
CHAPTER 2

Economic Insecurity in Latin America and the Caribbean: The Stylized Facts

LATIN AMERICA SUFFERS FROM A HIGH DEGREE OF ECONOMIC VOLATILITY. A HISTORY OF repeated booms and busts has made economic insecurity a major concern for workers and households across the region, and especially for the poorer segments of the population, who are more exposed to the consequences of income and employment variability.

Drawing on both macroeconomic and microeconomic information, this chapter sets the stage for the analysis in the rest of the report by reviewing the major trends in economic volatility in Latin America over the last three decades. The objective is to establish the facts concerning (a) Latin America's performance over time and relative to the international experience in terms of aggregate volatility—that is, the variability of key economic variables such as consumption and income; and (b) economic insecurity from the perspective of individual workers and households—that is, the fluctuations in employment, unemployment, and labor earnings.

Methodological Considerations

How does the economic risk faced by workers and households arise? The answer to this question provides the organizing framework for this chapter. Here, risk may be measured by the variability of the real earnings of employed workers; the level, incidence, and duration of unemployment; the rate of turnover in jobs

or, inversely, the average job tenure; and the quality or precariousness of available jobs (a concept often related by observers to informality). In addition, the inequality of income distribution could be seen as a measure of the risk of faring poorly relative to others in society. This deserves mention here because increased inequality may lie behind the concern with economic insecurity that appears to have spread across the region.

The risks faced by households arise from two sources. First, they may reflect just aggregate volatility—itsself due to external shocks from global goods or financial markets, volatile fiscal or monetary policies, and other factors. The speed and extent with which aggregate shocks are transmitted to household income and employment outcomes depends on factors including the sensitivity of labor demand to wages, and labor market policies and institu-

tions. Second, risk faced by households may arise from microeconomic or sectoral volatility—namely, such factors as the changing allocation of resources across economic sectors and the rapid obsolescence of skills—unrelated to aggregate disturbances (see Box 2.1). This chapter is organized around the following three factors: aggregate risk, the transmission of aggregate risk to households, and microeconomic risk.

Assessing Latin America's performance along these three dimensions poses serious methodological challenges. Beyond basic national income aggregates, there are few broadly available labor market and microeconomic indicators that permit comparisons across countries or that can give a regional perspective on the key issues. Some, such as unemployment rates, differ sharply in magnitudes in ways that suggest differences in data collection or definitions.

BOX 2.1

Defining and Measuring Insecurity

In this report we extensively use terms such as *economic insecurity*, *uncertainty*, *variability*, and *volatility*. In theory, these concepts are not identical, but in practice they are closely related.

Definitions

Economic insecurity refers to the uncertain environment faced by workers and households due to erratic movements in key economic quantities and prices, such as employment, income, and real wages. These variables change, sometimes abruptly, from one month or year to the next, and the uncertainty surrounding their future values is the essence of economic insecurity. In the economics literature, this is commonly referred to as *uncertainty* or *risk*.

It is important to distinguish between two kinds of risks. *Aggregate* or *common* risks affect equally most or all economic actors. For example, the risk posed by fluctuations in worldwide economic activity is common to all developing countries, while that posed by fluctuations in domestic economic activity is common to all workers and firms in the national economy. In contrast, other risks are *individual* (equivalently, *microeconomic*) or *idiosyncratic*—they affect only specific individuals or particular groups of economic actors. For example, fluctuating demand for steel is primarily a risk specific to the steel industry and its workers; uncertain world coffee prices are a source of idiosyncratic risk for coffee-exporting countries but not for the rest.

Volatility—or *variability*—refers in turn to the variation of a magnitude around some central trend (typically its average or median value), for example, the movement of oil prices relative to their historical average. In some cases, part of the variation of certain economic variables may be predictable; for example, prices of agricultural goods typically rise before the harvest and fall afterward.

Strictly speaking, then, volatility and uncertainty are not exactly synonymous: the former refers to the overall variation of a variable, while the latter refers only to the unpredictable part of that variation. In practice, however, the two usually go hand in hand: volatile variables are also hard to predict. For this reason, this report focuses on measuring volatility as a rough approximation to uncertainty and insecurity.

Measurement

How should volatility be measured? Ideally, we need some summary indicator of the extent and frequency with which a variable tends to depart from its central trend. A number of such measures are available from statistical theory, and in this report we use the *standard deviation* most often, which quantifies the extent to which a variable typically departs from its average or mean value. Since our variables of interest are in many cases expressed as percentages, their standard deviation is also a percentage.

While the standard deviation is the most commonly used measure of dispersion, it is by no means the only one, and other measures may be more appropriate in specific contexts. For example, the coefficient of variation—defined as the standard deviation of a variable divided by its mean—might be preferable when the mean and standard deviation tend to move together, as is usually the case with variables that display rising or falling trends. Other “robust” measures (such as the interquartile range) may be superior in the presence of infrequent, large deviations of a variable from its central value. Using some of these alternatives rather than the standard deviation to measure volatility would change quantitatively some of the empirical findings in the report, but would leave them qualitatively unchanged.

Others, such as labor turnover, are available only for a few countries. In many cases, therefore, the discussion has to be guided by what can be learned from a few case studies.

It is likewise difficult to identify the links between the evolution of economic insecurity in Latin America over the last two decades and the process of economic and institutional reform undergone by many of the region's

economies. In our framework, households could face increased risk due to larger aggregate shocks, strengthened channels of transmission, higher microeconomic risks, or a combination of all three. Reforms may have affected all three of these ingredients, but disentangling their impact is no easy matter. In many dimensions, the postreform history is too short to allow distinction between transitional

effects derived from intersectoral resource reallocation and permanent impacts on economic volatility faced by households—a distinction that is critical for the design of social safety nets. Moreover, radical reform policies are often implemented along with stabilization measures, so that the permanent effects of the former are difficult to separate from the largely temporary consequences of the latter.

Aggregate Volatility in Latin America

Like other developing regions, Latin America faces a high degree of volatility of the major economic aggregates related to national income, expenditure, and consumption.

Volatility in Aggregate Output

Over the last four decades, the volatility of real output growth as measured by the standard deviation of the growth rate of real GDP¹ in Latin America has been twice as high as in industrial economies. Figure 2.1 shows that

the volatility of GDP growth in the typical (median) industrial country over the last four decades was just above 2 percent. In contrast, it exceeded 4 percent in Latin America, higher than the levels seen in the most stable developing regions—the seven East Asian miracle economies and South Asia. Sub-Saharan Africa (which comprises mainly low-income economies), the Middle East, and North Africa (largely consisting of oil-exporting economies whose performance tracks closely the vagaries of world oil prices), and the rest of East Asia² experienced even higher GDP growth volatility than Latin America.

Volatility in Aggregate Consumption

Latin America also suffers high volatility in real private consumption growth—an aggregate which provides a more accurate measure of the change in the standard of living of the population of each region. Using the standard deviation of consumption growth as the yardstick, Figure 2.2 shows

FIGURE 2.1

Long-Term Volatility of Real GDP Growth

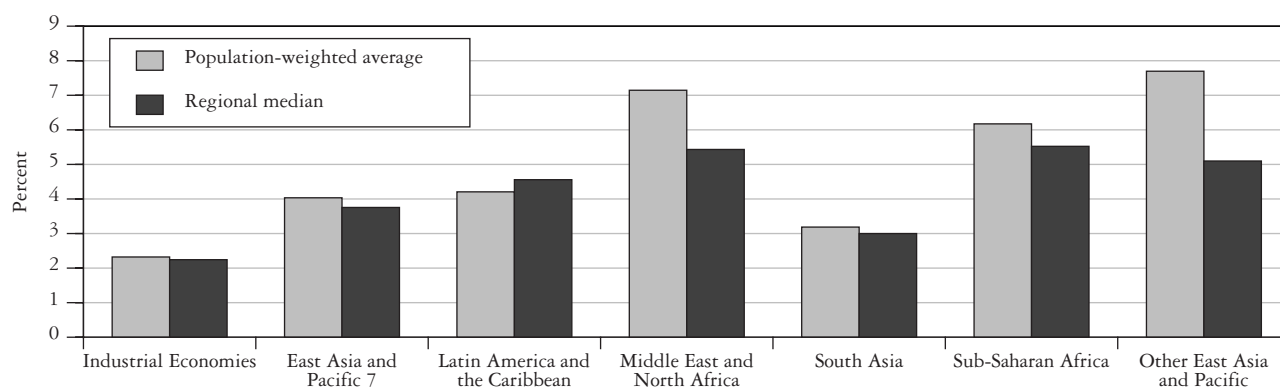
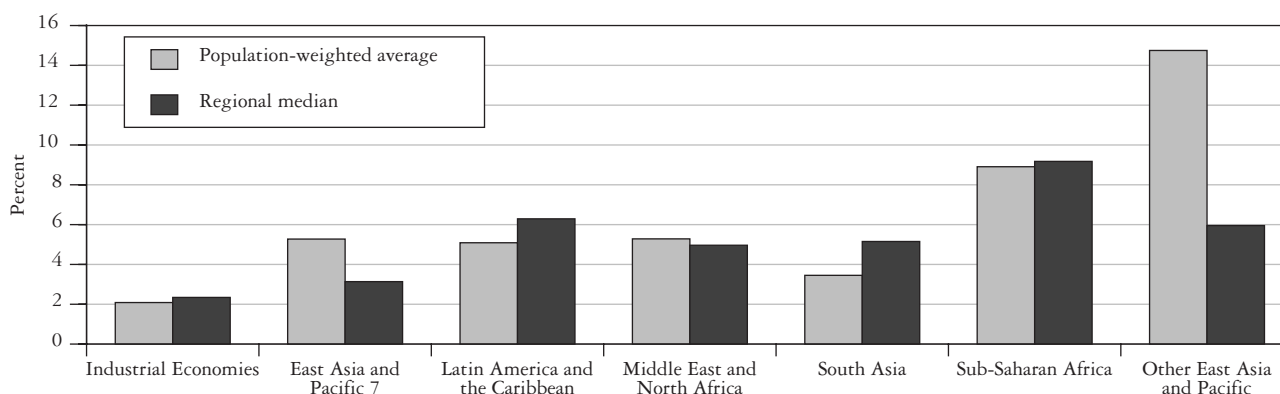


FIGURE 2.2

Long-Term Volatility of Real Private Consumption Growth



that volatility in Latin America is three times higher than in industrial economies, well above the levels of South Asia and on par with those witnessed in the Middle East and North Africa.

Differences in Volatility Across Countries Within the Region

The LAC region comprises a large number of different economies, and their respective performance from the point of view of economic volatility has been equally diverse (Table 2.1). The volatility of annual GDP growth has been highest in Nicaragua (with a standard deviation exceeding 7 percent) and the Bahamas (8 percent), and lowest in Guatemala and Colombia (with standard deviations around 2 percent). These two countries, along with Bolivia and Ecuador, the data of which do not yet reflect the 1999–2000 crisis, also possess the best record in terms of long-term stability of real private consumption growth. At the other extreme, the largest variability in consumption growth rates, in excess of 10 percent, was suffered by several of the smaller economies in the region—the Bahamas, Belize, Guyana, Nicaragua, and Trinidad and Tobago—as well as Chile.

The regional and country experiences in Figures 2.1 and 2.2 and Table 2.1 illustrate three general points. First, lower-income economies typically suffer from higher macroeconomic volatility. This is apparent from the fact that in all developing regions volatility is considerably higher than in industrial economies. This largely reflects the fact that lower-income economies often possess less diversified productive structures than more advanced economies, which increases their exposure to risk; moreover, once shocks happen, lower-income countries are less able to weather them than richer countries, due to their more limited access to external financing and their less-developed domestic financial systems.

The second stylized fact, apparent from Table 2.1, is that with few exceptions smaller economies tend to suffer higher volatility than bigger economies. Smaller economies are typically much more open to trade than larger ones, and yet they cannot diversify their production as much as the latter. This makes them more vulnerable to terms of trade shocks (Easterly and Kraay 1999). Moreover, many of them are located in regions prone to hurricanes and other natural disasters, as is the case of the Caribbean subregion.

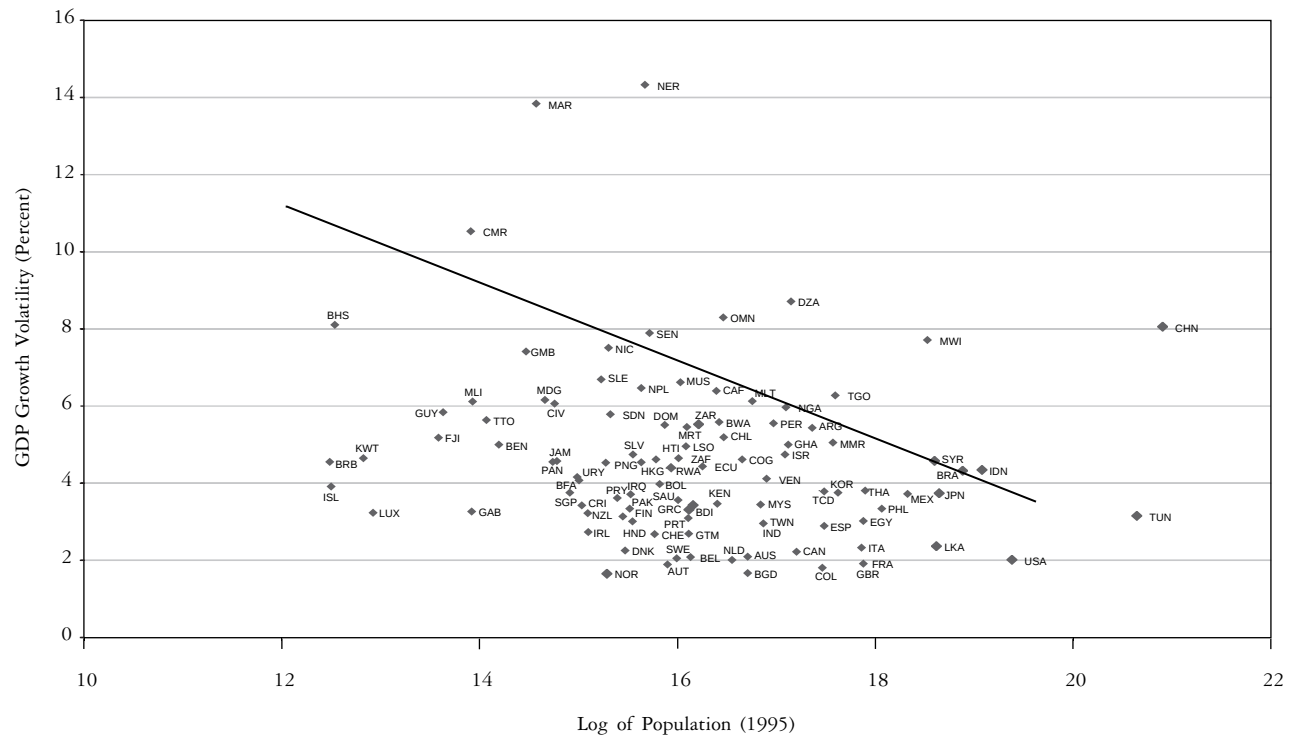
TABLE 2.1

Long-Term Volatility in Latin America

(Standard Deviations of Growth Rates, Percent)

COUNTRY	GDP	PRIVATE CONSUMPTION
Argentina*	5.4	5.5
Bolivia	4.0	2.7
Brazil	4.3	5.1
Chile	5.2	11.5
Colombia	2.4	2.7
Costa Rica	3.4	4.7
Dominican Republic	5.5	7.8
Ecuador	4.8	2.7
El Salvador	4.7	6.8
Guatemala	2.7	2.2
Haiti	4.6	4.5
Honduras	3.0	3.8
Jamaica	4.6	10.1
Mexico	3.7	4.0
Nicaragua	7.5	12.4
Panama	4.6	10.4
Paraguay	3.7	8.5
Peru	5.5	6.3
Trinidad and Tobago	5.6	12.3
Uruguay	4.2	6.3
Venezuela	4.4	5.2
<i>Mean</i>	4.5	6.5
<i>Median</i>	4.6	5.5
<i>Smaller countries</i>		
Bahamas	8.1	13.3
Belize	3.7	11.8
Barbados*	4.6	4.8
Guyana	5.8	19.5
<i>Mean</i>	5.5</	

FIGURE 2.3

GDP Growth Volatility and Country Size

These relationships between volatility and country size and volatility and per capita income are weak, however. Together, the latter two variables account for less than 10 percent of the observed variation in volatility across countries, which implies that its causes have to be found elsewhere. Indeed, Chapter 4 will show that the main roots of volatility lie in trade and financial shocks, policy volatility, and underdeveloped financial systems. These factors account for the bulk of macroeconomic volatility and—once they are taken into consideration—income level and country size are no longer significantly associated with aggregate volatility.

The third fact apparent from the region and country comparisons above is that in LAC, as in almost all developing regions, the volatility of consumption is typically larger than that of income or production (this is the case in 21 of the 25 economies in Table 2.1). This is in contrast with more developed economies, where the volatility of consumption growth is similar to or smaller than that of real income growth. This phenomenon is summarized by Figure 2.5, which presents volatility measures for both developing and industrial countries. Industrial countries typically cluster on or above the 45-degree line along which private consumption and real GDP growth are equally volatile. Developing economies, however, tend to cluster below the 45-degree line, reflecting their higher consumption volatility, and LAC economies are no exception to this rule.

This regional contrast reflects the more limited ability of consumers in developing economies, relative to those in the

industrial world, to protect their consumption from fluctuations in income through mechanisms such as asset depletion, borrowing, or countercyclical public sector policies. The result is that the impact of economic fluctuations on the welfare of households is likely much more severe in Latin America and other developing regions than in OECD economies.

Regional Trends in Economic Volatility

World regions experienced marked changes in economic volatility over the last four decades, and LAC has been no exception (see Figure 2.6). In industrial countries (as well as Sub-Saharan Africa), median GDP and consumption growth volatility peaked in the 1970s, largely a reflection of the global impact of the oil shocks of the 1970s. In LAC, in turn, volatility increased further in the 1980s—as the debt crisis and the ensuing macroeconomic and financial turmoil threw many of the region’s economies into disarray. The rise in the variability of macroeconomic aggregates was significant for LAC: the median standard deviation of real GDP growth rose from 3.5 percent in the 1970s to just under 5 percent in the 1980s, while that of private consumption growth rose to 6.1 percent, a level surpassed in that decade by only the low-income economies of Sub-Saharan Africa.

In the 1990s, however, the rising trend in aggregate volatility in Latin America was partially reversed. Contrary perhaps to popular perception, the available information on GDP (that reaches up to 1999 for the region’s largest economies³) shows that the variability of real GDP growth

FIGURE 2.5

GDP Growth Volatility and Private Consumption Growth Volatility

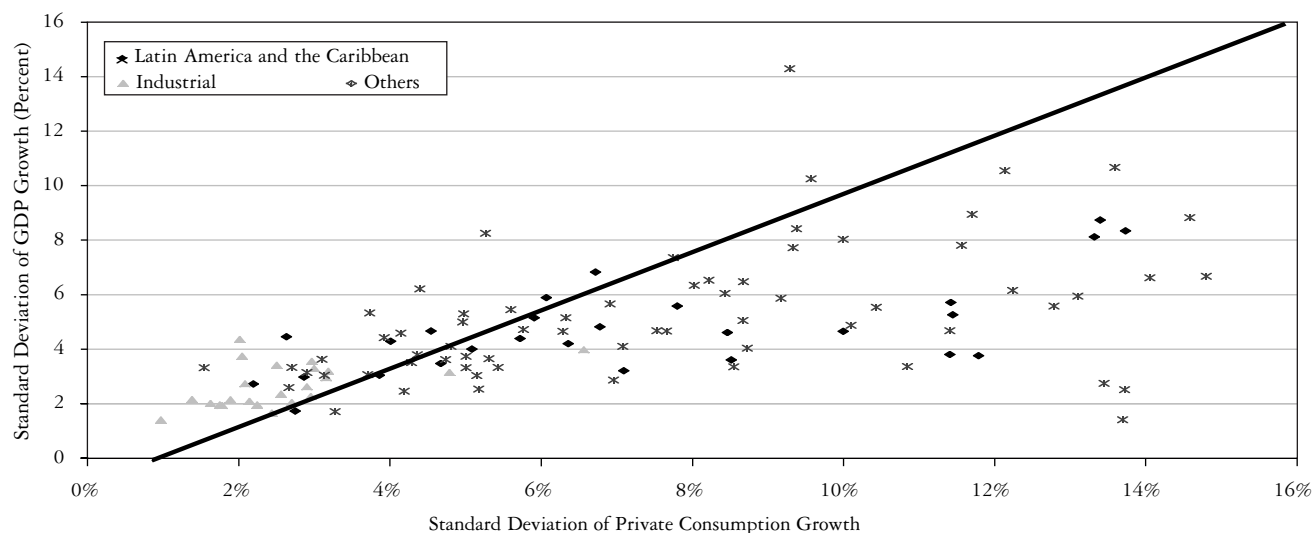


FIGURE 2.6

Volatility of Real GDP Growth by Decade

(Regional Medians)

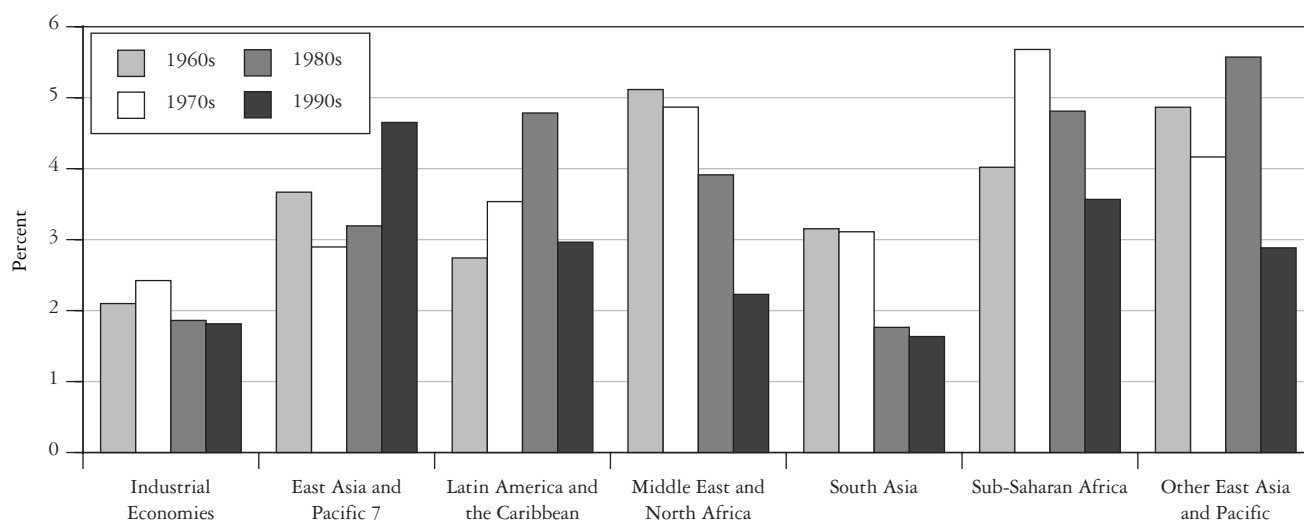
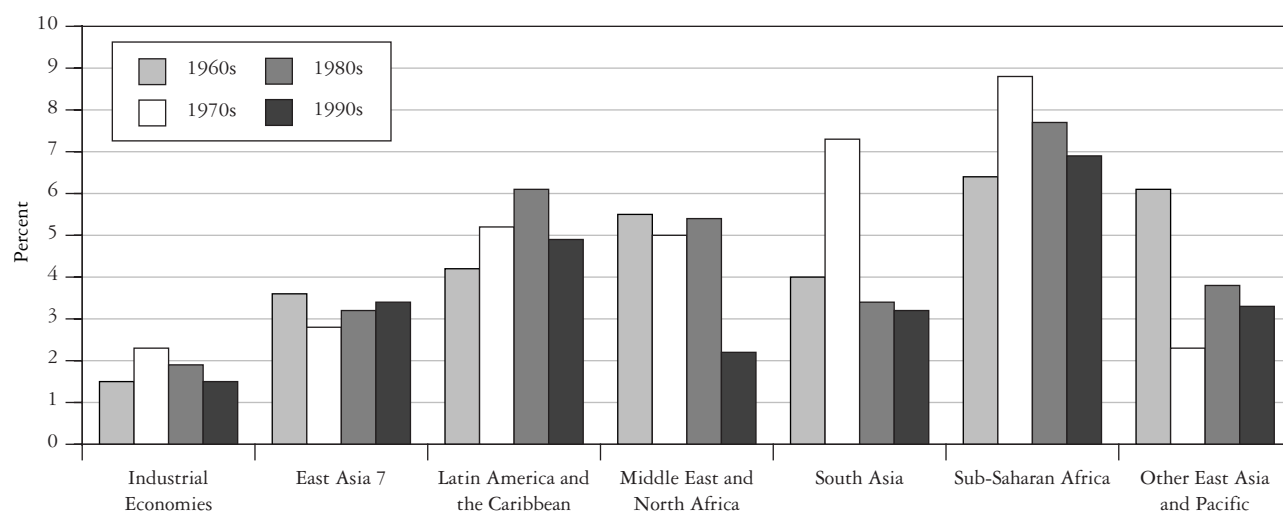


FIGURE 2.7

Volatility of Real Private Consumption Growth by Decade

(Regional Medians)



declined substantially across the region, to levels comparable to (and in a number of countries, lower than) those witnessed in the 1970s. This decline in growth volatility was shared by other developing regions, with the major exception of the East Asian miracle economies. In turn, the volatility of private consumption growth (on which data are only available though 1988) declined as well relative to the 1980s, but to a more limited extent than that of GDP growth.

It is worth emphasizing that this cycle of rising economic instability followed by declining economic instability in Latin America is readily apparent in the macroeconomic data, and is not a result of the breakdown of the period of analysis into subperiods (decades) used here. The same pattern arises with alternative period definitions,⁴ and even if annual rather than decade-based measures of volatility are

BOX 2.2

Trends in Aggregate Volatility in Latin America and the Caribbean

The discussion in the text assesses the time pattern of macroeconomic volatility by comparing the variability of GDP and private consumption growth during each of the last four decades. This choice of subperiods is, like any other, unavoidably arbitrary, and it is important to verify the robustness of any conclusions drawn from it. With this purpose, Figure 2.8 provides another perspective on the trends in volatility in the LAC region, based on a different method.

Rather than computing the volatility indicators for fixed 10-year periods, they are computed each year over the current year and the preceding nine years—that is, using a moving 10-year window. Thus, for example, the figure reported in the graph for 1995 refers to the standard deviation of the relevant macroeconomic variable

during 1986–95. Since the available data start in 1961, they do not permit calculation of such measures prior to 1970. In addition, volatility measures constructed in this manner tend to move slowly over time. Nevertheless, they are useful to identify not only trends, but also turning points in economic volatility.

The graphs confirm the volatility cycle in Latin America identified in the text. The variabilities of GDP and private consumption growth remain roughly stable until the late 1970s, and then rise sharply during the early 1980s. Median GDP volatility peaks in the late 1980s and declines steadily thereafter; consumption volatility follows a similar trend with some delay, peaking in 1991. At the end of the sample period, both measures attain levels similar to those of the late 1970s.

The decline in GDP growth volatility in the 1990s affected most countries in the region (20 out of the 25 shown in Table 2.2) with the exception of a few Caribbean economies (the Dominican Republic, Haiti, and Trinidad and Tobago), and Colombia and Venezuela. Further, 13 of the 25 economies in the table experienced lower GDP growth volatility in the 1990s than in the 1970s.

Regarding private consumption growth, performance was more mixed. In a number of countries in the region (13 out of the 25 in Table 2.2), volatility declined in 1990–98 relative to the 1980s, but rose in some of the largest economies—for example, Brazil, Mexico, and Venezuela. As a result, the decline in the region's population-weighted average consumption volatility was much more modest

FIGURE 2.8

Volatility of Growth of GDP and Private Consumption in Latin America
(Ten-Year Window, Regional Median)

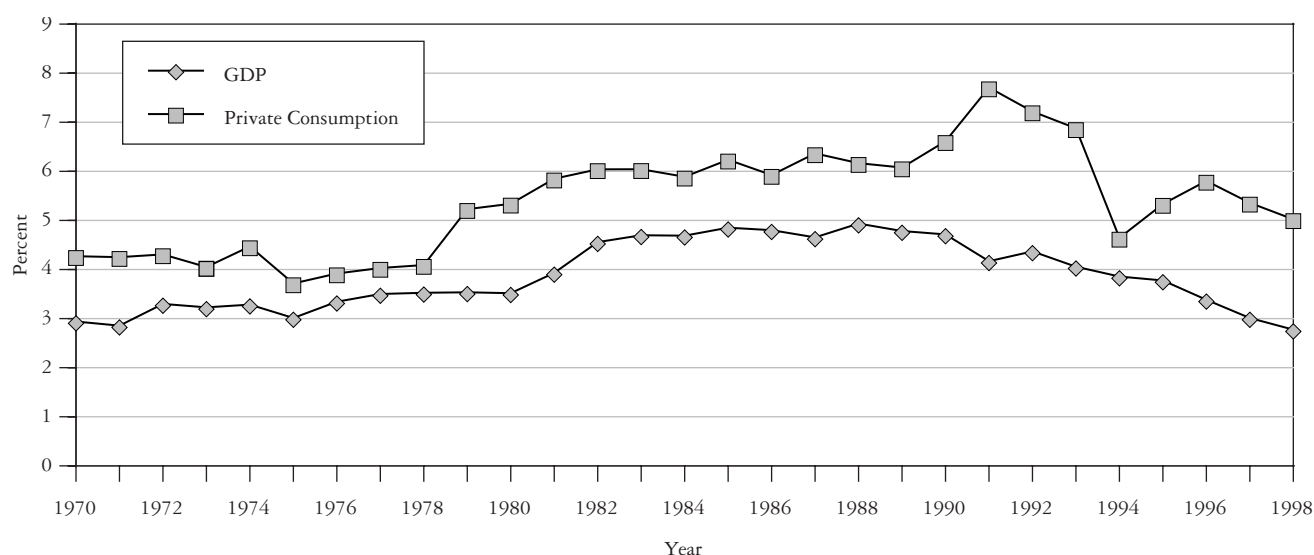


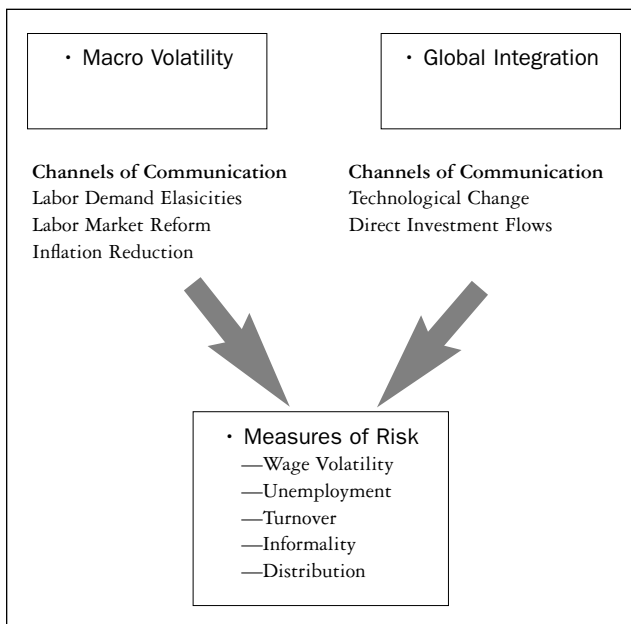
TABLE 2.2

Volatility in Latin America Over Time

(Standard Deviations of Growth Rates by Decade, Percent)

COUNTRY	GDP				PRIVATE CONSUMPTION			
	1960s	1970s	1980s	1990s	1960s	1970s	1980s	1990s
Argentina*	5.4	4.3	5.6	5.5	4.3	5.2	5.9	5.7
Bolivia	6.2	2.5	2.9	1.0	..	..	3.3	0.5
Brazil	3.5	3.2	4.6	3.0	3.6	4.9	4.4	4.9
Chile	2.5	6.7	6.4	3.5	12.0	16.8	9.4	3.4
Colombia	1.4	1.7	1.5	3.3	4.1	1.8	1.2	1.9
Costa Rica	3.1	1.9	4.5	2.4	4.5	3.7	6.1	3.2
Dominican Republic	8.8	4.4	2.7	4.4	10.8	6.7	4.5	8.7
Ecuador	2.0	5.3	4.5	3.4	2.1	2.0	2.5	0.3
El Salvador	2.8	3.1	5.7	1.9	4.2	6.3	6.0	6.9
Guatemala	2.0	1.6	2.7	0.8	1.1	1.4	2.4	1.0
Honduras	2.4	3.7	2.5	2.4	2.4	6.3	3.1	1.9
Haiti	4.3	3.8	2.9	6.4	4.3	4.8	4.4	..
Jamaica	2.3	7.1	4.3	2.2	3.9	9.5	7.6	16.5
Mexico	2.4	2.1	4.4	3.6	1.9	1.8	4.9	5.1
Nicaragua	3.3	12.2	5.4	2.3	4.9	11.7	15.8	14.4
Panama	1.6	3.0	6.5	2.6	..	..	11.3	10.2
Paraguay	2.3	2.3	5.3	1.5	3.8	4.5	11.2	12.5
Peru	2.5	2.6	8.4	5.2	2.8	6.7	8.3	4.6
Trinidad and Tobago	3.5	4.8	5.7	6.8				

FIGURE 2.9

The Links Between Aggregate and Microeconomic Volatility

increase during the period of study (see Fajnzylber and Maloney 2000).

Trade liberalization, and the labor market reform measures thought to be a necessary complement to it, have loosened the relationship between firm and employee. To start, in a highly competitive environment, the traditional promise of a lifetime labor contract is simply less realistic than in the past. More generally, competing firms need greater flexibility to reallocate or reduce their work forces

when economic conditions demand it. Recent research on labor market reform suggests that government-mandated reductions in firing costs had a negligible impact on *labor demand* in Brazil, Colombia, Peru, and Uruguay, but did reduce *tenure* to a greater or lesser degree.⁶ Though in all cases overall employment may rise as a result of these reforms, workers may be more exposed to layoffs than previously. The ambiguous impact on risk also arises from the diminished power of labor unions that has occurred either because of greater competition or the political evolution of the 1970s and 1980s. Weaker collective bargaining in Uruguay, for example, is associated with lower unemployment, but also more wage volatility and higher labor demand elasticities than in the past (Allen, Cassoni, and Labadie 1997; Cassoni 1999).

The successful fight against high inflation rates in the region, and the resulting reduction in the ability to adjust real wages through inflation, have led labor markets to adjust through employment instead. Given the absence of unemployment insurance in most countries, workers may feel more at risk, even if the shocks to labor demand are no larger than before. Figure 2.11 suggests an inverse relation between how much real wages fall with a shock to GDP and how much unemployment rises with the same GDP shock (Gonzalez 1999). Studying the impact over the last 20 years reveals ambiguous although broadly similar results. As inflation falls, Argentina, Mexico, Peru, and Venezuela do appear to adjust less through wages, but only Colombia and Mexico adjust more through unemployment as predicted.

FIGURE 2.10

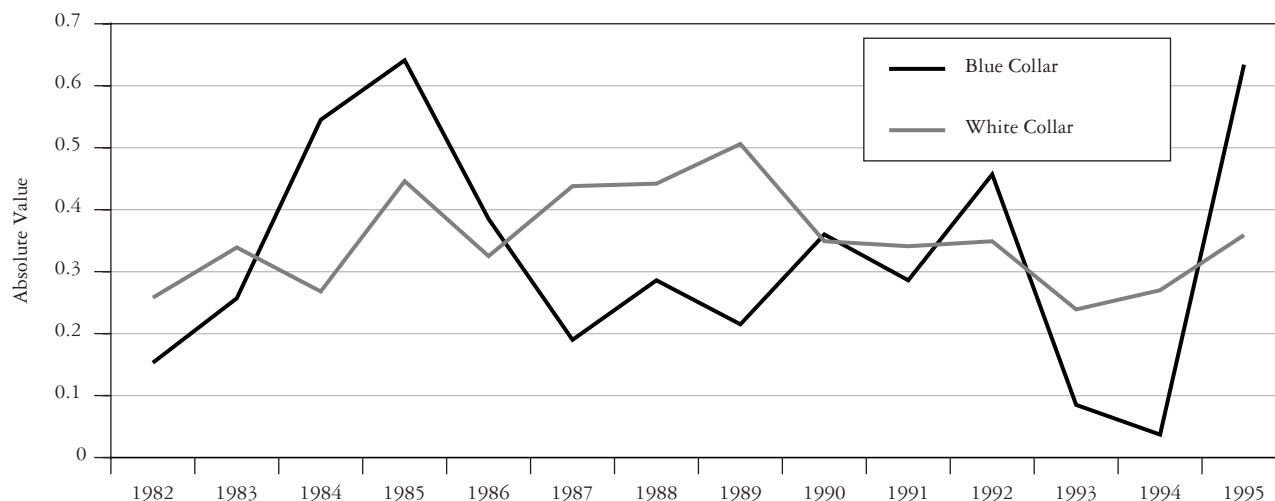
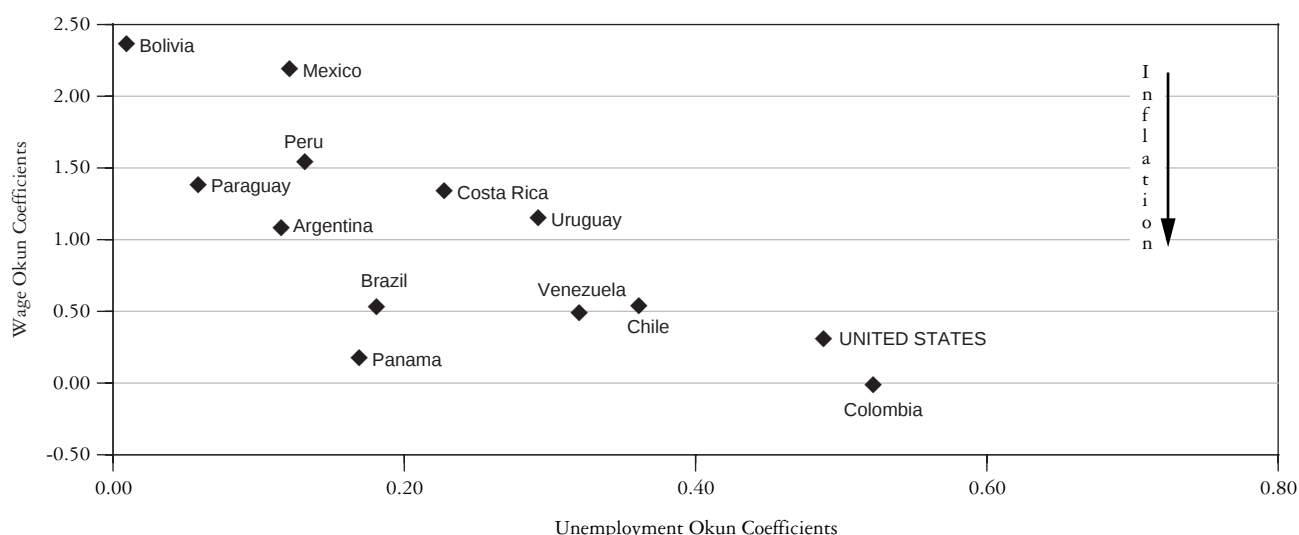
Long-Run Own Wage Elasticities, 1980–95, Chile

FIGURE 2.11

Wage and Unemployment Okun Coefficients

Brazil, Bolivia, and Uruguay show either counterintuitive or insignificant coefficients (Galindo and Maloney 2000).

Finally, as depicted by the right side of Figure 2.9, the general reduction in global barriers to direct foreign investment may also make it easier for foreign investors to relocate production in response to modest movements in wages.⁷ There is ample anecdotal evidence of such footloose industries, particularly in Central America, though the findings of research on firm entry and exit behavior in Chile and Colombia are ambiguous.⁸ More generally, being more tightly linked to the process of technological advance may create more dynamic industrial sectors in the region, but also require workers to retrain and find new jobs more frequently.

Are Latin American Workers Facing More Risk?

Despite the falling trend in macroeconomic volatility, the mixed evidence on changes in transmission mechanisms, and the possibility of direct microlinkages, the question remains as to whether, overall, workers are facing more risk than in the past.

Changes in Earnings Volatility

Wage or earnings volatility captures a central dimension of income volatility. At the aggregate level, Table 2.3 presents this information for 14 countries in the region. The cycle of rise and fall in volatility tracks closely that found in the macroeconomic aggregates. This is mainly a reflection

of the inflationary surge experienced by many Latin American economies in the 1980s, which resulted in a generalized rise in the variability of real wages during that decade, followed by a decline derived from the success of inflation stabilization. As a result, in the 1990s real wage volatility was broadly similar to, or even lower than, in the 1970s. The decline in the variability of real wages in the 1990s was particularly marked in Argentina, Bolivia, and Chile. Brazil and Peru also witnessed a substantial decline in wage volatility, although its average level in the 1990s was still high, reflecting the persistence of inflation in the early years of the decade.

It could be possible, however, that individual workers face higher idiosyncratic wage risk than disappears in aggregation. Calculating the variance of individual wages across a year from panel labor force data, Arango and Maloney (2000a) find no trend in Mexico since 1987, and a downward trend in Argentina, consistent with the aggregate data above. Since workers may be particularly concerned about negative shocks, Figure 2.12 transforms the changes (by taking the squared values), but again does not reveal a worsening trend. In Mexico, the size of negative shocks for skilled workers rose and

TABLE 2.3

Real Wage Growth Volatility in Latin America and the Caribbean, Percent

COUNTRY	1970s	1980s	1990s	ENTIRE PERIOD
Argentina	15.8	15.0	2.1	12.2
Bolivia	14.5	31.9	3.9	20.3
Brazil	8.7	26.2	10.2	16.8
Chile	20.6	6.0	1.1	12.0
Colombia	6.7	3.1	2.5	3.9
Costa Rica	6.9	16.3	3.3	11.2
Ecuador	6.1	10.7	6.4	8.6
El Salvador	7.1	14.1	13.0	11.7
Guyana	5.9	15.4	13.3	11.8
Mexico	3.2	10.2	7.9	8.1
Paraguay	4.3	5.1	6.6	5.1
Peru (CEPAL)	7.0	23.5	9.3	16.1
Peru (ILO)	11.2	28.9	10.2	19.3
Uruguay	6.4	9.1	4.3	7.5
Venezuela	3.3	6.2	10.6	8.0
<i>LAC Mean</i>	<i>8.5</i>	<i>14.8</i>	<i>7.0</i>	<i>11.5</i>
<i>LAC Median</i>	<i>6.9</i>	<i>14.1</i>	<i>6.6</i>	<i>11.7</i>

such measures will miss. One way to rectify this is to examine changes in the shape of the full distribution of income shocks, and not just those at some average such as the median. When we examine the 25th quantile (the point at which 25 percent of income shocks are lower and 75 percent higher), we find trends similar to those found at the median for Mexico, and no significant trend in Argentina

(see Figure 2.13). This evidence suggests that workers are not being hit particularly harder by catastrophic shocks than prior to the reforms.

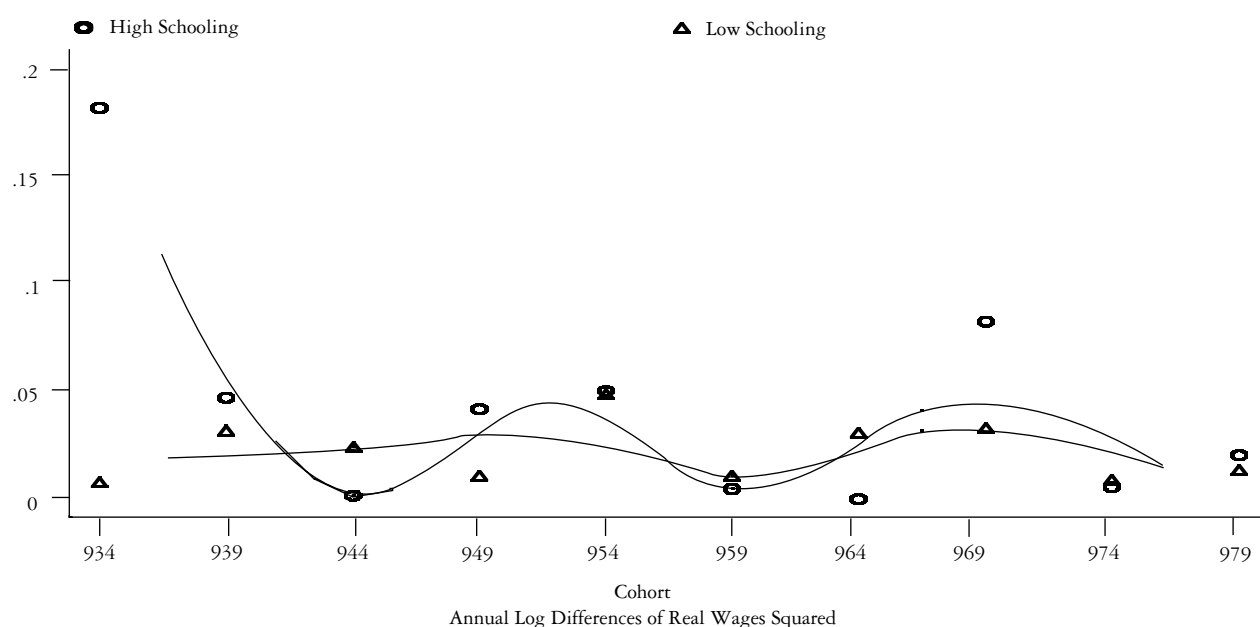
Trends in Unemployment Rates

In sum, workers are not facing higher volatility in real wages. However, as suggested above, this may only reflect a new reality in that, because of a fall in inflation without deep reforms of labor market institutions, adjustments occur largely through fluctuations in unemployment. Since, in the absence of insurance, unemployment implies a catastrophic fall in income, this is clearly a central dimension of the risk that workers face. Table 2.4 presents decade averages of the unemployment rate for 13 Latin American economies. The trend that the table reveals is broadly similar to that already identified from the macro-economic aggregates. Unemployment rates rose in the 1980s in almost all the countries in the table, with the exception of only Brazil and Mexico. In the 1990s, however, the rise was partially reversed: average unemployment declined in 7 out of 13 economies, although it did increase in some major economies such as Argentina.

The net result is that in the 1990s average unemployment rates still remained above the levels of the 1970s in 7 of 12 economies. The increase was substantial in Argentina, Paraguay, and Venezuela, and the data for

FIGURE 2.12

FIGURE 2.13

White- and Blue-Collar Wage Volatility, Argentina

Colombia and Uruguay conceal falls in the early 1990s that were dramatically reversed by the end of the decade: booms in the nontradables sector, particularly construction, absorbed labor and partially obscured the dislocations in the restructuring tradables sector. The end of these booms both displaced workers, and revealed the higher industrial sector unemployment. More generally—and perhaps central to the stated feeling of insecurity in the region—

Argentina, Brazil, Mexico, and Uruguay experienced historically unusual periods of growth with limited formal sector employment creation.⁹ This is especially striking in Uruguay in the late 1990s, where unemployment was at levels similar to those of the debt crisis years in the early 1980s, despite apparently healthy economic growth.

Behind these numbers lie numerous phenomena that are fundamentally transitory: the dislocations due to industrial restructuring, the temporary real exchange rate overvaluations accompanying necessary stabilization plans, contamination effects from the Tequila, Asian, and Brazilian crises, and in Colombia's case, a rise in rural violence. Neither theory, nor the experiences of the Asian newly industrialized countries and of Chile suggest that openness implies higher long-term rates of unemployment. However, lower inflation rates may imply more frequent adjustment through quantities that push up unemployment rates during downturns, and hence imply more risk for workers.

In addition, the nature of unemployment may change even if the level stays the same—either a higher propensity to become unemployed or longer unemployment spells may be interpreted as riskier by workers. Neither effect enjoys strong empirical support. Probit analysis using the Argentine and Mexican panel data, for example, does not suggest secular increases in the probability of becoming

TABLE 2.4

Average Unemployment Rates in Latin America and the Caribbean, Percent

COUNTRY	1970s	1980s	1990s	ENTIRE PERIOD
Argentina	4.1	4.8	12.3	6.9
Bolivia	6.3	7.7	4.8	6.3
Brazil	6.6	5.4	5.4	5.7
Chile	10.5	14.4	7.0	10.7
Colombia	9.6	11.3	10.7	10.6
Costa Rica	5.0	6		

unemployed. In both countries, skilled workers in non-tradable or protected sectors show lower probabilities of becoming unemployed, but also more difficulty in being rehired after job loss. Colombia shows more substantial swings in hiring and firing with given movements in GDP, and exit rates out of employment *and unemployment* rose by 1 percent (Kugler 1999).

Neither Mexican nor Brazilian panel data suggest an increase in duration across the 1990s. However, using aggregate labor flow data, Figures 2.14 and 2.15 suggest a possible rise in duration of unemployment in the interior of Uruguay¹⁰ relative to the early 1990s, and maybe a rise in Montevideo. However, duration is always inversely cor-

related with rising unemployment, which makes it difficult to postulate a permanent movement. Further, in Chile, the duration of unemployment increases during the restructuring period, but then falls essentially to its 1960s levels (Figure 2.16a).¹¹

Changes in Turnover Rates

More generally, turnover among jobs, while a necessary byproduct of the creative destruction that offers new opportunities to some workers, may also represent more uncertainty for others. As Table 2.5 shows, turnover is higher (or the length of tenure lower) in LAC countries compared to OECD countries. However, turnover depends

FIGURE 2.14

Unemployment Rate and Expected Duration, Montevideo

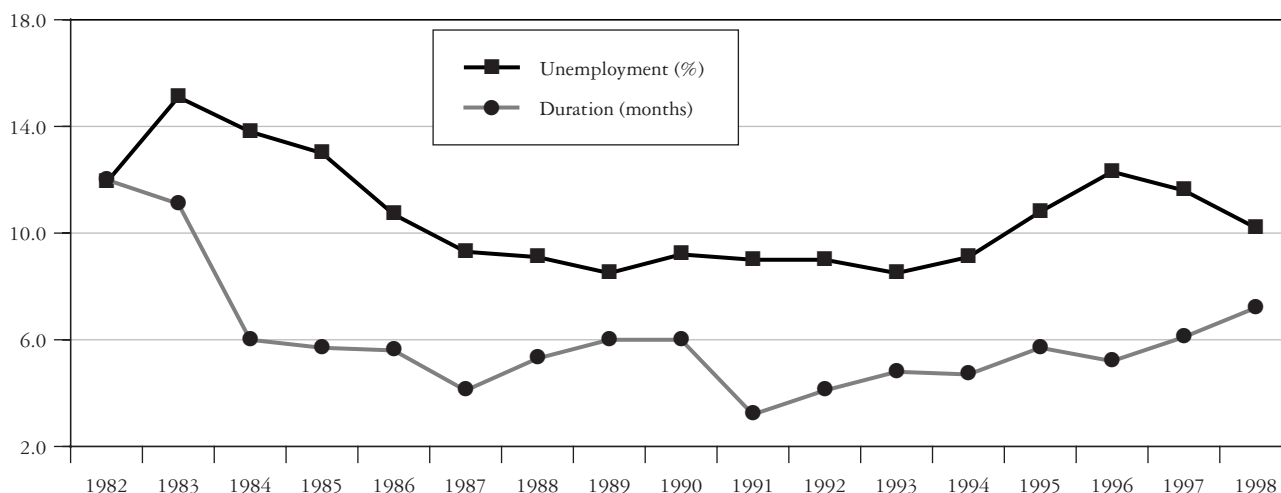


FIGURE 2.15

Unemployment Rate and Expected Duration, Interior Uruguay

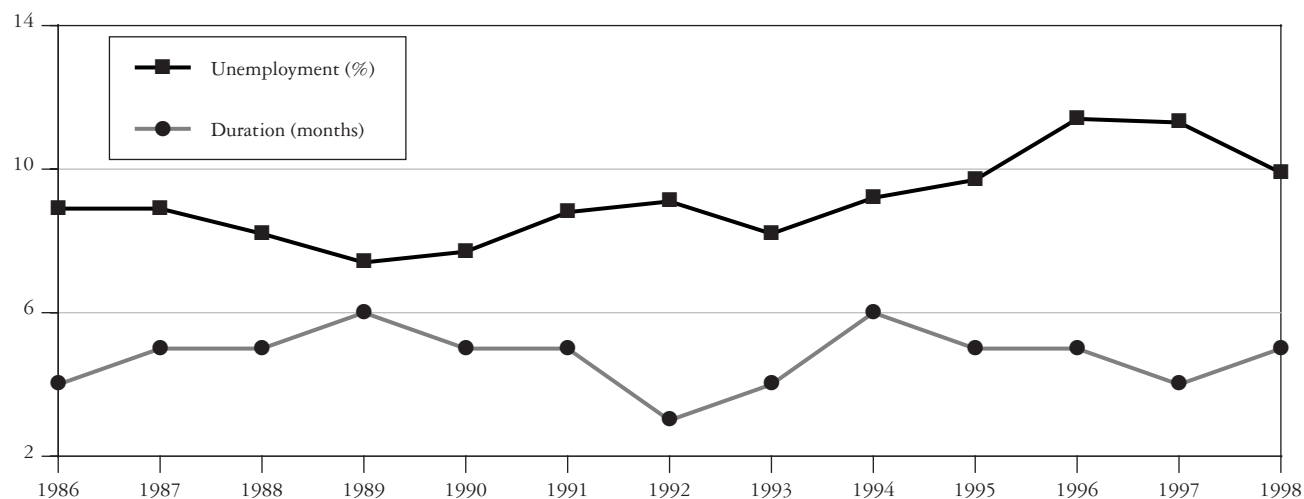
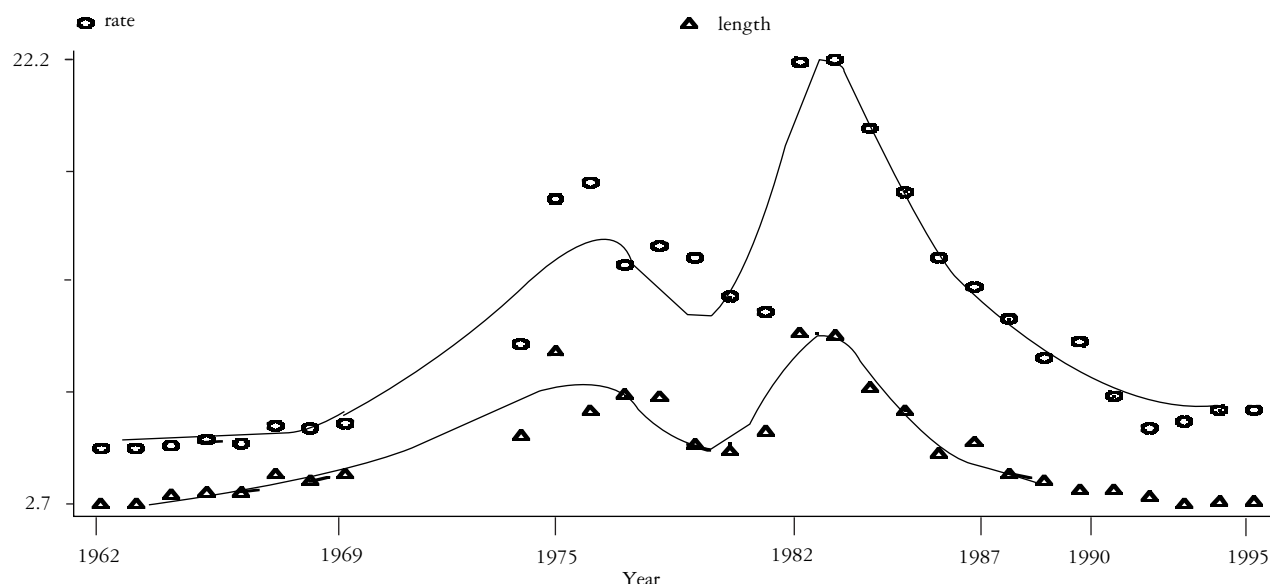


FIGURE 2.16A

Unemployment Rate and Expected Duration, Greater Santiago

on education, per capita income, and other demographic/growth variables. Thus, for example, younger workers change jobs more frequently, and lower levels of education can imply lower levels of firm specific capital, and hence higher voluntary separations. In fact, in Mexican enterprise surveys, over 80 percent of separations were reported to be quits, not fires (Maloney 1999; Maloney and Ribeiro 1999). As Figure 2.16b suggests, once we adjust for these factors, the region does not show “conditionally” higher turnover.¹²

However, a finding of increased turnover across the period of liberalization may imply increased risk. But, as in the industrial country literature, there is only mixed evidence that either greater trade liberalization or exposure to technological change leads to greater turnover overall, beyond that discussed on the impact of firing cost reductions mentioned earlier.¹³ Figures 2.17 and 2.18 plot the evolution of turnover in the manufacturing sector in Colombia during 1980–91, and Chile during 1980–95, in both countries periods of increased trade protection and then liberalization.¹⁴ Disaggregated into turnover due to birth and death of firms (BD) and turnover due to readjustments by continuing firms (Cont), there is no obvious pattern across time in either country (Fajnzylber, Ribeiro, and Maloney 2000). However, as with involuntary separations in Argentina and

Mexico, tradables industries show higher rates of turnover in Chile (Levensohn 1999). This suggests that, to the degree that trade liberalization expands the share of tradables in total output, it may lead to more churning in the job market.

The aggregate labor flows data do find evidence of decreasing tenure in Uruguay (Figures 2.19 and 2.20). However, these movements again parallel the sharp rise in unemployment, and therefore it is difficult to argue that they are permanent: a sharp reduction in tenure also appeared during the 1973–87 restructuring period in Chile that, by 1995, had largely although not completely reversed (Figure 2.21).

Rise in Informality

Even if all the above indicators of stability and employment showed no change, there is a concern that the quality of jobs available has fallen. In particular, the share of workers unprotected by labor legislation or benefits has risen as a share of Latin America’s workforce. International Labour Organisation and Inter-American Development Bank studies suggest that 80 out of 100 jobs created in the 1990s were in the informal sector, and the Economic Commission for Latin America and the Caribbean (ECLAC) reports that the share of informal employment in the workforce rose from 52 percent in 1990 to 58 percent in 1997.

TABLE 2.5

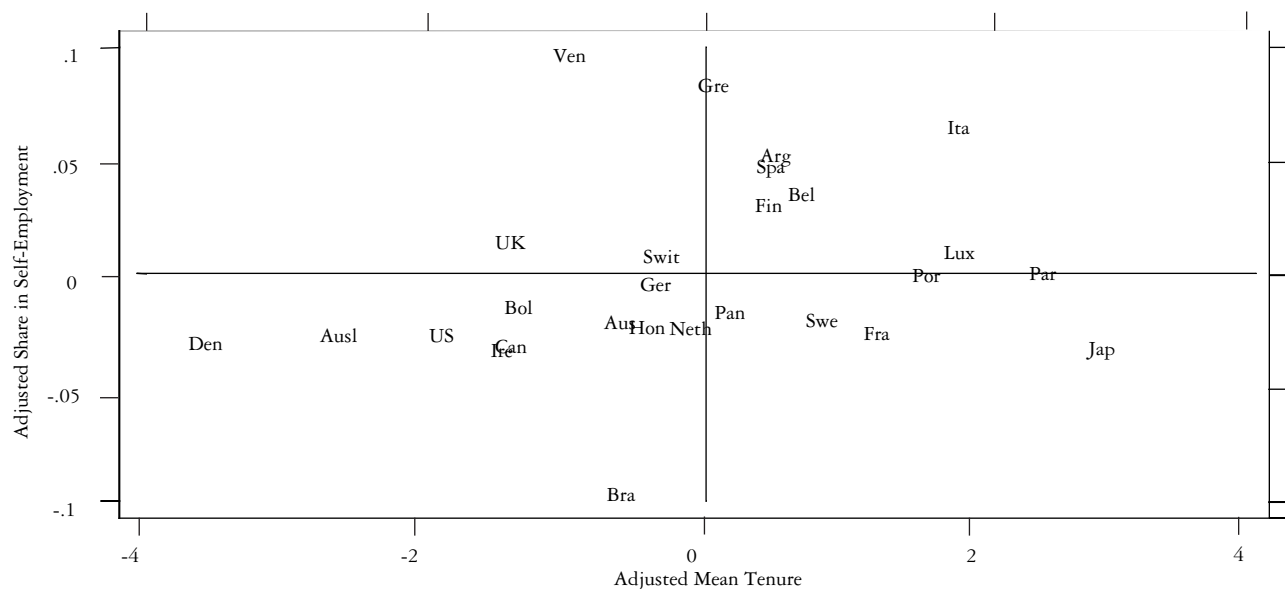
Labor Turnover, LAC and OECD Countries

	LAC	OECD
% < 2 Years Seniority (Manufactures)	38.1	24.5
Average Tenure (Manufactures)	7.61	10.5

Source: Maloney (1999b).

FIGURE 2.16B

Labor Turnover, LAC and OECD Countries



Source: Maloney 1999b.

FIGURE 2.17

Evolution of Turnover in Chile, 1980-95

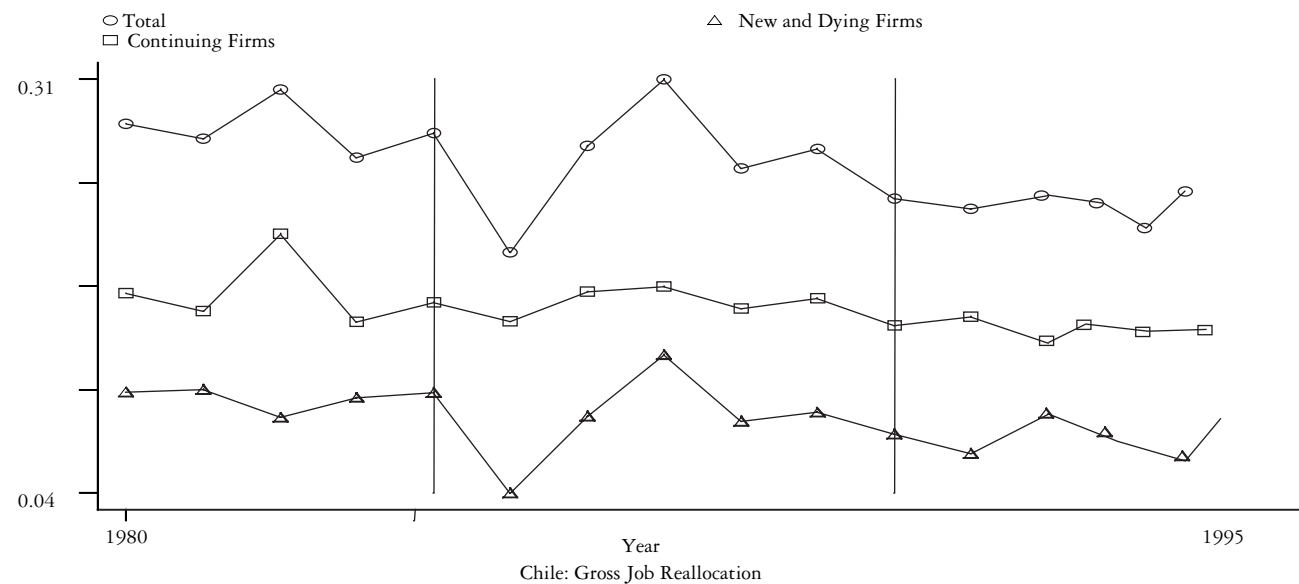
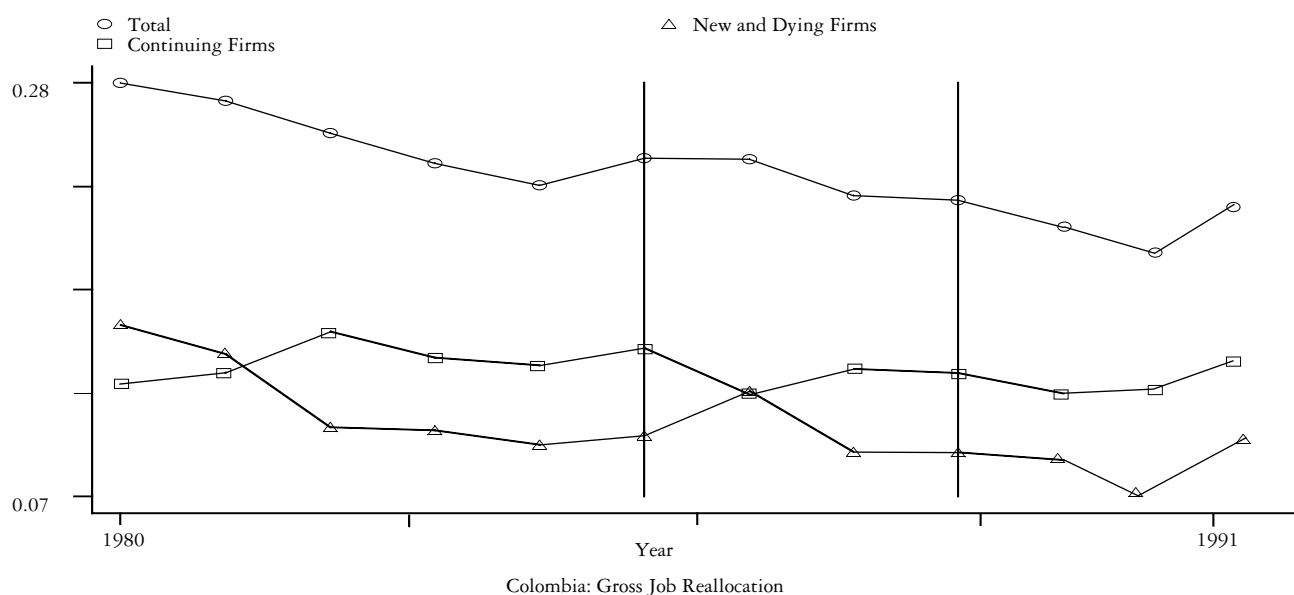


FIGURE 2.18

Evolution of Turnover in Colombia, 1980–91

Some subtlety is necessary in interpreting these trends. Recent work at the World Bank suggests that the conventional view of the sector as a residual for displaced formal sector workers is probably incomplete. In many ways informal self-employment behaves more like an unregulated entrepreneurial sector where, as in industrial countries, the risks of entrepreneurship and lack of protection under individual labor codes are voluntarily taken on (see Box 2.3).¹⁵ After economic reforms, for example, informal self-employment as a share of the work force rose procyclically

from 18 percent to 22 percent from 1987 to 1990 in Mexico, and 23 percent to 27 percent from 1988 to 1993 in Argentina, at the same time that the premium self-employment enjoyed over formal salaried work rose from 0 percent to 25 percent and 4 percent to 13 percent, respectively. The expansion of the sector makes sense if we believe that entrepreneurs prefer good times, such as the construction booms in both countries, to start new businesses.¹⁶ This is fully consistent with interview data from both countries that suggest that roughly 70 percent choose

FIGURE 2.19

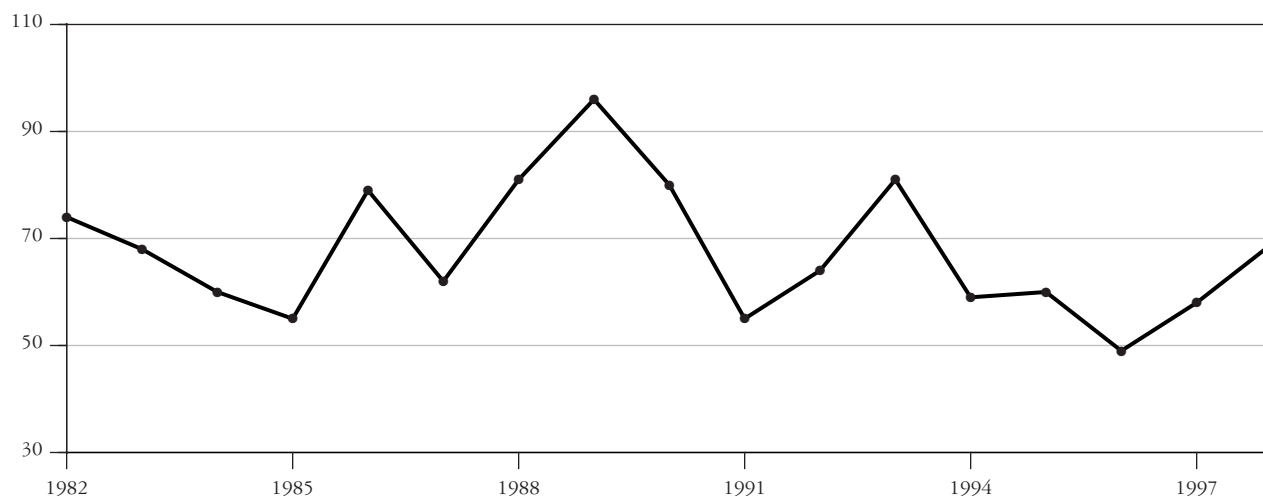
Expected Tenure in Current Job, Montevideo (Months)

FIGURE 2.20

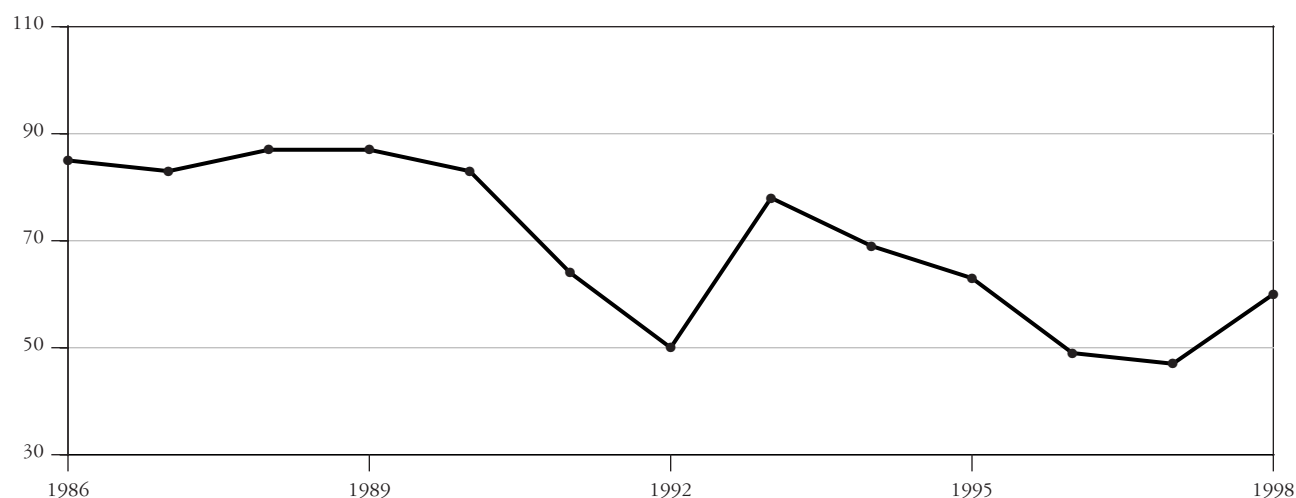
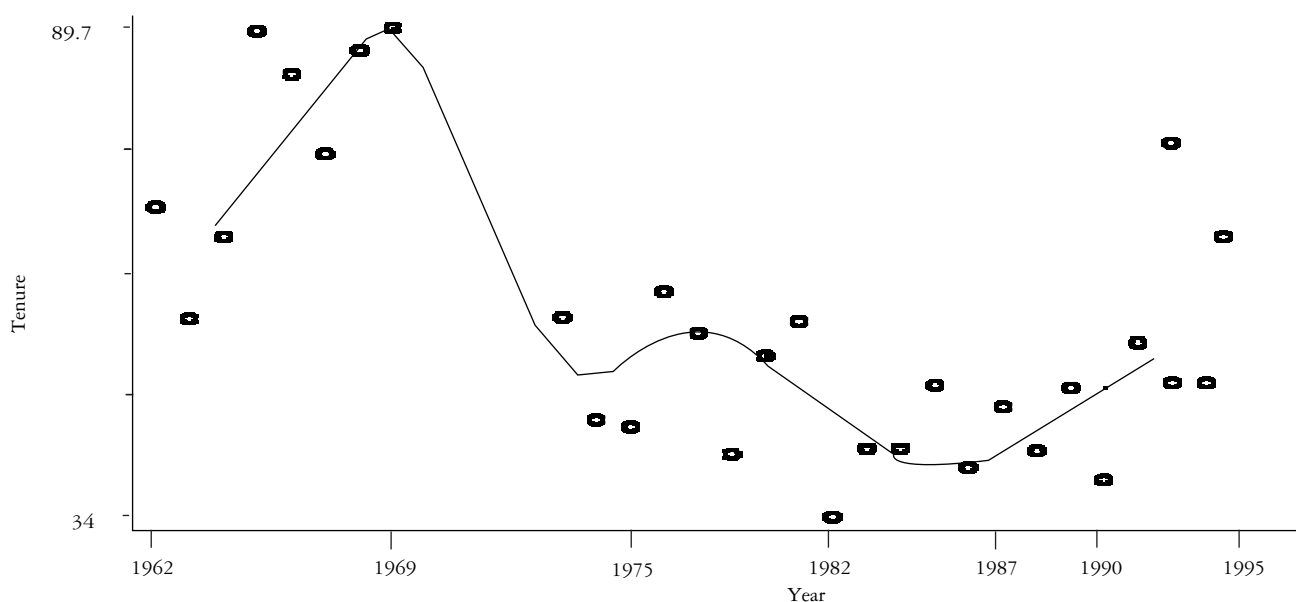
Expected Tenure in Current Job, Interior Uruguay (Months)

FIGURE 2.21

Expected Tenure on Job, Greater Santiago

to be in the sector for reasons of independence and higher earnings, and are not looking for other jobs (Arango and Maloney 2000).

This also suggests that the strong negative relationship between formal sector productivity and the share of the workforce in self-employment (Figure 2.22) is due to the growing

BOX 2.3

Why Might Workers Prefer to be Precarious or Unprotected?

It is rational for many workers to desire to be “unprotected” if they do not value the provided benefits as much as the implicit tax paid for them. Workers’ benefits are financed either through explicit taxes on workers, or implicitly as lower wages. Inefficiently provided benefits—poor medical services, a social security system seen as bankrupt and unreliable, or an unemployment insurance system substantially different from one workers would choose—provide incentives for workers to work off the books. In his interviews with workers in Guadalajara Mexico, Roberts (1989) finds that, “Many informants cited the deduction made for welfare as a disadvantage of formal employment, particularly since the services they received were poor.” In addition to avoiding nonlabor taxes and regulation, informal workers may be avoiding inefficient “protection” (see Amadeo, Gill, and Neri (2000), and Maloney (1999).

falling. Uruguay also experienced a rise in what workers termed “unstable employment” during the 1990s.

In sum, there is evidence of an increase in uncovered work in the region that may imply a degree of lack of protection for a segment of the workforce. As with falls in job

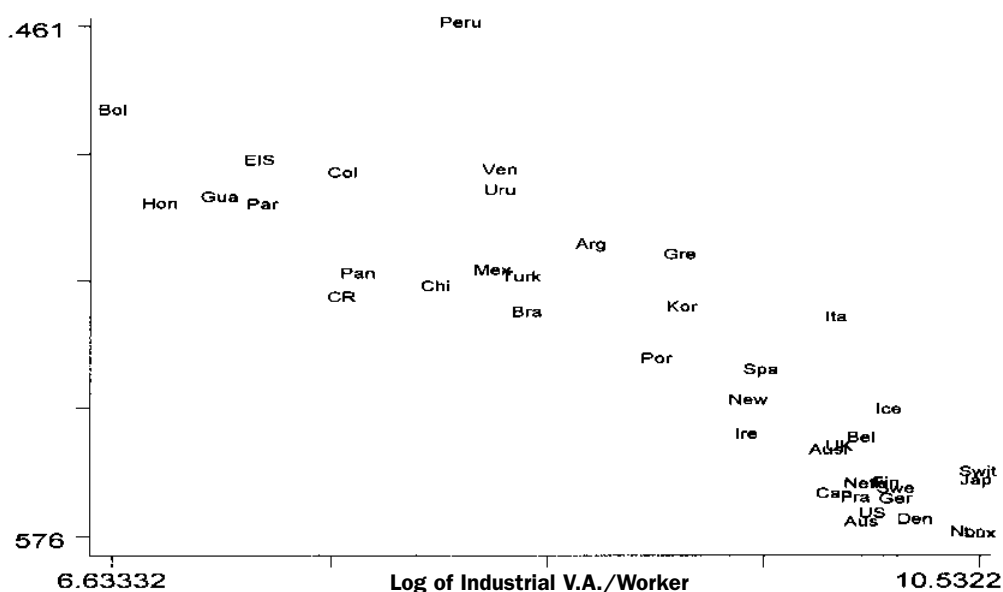
turnover, only time will tell whether these are permanent increases or related to the low rates of job creation and high rates of unemployment experienced during restructuring.

The Deterioration in Prospects of Older Workers

Much of the reported dissatisfaction in the region may be due to workers laid off in the restructuring process and who have suffered substantial falls in income, or are experiencing difficulty finding jobs. The privatization process has led to a fall in often privileged jobs in public employment from 15 percent of the labor force in 1990 to 13 percent in 1998. More generally, restructuring of the private sector, both in tradables and nontradables, may have had the same effect. Studies find an increase in subcontracting across the period that could be due to restructuring of firms where they now put their cleaning and security services out to unprotected employees. Mexico, for example, experienced a once-and-for-all 3 percentage point increase in the share of the workforce in subcontracting in the mid-1990s. This was accompanied by a fall in relative incomes that suggests a deterioration in “job quality.”

Older displaced workers may be particularly affected by their inability to requalify themselves or by the unwillingness of firms to employ them. While in both the formal and informal sectors, workers with primary education gained during the 1990s in Argentina, Brazil, and Costa Rica relative to those with more schooling, there are two notable exceptions in the case of Argentina (Arias 1999 in

FIGURE 2.22

Self-Employment versus Industrial Productivity, OECD and LAC

Cunningham and Artecona 2000). The first is that of those starting new informal businesses; many are older workers displaced from previous jobs. The second group is older informal sector workers who may have lost their market niche; repairing, for example, domestically produced cars or working in small print shops due to imports of new cars and technologies. In Peru in the 1990s, older workers experienced an increased probability of becoming informal due to reduced restrictions on firing workers, and in both Argentina and Uruguay, older workers suffered from lengthening spells of unemployment.¹⁸ In the bottom income quintile group, the share of unemployed Uruguayan workers over 40 years of age with unemployment duration of over a year rose from 28 percent during 1982–86 to about 40 percent during 1999–2000, a period with similar aggregate unemployment rates. In sum, for a sizable segment of older displaced workers, the loss in value of their human capital may have been substantial.

To a lesser degree, these difficult adjustments for mature workers are likely to become a permanent feature of the postreform landscape in Latin America. In the industrial countries, the rapid pace of innovation is thought to require that workers retrain more than once during their lifetime. The design of training and pension programs will need to reflect this reality.

Changes in Income Distribution

It is also possible that it is not uncertainty per se, but changes in income distribution, that are creating the perception of insecurity. In broad terms, inequality increased during the 1990s (see Table 2.6), though there is a wide range of country experience. Inequality in Brazil and Mexico increased between 1986 and 1989 before leveling off or decreasing until the late 1990s. Chile and Paraguay experienced increasing inequality, although in Chile the low baseline for 1986 may compromise comparability. In Argentina, Colombia, Ecuador, Uruguay, and Venezuela inequality has been relatively stable, with some indexes suggesting an increase, others a decrease. And in Bolivia, the Dominican Republic, and Honduras there is a decrease in inequality over time. Overall, from the aggregate indexes, it would be hard to argue that opening the economy, as in Argentina, Brazil, Colombia, and Mexico, led to a permanent worsening of aggregate inequality.

The ILO and ECLAC find evidence of increased wage dispersion throughout the region, but again, the evidence

is mixed. In Argentina (1988–97) and Brazil (1989–95)—both liberalizing economies—and in Costa Rica (1989–95), the gap between educated and primary school workers declined, especially for women. Further, Chile, the bellwether country for the region, experienced a harsh deterioration in wage dispersion in the late 1980s, but a reversal in the 1990s as returns to higher education fell to historically normal levels.¹⁹

What has not been carefully studied to date is whether, despite relatively constant inequality measures, there may be more movement of individuals within the distribution. Thus, for example, there may be increased earnings mobility or—looking at the other side of the coin—greater risk, as a more open economy generates job opportunities in new industries and causes other industries to close. Box 2.4 suggests that this probably is not the case in Argentina or Mexico across their periods of trade liberalization: there was little or no trend increase in labor income mobility during the 1990s. What does emerge is that adjustment to crises through unemployment exacerbated by wage rigidity in Argentina leads to greater downward mobility than adjustment through real wages in Mexico made possible by leaving the exchange rate peg. A generalized fall in wages leaves the relative positions of individuals in the income distribution the same, whereas unemployment experienced by a few radically changes their position.

Conclusion

As in other developing regions, macroeconomic volatility is high in LAC, and this translates into volatility in aggregate wage measures and unemployment rates. In most countries in the region growth volatility is lower today than it was in the 1980s, and major labor market aggregates, particularly wage volatility, and to a lesser extent unemployment, appear to follow this trend. The evidence is mixed, however, on whether volatility has become higher today than it was in the relatively normal 1970s, because the 1980s are rightly viewed as an unusually turbulent decade.

What may be a central issue is the slow rate of job growth that has coexisted for relatively long periods with healthy economic growth rates, most clearly in Argentina, Colombia, Mexico, and Uruguay. This phenomenon is associated with lower job tenure, higher unemployment duration, growing levels of informality and insecure jobs, and difficulty of reinsertion of laid-off older workers. Taken together, these developments suggest that employment-

TABLE 2.6

Income Inequality Measures by Country, 1986–96

	THEIL	GINI	ATKINSON		THEIL	GINI	ATKINSON
Argentina				Ecuador			
1986	0.51	0.50	0.68	1986	0.47	0.49	0.46
1989	0.68	0.58	0.73	1989	0.36	0.44	0.33
1992	0.48	0.51	0.65	1992	0.48	0.50	0.44
1995	0.52	0.52	0.61	1995	0.53	0.51	0.46
1996	0.53	0.53	0.64	1996	0.50	0.51	0.54
Bolivia				Honduras			
1986	0.56	0.54	0.60	1986	0.64	0.59	0.62
1989	0.76	0.63	0.64	1989	0.8	0.6	0.58
1992	0.49	0.50	0.41	1992	0.63	0.57	0.58
1995	0.58	0.53	0.41	1995	0.67	0.58	0.57
1996	0.52	0.51	0.40	1996	0.62	0.55	0.53
Brazil				Mexico			
1986	0.74	0.59	0.52	1984	0.42	0.47	0.33
1989	0.89	0.64	0.59	1989	0.61	0.52	0.39
1992	0.71	0.59	0.59	1992	0.56	0.53	0.39
1995	0.74	0.61	0.59	1994	0.58	0.53	0.39
1996	0.75	0.61	0.60	1996	0.55	0.52	0.38
Chile				Paraguay			
1986	0.36	0.44	0.30	1986	0.41	0.47	0.33
1989	0.83	0.59	0.46	1989	0.32	0.43	0.27
1992	0.58	0.53	0.43				

BOX 2.4

Income Mobility and Risk in Two Countries

Income mobility can be used as a measure of risk which takes into account not only the absolute level of income of individuals, but also their ranking in the overall distribution of income; that is, their relative deprivation. Figures 2.23 and 2.24 give the trend in the Gini index of labor income mobility for adult men in Argentina and Mexico using panel data. The main findings are:

- Labor income mobility as measured by this index is high in both countries, at about 0.3 in Mexico and 0.4 in Argentina. It is higher in Argentina, in part because the length of time separating observations for the individuals in the panels is greater (a semester versus a quarter). In both countries, the level of mobility suggests that traditional one-period measures of inequality are overestimated. The results also suggest that short-term safety nets should help to offset frequent income losses.
- There is no trend toward higher or lower mobility over time. That is, contrary to what popular beliefs would suggest, the results do not suggest a large increase in risk over time.
- Mobility is negatively associated with growth in Argentina, and positively associated with growth in Mexico. The positive correlation in Mexico is as expected in that growth provides opportunities, and thus results in a more dynamic and mobile labor market. The negative correlation in Argentina may be due to the fact that the Argentine labor market adjusts to shocks through quantities (unemployment) rather than prices (real wages). In Mexico, adjustments take place through prices. Employment losses result in more rerankings in the distribution of income, and therefore higher mobility than wage losses. The differences between Argentina and Mexico may alternatively or additionally be due to different exchange rate regimes, with pegged exchange rates leading to employment losses, while flexible exchange rates lead to real wages losses.
- Finally, although this is not shown in Figures 2.23 and 2.24, it can be shown that income mobility is associated with individual-level characteristics such as age (the young are more mobile) and education (the less educated are more mobile, at least in Mexico).

FIGURE 2.23

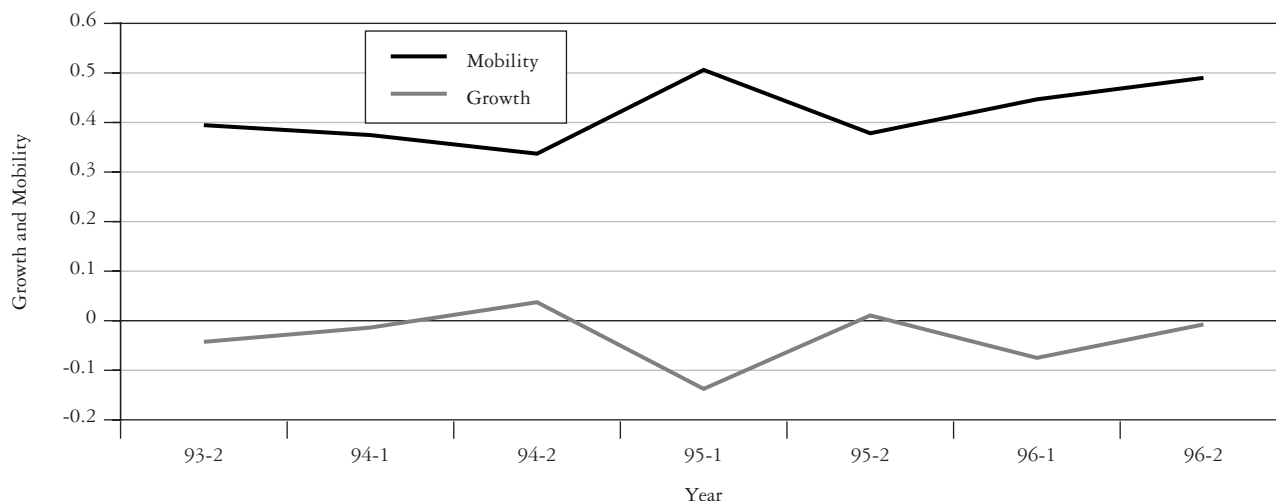
Growth and Income Mobility in Argentina

FIGURE 2.24

Growth and Income Mobility in Mexico

As Chapter 1 showed, many countries in LAC are facing an incipient recovery, offering enhanced economic opportunities. These may entail increased risks for some groups of workers and households—but the available evidence does not show a generalized increase in economic insecurity in the 1990s. Nevertheless, both the increased economic risks that those groups may be facing, and the still high levels of aggregate volatility in the region, provide ample justification for re

Davis, Haltiwanger, and Schuh (1996) found no relationship between U.S. job flows and either import penetration or export share, although Klein, Schuh, and Triest (2000) found that the responsiveness of job flows to the real exchange rate varies with the industries' openness to international trade.

14. Using firm level panel data for Latin America, Roberts and Tybout (1996) found high turnover in Chile, Colombia, and Morocco relative to the U.S. (Davis and Haltiwanger 1992), but no obvious relation with trade reform. Tybout (1996) did find very high exit rates following the Chilean liberalization. However, Roberts (1996) found that in Colombia during 1983–85, average entry and exit actually rose with trade restrictions, compared to the previous period of relative openness.

15. It might also explain why, with the exception of women in Brazil, wage gains of informal workers in Argentina, Brazil, and

Mexico outstripped those of formal sector workers during 1987–96. See Arias (1999), Saavedra (1999), and Cunningham and Artecona (2000).

16. Cassoni, Allen, and Labadie (2000) for Uruguay; and discussions with Jaime Saavedra (Peru).

17. Arias (1999) for Argentina; Saavedra (1998) for Peru; and Cassoni, Allen, and Labadie (1999) for Uruguay.

18. Arias and Saavedra in Cunningham and Artecona (2000); Montenegro (1998) for Chile.

19. These figures are from Wodon (2000). Most measures of income mobility in the literature have been developed independently of the concept of inequality. Yet, there are links between mobility and inequality. Yitzhaki and Wodon (2000) have proposed a Gini index of mobility to provide for an explicit link between inequality and mobility.