NO PAN	NO PER	NO URY	NO VEN	Plus PRY
Civil liberties	0.9195 * (0.4409)	0.8558 # (0.4526)	0.9305 * (0.4415)	0.6135 (0.4922)	1.7161 ** (0.3443)	0.3489 (0.5105)	0.6156 (0.5691)	0.8853 * (0.4452)	0.9522 * (0.4424)	1.6915 ** (0.3385)	1.0681 * (0.4208)	0.4579 (0.5304)	0.8706 # (0.5035)	0.9034 * (0.4363)	0.9344 * (0.4277)
GDP per capita	0.8144 (0.7767)	1.0972 (1.0223)	0.3512 (0.9498)	1.4420 # (0.8195)	1.6543 * (0.7589)	1.3784 # (0.8018)	0.8517 (0.7782)	1.0028 (0.8113)	0.4185 (0.9045)	-0.9605 # (0.5741)	1.0276 (0.7752)	0.6904 (0.7771)	0.7893 (0.8328)	0.6044 (0.7895)	0.9066 (0.7813)

Notes: #, * and ** indicate significance at 10, 5 and 1% levels, respectively.

Based on pooled OLS estimates without time dummies.

White heteroskedasticity-consistent standard errors in parentheses.

Data are transformed as the Hodrick-Prescott trend of the variables.

Hodrick-Prescott trend is based on the years 1984-1997 and a smoothing parameter of 100.

GDP per capita is measured in PPP current international dollars in log form.

In the last column, Paraguay is added to the sample of 13 countries.

Table A.6: Wage shares of manufacturing value added for 14 Latin American countries, 1984-1997

Year	Argentina	Bolivia	Brazil	Chile	Colombia	Costa Rica	Ecuador	Honduras	Mexico	Panama	Paraguay	Peru	Uruguay	Venezuela
1984		37.00		15.45	19.91	33.91	39.55		21.62	33.72		16.56	21.03	25.76
1985		15.05		13.73	17.76	30.04	39.50		20.91	36.45		12.60	22.27	25.53
1986		9.79		15.51	15.87	29.69	37.48		20.21	32.82		18.19	25.00	26.80
1987		17.02		15.26	16.53	33.08	37.53		17.32	31.41		19.28	25.72	25.34
1988		9.31		15.01	14.70	30.84	32.86		17.91	36.71		13.25	26.94	27.82
1989		10.50		14.77	14.68	36.84	33.26		19.47	37.20		15.42	25.76	20.60
1990		9.81	20.92	16.55	14.63	39.01	27.94	45.23	20.63	33.86		13.93	23.14	16.11
1991		8.57	20.12	17.69	14.70	36.36	26.34	45.88	21.76	34.72	21.79	15.92	21.99	21.31
1992		10.10	19.33	18.18	17.49	38.00	25.03	49.18	23.08	30.82		17.02	23.24	19.13
1993	41.91	11.46	18.66	19.11	20.16	41.00	25.53	48.39	23.54	49.41		17.46	25.43	20.44
1994	39.68	11.14	18.93	19.85	18.28	40.42	9.24	47.11	22.09	40.30		17.90	24.99	18.26
1995	41.80	11.53	21.38	18.91	16.73	47.82	13.27	48.72	16.76	39.98			21.88	15.26
1996	40.34	12.88		18.79	16.35	43.94	15.47	48.93	16.80	39.66			20.84	10.38
1997		13.43		19.35	16.13	44.99	10.14		16.85	50.49			26.19	

Source: UNIDO Industrial Statistics Database, 2001.

Notes: Based on value added in producers' prices, except for Brazil and Honduras where value added is in factor prices, and Uruguay 1984-1986 where valuation of value added is not defined. Bold indicates estimated values (average of previous and subsequent observations).

Table A.7 : Trend regressions of employment shares on wage share and GDP per capita: robustness with respect to dropping one country at a time from the sample

Small firms

	13 countries	NO ARG	NO BOL	NO BRA	NO CHL	NO COL	NO CRI	NO ECU	NO HND	NO MEX	NO PAN	NO PER	NO URY	NO VEN
Wage share	-0.1223 ** (0.0304)	-0.1187 ** (0.0324)	-0.1259 ** (0.0383)	-0.1069 ** (0.0315)	-0.1187 ** (0.0327)	-0.0771 ** (0.0292)	-0.1877 ** (0.0241)	-0.1178 ** (0.0321)	-0.1024 * (0.0470)	-0.1155 ** (0.0323)	-0.0942 ** (0.0325)	-0.1397 ** (0.0309)	-0.1347 ** (0.0285)	-0.1467 ** (0.0300)
GDP per capita	3.4254 ** (0.7759)	3.5387 ** (0.9494)	3.1965 ** (0.9989)	2.9990 ** (0.7780)	3.2675 ** (0.8672)	2.9940 ** (0.7745)	2.8125 ** (0.7926)	3.8587 ** (0.7772)	2.9332 ** (1.0542)	3.1441 ** (0.8715)	3.3583 ** (0.7952)	3.1182 ** (0.7770)	5.2557 ** (0.5734)	3.7673 ** (0.8157)

Self-employed

	13 countries	NO ARG	NO BOL	NO BRA	NO CHL	NO COL	NO CRI	NO ECU	NO HND	NO MEX	NO PAN	NO PER	NO URY	NO VEN
Wage share	-0.1451 ** (0.0386)	-0.2006 ** (0.0307)	-0.1354 ** (0.0477)	-0.1545 ** (0.0387)	-0.1541 ** (0.0391)	-0.1621 ** (0.0394)	-0.0957 ** (0.0431)	-0.1461 ** (0.0404)	-0.2542 ** (0.0438)	-0.1126 ** (0.0352)	-0.0898 * (0.0392)	-0.1265 ** (0.0386)	-0.1483 ** (0.0387)	-0.1494 ** (0.0392)
GDP per capita	-9.2971 ** (0.9921)	-11.1872 ** (0.7882)	-8.9063 ** (1.4923)	-9.0572 ** (1.0046)	-9.1799 ** (1.0800)	-9.1867 ** (1.0094)	-8.8894 ** (0.9193)	-9.1104 ** (1.0681)	-6.8531 ** (1.1254)	-10.6350 ** (1.0234)	-9.5005 ** (0.8495)	-8.9771 ** (1.0003)	-8.8410 ** (1.0822)	-9.2413 ** (1.0046)

Domestic service

	13 countries	NO ARG	NO BOL	NO BRA	NO CHL	NO COL	NO CRI	NO ECU	NO HND	NO MEX	NO PAN	NO PER	NO URY	NO VEN
Wage share	0.0389 ** (0.0101)	0.0330 ** (0.0100)	0.0500 ** (0.0118)	0.0466 ** (0.0098)	0.0462 ** (0.0103)	0.0329 ** (0.0107)	0.0567 ** (0.0096)	0.0384 ** (0.0108)	0.0453 ** (0.0159)	0.0374 ** (0.0107)	0.0253 * (0.0100)	0.0366 ** (0.0105)	0.0391 ** (0.0102)	0.0265 ** (0.0092)
GDP per capita	0.3553 (0.2204)	0.1561 (0.2311)	0.8455 ** (0.1923)	0.1386 (0.2232)	0.1874 (0.2475)	0.4411 * (0.2152)	0.5178 * (0.2334)	0.2315 (0.2195)	0.2242 (0.3212)	0.4156 # (0.2450)	0.4021 # (0.2264)	0.3157 (0.2152)	0.3281 (0.2550)	0.5314 ** (0.1988)

Large firms

	13 countries	NO ARG	NO BOL	NO BRA	NO CHL	NO COL	NO CRI	NO ECU	NO HND	NO MEX	NO PAN	NO PER	NO URY	NO VEN
Wage share	0.0580 # (0.0331)	0.0901 ** (0.0266)	0.0249 (0.0359)	0.0580 (0.0353)	0.0947 ** (0.0331)	0.0712 # (0.0375)	0.0575 # (0.0337)	0.0501 (0.0347)	-0.0020 (0.0570)	-0.0164 (0.0329)	0.0670 * (0.0333)	0.0714 * (0.0345)	0.0710 * (0.0324)	0.0726 * (0.0361)
GDP per capita	4.5274 ** (1.3139)	5.6166 ** (1.4314)	3.1276 * (1.5443)	4.5506 ** (1.3858)	3.5399 * (1.3997)	4.3779 ** (1.3572)	4.5341 ** (1.3854)	3.6846 ** (1.3116)	5.8908 ** (1.8488)	7.5783 ** (1.0969)	4.4318 ** (1.3115)	4.7613 ** (1.2761)	2.6209 * (1.2868)	4.3268 ** (1.3552)

Public sector

	13 countries	NO ARG	NO BOL	NO BRA	NO CHL	NO COL	NO CRI	NO ECU	NO HND	NO MEX	NO PAN	NO PER	NO URY	NO VEN
Wage share	0.1708 ** (0.0436)	0.1967 ** (0.0440)	0.1871 ** (0.0463)	0.1570 ** (0.0438)	0.1322 ** (0.0419)	0.1354 ** (0.0433)	0.1695 ** (0.0510)	0.1757 ** (0.0445)	0.3138 ** (0.0559)	0.2075 ** (0.0461)	0.0920 ** (0.0324)	0.1586 ** (0.0442)	0.1733 ** (0.0443)	0.1974 ** (0.0454)
GDP per capita	1.0024 (1.0080)	1.8921 # (1.0873)	1.7618 (1.2429)	1.3840 (1.0303)	2.1993 * (0.9598)	1.3870 (0.9988)	1.0376 (1.0141)	1.3425 (1.0638)	-2.1846 # (1.2772)	-0.4910 (1.0025)	1.3209 (0.8508)	0.7956 (0.9859)	0.6482 (1.1335)	0.6291 (1.0634)

Notes: #, * and ** indicate significance at 10, 5 and 1% levels, respectively.

Based on pooled OLS estimates without time dummies.

White heteroskedasticity-consistent standard errors in parentheses.

Data are transformed as the Hodrick-Prescott trend of the variables.

Hodrick-Prescott trend is based on the years 1984-1997 and a smoothing parameter of 100.

GDP per capita is measured in PPP current international dollars in log form.

Paraguay is excluded from the sample due to data unavailability.

Table A.8 : Difference regressions of employment shares on wage share and GDP: robustness with respect to dropping one country at a time from the sample

Small firms

	13 countries	NO ARG	NO BOL	NO BRA	NO CHL	NO COL	NO CRI	NO ECU	NO HND	NO MEX	NO PAN	NO PER	NO URY	NO VEN
Wage share	-0.1281 (0.7438)	-0.1299 (0.7491)	-0.4987 (0.7626)	-0.1615 (0.7671)	-0.0192 (0.7777)	-0.1423 (0.7862)	-0.0066 (0.7272)	-0.5293 (1.4216)	-0.0440 (0.7412)	-0.1264 (0.7833)	0.2073 (0.7904)	-0.0155 (0.7569)	-0.3688 (0.7798)	-0.0442 (0.7170)
GDP	-7.3221 (4.7382)	-8.0677 # (4.8215)	-6.1373 (4.9617)	-7.3569 (5.0524)	-8.3239 (5.2102)	-6.4706 (5.0317)	-3.5679 (4.9073)	-8.4544 # (4.8671)	-8.3281 (5.0461)	-8.5999 (5.1491)	-9.0832 # (5.0105)	-6.0290 (5.1713)	-7.3088 (4.9561)	-7.2085 (4.4487)

Self-employed

	13 countries	NO ARG	NO BOL	NO BRA	NO CHL	NO COL	NO CRI	NO ECU	NO HND	NO MEX	NO PAN	NO PER	NO URY	NO VEN
Wage share	2.4794 ** (0.6435)	2.5513 ** (0.6500)	2.7848 ** (0.6869)	2.5790 ** (0.6801)	2.5318 ** (0.6978)	2.5891 ** (0.6491)	2.6938 ** (0.6316)	2.0709 (1.4455)	1.7325 ** (0.4996)	2.4929 ** (0.6479)	2.5577 ** (0.6334)	2.4099 ** (0.6830)	2.5910 ** (0.6397)	2.3896 ** (0.6829)
GDP	-21.9377 ** (5.5215)	-23.8089 ** (5.7632)	-23.3574 ** (5.5950)	-22.2842 ** (5.9494)	-21.8693 ** (6.0586)	-22.8759 ** (5.7347)	-23.1414 ** (5.5529)	-21.4913 ** (5.9727)	-16.0536 ** (3.7123)	-22.4059 ** (6.1684)	-21.9973 ** (5.9944)	-22.7675 ** (6.2171)	-22.8645 ** (5.5710)	-19.7015 ** (6.5579)

Domestic service

	13 countries	NO ARG	NO BOL	NO BRA	NO CHL	NO COL	NO CRI	NO ECU	NO HND	NO MEX	NO PAN	NO PER	NO URY	NO VEN
Wage share	-0.4245 * (0.1854)	-0.4355 * (0.1933)	-0.3134 # (0.1721)	-0.3833 * (0.1761)	-0.4914 * (0.1928)	-0.4427 * (0.1949)	-0.4582 * (0.1910)	-0.5048 (0.3927)	-0.4735 * (0.1960)	-0.3977 * (0.1894)	-0.2793 (0.1695)	-0.4406 * (0.1909)	-0.4448 * (0.1923)	-0.4872 * (0.1988)
GDP	1.7768 (1.2509)	2.3891 # (1.2592)	1.0922 (1.1883)	1.2097 (1.2471)	2.1532 (1.3518)	2.0347 (1.3146)	2.0213 (1.3512)	1.7598 (1.3813)	2.0730 (1.3854)	2.0629 (1.4275)	0.7139 (1.1526)	2.0533 (1.4001)	1.0625 (1.2503)	2.6841 # (1.4683)

Large firms

	13 countries	NO ARG	NO BOL	NO BRA	NO CHL	NO COL	NO CRI	NO ECU	NO HND	NO MEX	NO PAN	NO PER	NO URY	NO VEN
Wage share	-1.7821 * (0.8301)	-1.8625 * (0.8584)	-2.0700 * (0.8386)	-1.8350 * (0.8716)	-1.8643 * (0.8924)	-1.8208 * (0.8456)	-2.1214 * (0.8707)	-1.6432 (1.8000)	-1.1566 (0.7337)	-1.6515 # (0.8275)	-1.9698 * (0.8639)	-1.8710 * (0.8645)	-1.6134 # (0.8359)	-1.5643 # (0.8144)
GDP	31.0928 ** (6.8004)	32.8774 ** (6.9806)	33.0752 ** (6.5488)	32.0525 ** (7.2112)	31.9477 ** (7.4698)	30.9062 ** (7.1001)	30.2838 ** (7.2585)	32.2961 ** (7.0657)	27.3565 ** (6.9300)	33.9640 ** (7.2396)	30.2834 ** (7.4756)	29.7210 ** (7.6155)	31.8272 ** (6.9469)	27.0476 ** (6.6556)

Public sector

	13 countries	NO ARG	NO BOL	NO BRA	NO CHL	NO COL	NO CRI	NO ECU	NO HND	NO MEX	NO PAN	NO PER	NO URY	NO VEN
Wage share	-0.0959 (0.5245)	-0.0718 (0.5182)	0.1410 (0.5568)	-0.1434 (0.5420)	-0.1088 (0.5472)	-0.1357 (0.5437)	-0.0691 (0.5311)	0.5973 (0.9686)	-0.0316 (0.4957)	-0.2678 (0.5144)	-0.4410 (0.4687)	-0.0330 (0.5190)	-0.1084 (0.5345)	-0.2245 (0.5526)
GDP	-3.9293 (4.1236)	-3.7577 (4.4040)	-4.9844 (4.2350)	-4.0100 (4.3528)	-4.1252 (4.4964)	-3.9188 (4.2650)	-6.0236 (4.2361)	-4.4028 (4.3114)	-5.0861 (3.9544)	-5.3724 (4.5826)	-0.3253 (3.6872)	-3.3202 (4.1702)	-3.0137 (4.3525)	-3.1775 (4.8256)

Self-employed

	13 countries	NO ARG	NO BOL	NO BRA	NO CHL	NO COL	NO CRI	NO ECU	NO HND	NO MEX	NO PAN	NO PER	NO URY	NO VEN
Wage share (-1)	-1.4102 * (0.6804)	-1.4149 * (0.6890)	-1.3439 # (0.7226)	-1.4901 * (0.7110)	-1.3590 # (0.7092)	-1.4709 * (0.6983)	-1.4557 * (0.6598)	-1.3996 (1.1908)	-1.0758 (0.6856)	-1.5640 * (0.6986)	-1.7473 * (0.7224)	-1.5401 * (0.6835)	-1.4042 * (0.6921)	-1.0638 (0.7064)
GDP(-1)	0.5092 (4.2953)	0.6876 (4.4754)	1.0579 (4.2772)	0.7217 (4.4183)	0.6324 (4.8563)	0.3947 (4.4390)	0.0986 (4.4194)	-0.5352 (4.3762)	-0.4971 (4.1389)	0.1657 (4.6007)	2.3017 (4.7210)	0.5282 (4.9786)	0.6159 (4.5331)	0.4360 (4.5692)

Notes: #, * and ** indicate significance at 10, 5 and 1% levels, respectively.

Including fixed effects and time dummies.

White heteroskedasticity-consistent standard errors in parentheses.

Based on differencing of employment share variables and log growth rates of wage share and GDP.

GDP is measured in constant terms (yielding identical results based on local currency or U.S. dollars).

Paraguay is excluded from the sample due to data unavailability.

Figure 1: Non-agricultural employment shares for 14 Latin American countries, 1990-1997

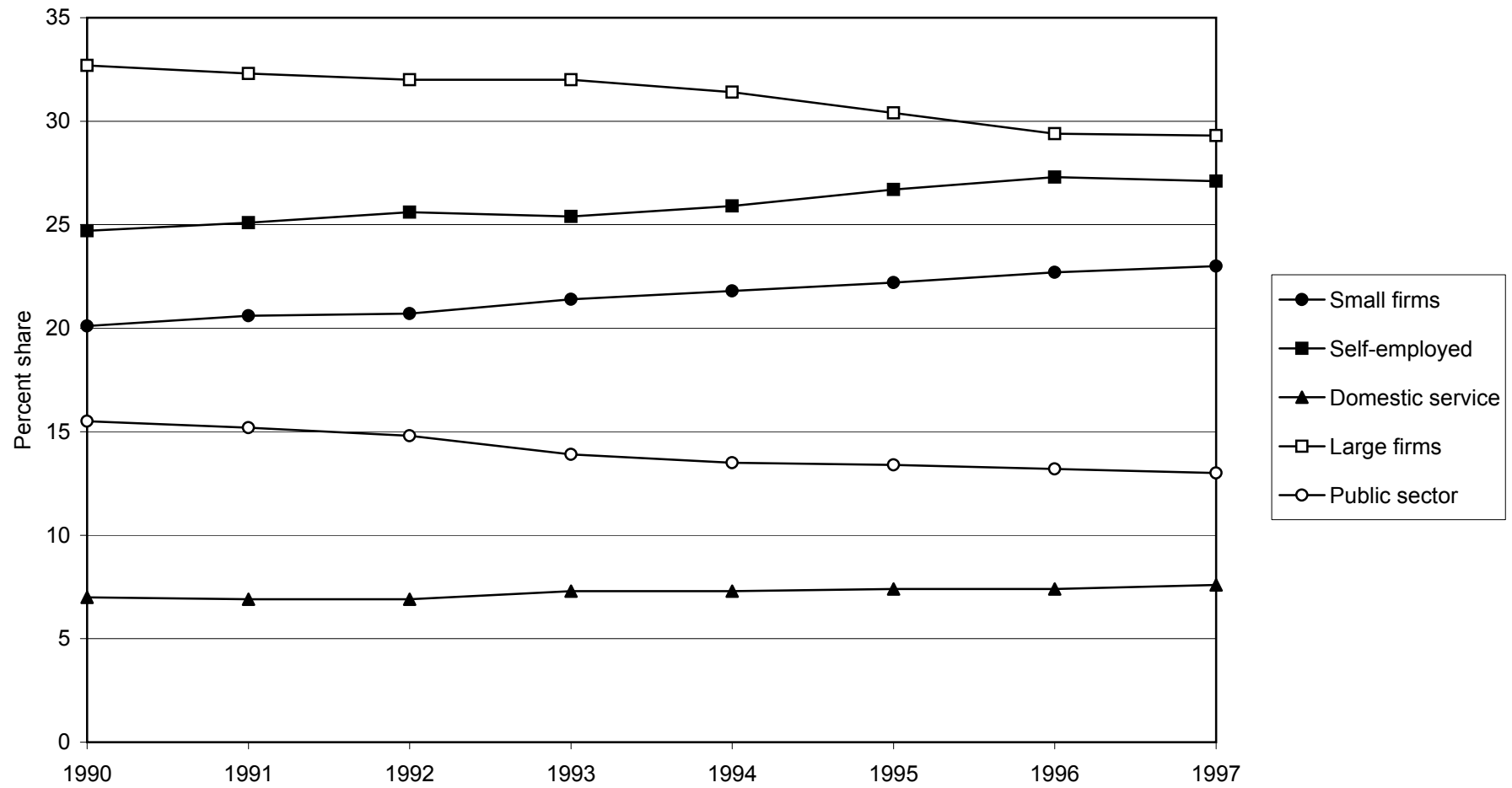


Figure 2: Urban employment shares by gender, 12 Latin American countries, 1990-99

