

Employment and unemployment in Mexico in the 1990s

Focusing only on Mexico's total employment and its unemployment rate obscures an important response to economic downturns, namely, relative growth in the informal sector

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Travelers are often cautioned against viewing other countries through the lens of their own cultural bias. Economists must be warned as well about the pitfalls of evaluating the performance of economies that differ greatly from those that they are accustomed to examining. Although Mexico joined with the United States and Canada in the North American Free Trade Agreement in 1994, this alliance should not cause one to lose sight of the fact that Mexico's economy continues to differ considerably from those of its northern neighbors. The application of the usual measures of "employment" and "unemployment" to evaluate Mexico's economic performance in the 1990s reveals many such differences.

For the first 4 years of the 1990s, Mexico's economy grew at an annual rate of 3.6 percent, continuing the long recovery from the 1982 "debt crisis." The economy experienced a sharp decline in 1995, however, as a result of the "peso crisis" of late December 1994. Gross domestic product fell by 6.2 percent, but employment actually rose slightly. Unemployment rose sharply, although the level reached was not particularly high by world standards. The impact of the crisis, both in severity and duration, shows up more clearly in *other* indicators, such as those for the composition of employment and the trend in real wages. This article focuses on the employment side, but includes some information on the wage trend.

In economies such as Mexico's, the "informal sector," made up primarily of small establishments providing marginal, insecure, and low-paying jobs, looms large in the best of times.¹ Because Mexico lacks a broad social safety net, this sector takes on added significance in hard times, as the data clearly revealed in the immediate wake of the 1994 peso crisis. Overall, employment continued to increase, but the rate of growth slowed. Employment in the smallest establishments and in jobs with no fringe benefits grew at a much faster rate than did employment overall. Employment also rose much more in Mexico's less urban areas, where the data suggest the informal sector is more dominant, than it did in the more urban areas.

Real wages fell substantially in 1995. But while gross domestic product rose sharply in the following years, real wages remained well below pre-crisis levels through 1998.² (See table 1.) The lingering effects of the downturn also still could be seen on the employment side of the labor market. By 1997, unemployment had returned to pre-crisis figures, and the rate of employment growth was greater than before; even so, the aggregates conceal a disproportionately high rate of growth over the longer term in a number of key indicators of informality.

The three key indicators of informality found in Mexico's National Employment Survey, the primary source of data for this article, are (1) "employed in establishments with five or fewer

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Table 1. Annual percentage change in real gross domestic product in Mexico, 1990–99 (1993 prices)

| Beginning year | Ending year | | | | | | | | |
|----------------|-------------|------|------|------|------|------|------|------|------|
| | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
| 1990 | 4.2 | 3.9 | 3.3 | 3.6 | 1.5 | 2.1 | 2.8 | 3.0 | 3.1 |
| 1991 | ... | 3.6 | 2.8 | 3.3 | .9 | 1.7 | 2.5 | 2.9 | 3.0 |
| 1992 | ... | ... | 2.0 | 3.2 | .0 | 1.2 | 2.3 | 2.7 | 2.9 |
| 1993 | ... | ... | ... | 4.5 | -1.0 | 1.0 | 2.4 | 2.9 | 3.0 |
| 1994 | ... | ... | ... | ... | -6.2 | -7 | 1.7 | 2.5 | 2.7 |
| 1995 | ... | ... | ... | ... | ... | 5.1 | 5.9 | 5.6 | 5.1 |
| 1996 | ... | ... | ... | ... | ... | ... | 6.8 | 5.8 | 5.1 |
| 1997 | ... | ... | ... | ... | ... | ... | ... | 4.8 | 4.2 |
| 1998 | ... | ... | ... | ... | ... | ... | ... | ... | 3.7 |

SOURCE: OECD *Economic Surveys, Mexico, 1997–1998*, p. 135 for 1990–96 data; INEGI, *Cuaderno de Información Oportuna*, September 1999, tables 1.1 and 1.4 for 1997 data, and June 2000 for 1998 and 1999 data.

workers,” (2) “self-employed,” and (3) “without any employment benefits.”³ None of these measures is necessarily a measure of informality.⁴ However, a relatively small proportion of workers in an advanced, industrial economy falls into any of those categories, while a relatively high proportion of workers in the developing world does. Consequently, this leads to the assumption that intertemporal and interregional differences in these categories in Mexico indicate differences in the importance of the informal sector.⁵ Data used as indicators of formality from the National Employment Survey are (1) “employed in establishments with six or more employees,” (2) “with some employment benefits,” and (3) “covered by social security.” Administrative data from Mexico’s Social Security Institute supplement the third category.

This article updates a 1994 *Monthly Labor Review* article on Mexico’s employment and unemployment.⁶ It presents more recent calculations of Mexico’s unemployment rates under U.S. concepts, and updates Mexico’s complementary unemployment indicators that cover aspects of the country’s employment situation missed by the unemployment rate. It also examines the importance of the informal sector in Mexico over a longer time period and under a wider range of economic conditions than does the previous article. Improvements in Mexico’s labor data since 1994, including greater geographic coverage, more consistency in methodology, and more frequent availability of results, enrich the new analysis. (See appendix.)

Low general unemployment

For many years, unemployment has been strikingly low in Mexico, as reported both by the National Employment Survey, done annually only since 1995, and by the monthly Urban Employment Survey. (See appendix.) According to the urban survey, the average annual official rate of unemployment during the 1991–99 period was 3.7 percent.⁷

That rate may be contrasted with an average annual unemployment rate of 5.8 percent for the United States and 9.7 percent for Canada.⁸ The figure for Mexico is deceptive. The job situation was not substantially better there compared with its two North American Free Trade Agreement partners. Fleck and Sorrentino have noted two principal reasons for the difference in the unemployment rate in Mexico and the United States: the measurement concepts themselves are different, and many people who are counted as

employed in Mexico find only unproductive and marginal employment in Mexico’s large informal sector.⁹

Adjustment to U.S. concepts

Adjustments of Mexico’s unemployment rates to U.S. concepts are shown in table 2. The National Employment Survey was used for consistent geographic coverage through time, and only its more urban areas were considered to correspond as closely as possible to the Urban Employment Survey from which the official unemployment rates are generated. The National Employment Survey identifies cities with a population of 100,000 and more, plus all state capitals, as “more urban areas.” This is contrasted with the remainder of the country, called “less urban areas.” (See appendix for more details on the two surveys.) Three adjustments were made, two to unemployment and one to the labor force. Mexico counts as employed two groups of people that the United States generally includes among the unemployed and one group that the United States omits from the labor force altogether. The first two groups are those on temporary layoff and those who anticipate starting a job within 30 days. Concerning the latter group, since January 1994, the U.S. Current Population Survey designates as unemployed only those persons waiting to start a new job who have engaged in a job search within the past month. If they have not searched for a job in that period, they are not in the labor force.¹⁰ Mexicans who are already counted as employed are not asked about their job search history, so there is no way of knowing how many among those expecting to start work within the next month actually looked for work. In counting all those individuals in Mexico waiting to start work as “unemployed” using U.S. definitions in this article, it is assumed that all those who think they have a job in hand but have not yet begun to work, sought that job or some other job in the previous month. The third adjustment involves a subtraction from the labor force of unpaid fam-

Table 2. Adjustment of Mexico's unemployment rates to U.S. concepts, more urban areas, second-quarter 1991, 1993, 1995-98

| Category | Total | Men | Women | Total | Men | Women | Total | Men | Women |
|--|------------|------------|-----------|------------|------------|-----------|------------|------------|-----------|
| | 1991 | | | 1993 | | | 1995 | | |
| Reported unemployment | 352,114 | 209,144 | 142,970 | 490,941 | 306,703 | 184,238 | 1,107,667 | 700,748 | 406,919 |
| Plus: | | | | | | | | | |
| Persons on temporary layoff | 142,141 | 93,359 | 48,782 | 190,966 | 126,286 | 64,680 | 104,111 | 63,434 | 40,677 |
| Persons waiting to start a new job in 30 days | 92,311 | 58,347 | 33,964 | 94,197 | 61,238 | 32,959 | 104,255 | 68,026 | 36,229 |
| Adjusted unemployed | 586,566 | 360,850 | 225,716 | 776,104 | 494,227 | 281,877 | 1,316,033 | 832,208 | 483,825 |
| Reported labor force | 14,706,007 | 9,617,006 | 5,089,001 | 15,705,194 | 10,220,312 | 5,484,882 | 16,554,068 | 10,597,341 | 5,956,727 |
| Minus unpaid family workers working less than 15 hours per week ¹ | 140,798 | 57,898 | 82,900 | 180,419 | 77,940 | 102,479 | 175,337 | 58,320 | 117,017 |
| Adjusted labor force | 14,565,209 | 9,559,108 | 5,006,101 | 15,524,775 | 10,142,372 | 5,382,403 | 16,378,731 | 10,539,021 | 5,839,710 |
| Unemployment rates: | | | | | | | | | |
| Reported | 2.4 | 2.2 | 2.8 | 3.1 | 3.0 | 3.4 | 6.7 | 6.6 | 6.8 |
| Adjusted | 4.0 | 3.8 | 4.5 | 5.0 | 4.9 | 5.2 | 8.0 | 7.9 | 8.3 |
| | 1996 | | | 1997 | | | 1998 | | |
| Reported unemployment | 953,690 | 601,453 | 352,237 | 615,530 | 342,101 | 273,429 | 590,610 | 337,892 | 252,718 |
| Plus: | | | | | | | | | |
| Persons on temporary layoff | 158,082 | 111,054 | 47,028 | 124,975 | 90,084 | 34,891 | 189,713 | 127,122 | 62,591 |
| Persons waiting to start a new job in 30 days | 94,516 | 57,351 | 37,165 | 121,767 | 66,685 | 55,082 | 105,457 | 61,071 | 44,386 |
| Adjusted unemployed | 1,206,288 | 769,858 | 436,430 | 862,272 | 498,870 | 363,402 | 885,780 | 526,085 | 359,695 |
| Reported labor force | 17,052,788 | 10,936,842 | 6,115,946 | 17,906,946 | 11,298,267 | 6,608,679 | 18,793,502 | 11,858,117 | 6,935,385 |
| Minus unpaid family workers working less than 15 hours per week ¹ | 193,662 | 80,790 | 112,872 | 219,962 | 77,025 | 142,937 | 213,261 | 94,570 | 118,691 |
| Adjusted labor force | 16,859,126 | 10,856,052 | 6,003,074 | 17,686,984 | 11,221,242 | 6,465,742 | 18,580,241 | 11,763,547 | 6,816,694 |
| Unemployment rates: | | | | | | | | | |
| Reported | 5.6 | 5.5 | 5.8 | 3.4 | 3.0 | 4.1 | 3.1 | 2.8 | 3.6 |
| Adjusted | 7.2 | 7.1 | 7.3 | 4.9 | 4.4 | 5.6 | 4.8 | 4.5 | 5.3 |

¹ Predominantly unpaid family workers; however, a few nonfamily workers are included.

inhabitants and state capitals.

NOTE: The "more urban areas" are those with 100,000 or more

SOURCE: INEGI, National Employment Survey 1991, 1993, 1995, 1996, 1997 and 1998, including unpublished data.

ily—and some nonfamily—workers working less than 15 hours per week.¹¹ Such persons are excluded from the U.S. labor force.

The rate of unemployment is the ratio of total unemployed to the total civilian labor force expressed as a percentage. All three adjustments raised the rate of Mexico's unemployment, the first two by increasing the size of the numerator, the third by reducing the size of the denominator. The adjustments added an average of 1.6 percentage points to the unemployment rate over the period.¹²

This is actually an overadjustment on several counts. First, some unknown portion of those waiting to start a new job would not have sought work in the 4 weeks prior to their interview and would be dropped both from the ranks of the unemployed and the labor force under U.S. concepts.

Second, in the United States, one must have actively sought work to be in the labor force. An active job search method is defined as any effort that could have resulted in a job offer without any further action on the part of the jobseeker. In Mexico, the respondent need only say that he or she sought work in the past 4 weeks to be counted.

Third, in the United States a respondent must have been available for work in the reference week (the last full workweek before the interview) to be counted as part of the labor force. In Mexico the assumption is made that if they sought work they were available. No test of availability is applied.

Fourth, in some cases when there is no sign of a discouraged attitude, the respondent in Mexico is counted as in the labor force even though he or she may not have sought work in the past 4 weeks.¹³

If sufficient information existed to account for these individuals who are included in the labor force in Mexico and excluded in the United States, then it would lower the adjusted unemployment rate by reducing both the total number of unemployed and the total labor force. For the category of those waiting to start a new job, the reduction would only be calculated since 1994. For the others, it would be calculated for the entire period.

No adjustments have been made for the fact that the working age population in Mexico is 12 years and older and in the United States it is 16 years and older. Indications are that such an adjustment would have little effect. The average unemployment rate in the more urban areas for the years the National Employment Survey was taken, 1991–98, was 4.06 percent for those 12 years and older and 4.07 percent for those 15 years and older. The 12 through 14 age group averaged only 1.4 percent of the labor force throughout the period.¹⁴

Overstated though it may be, the adjusted 1995 unemployment rate of just 8 percent (3 percentage points more than the 1993 adjusted rate) is still quite low in light of the steep decline in Mexico's economy. The United States has had nothing like a 1-year drop of 6 percent in gross domestic product in recent memory, and much smaller declines have been associated with greater relative unemployment and employment changes.¹⁵ Mexico's adjusted unemployment rate, even restricted to urban areas where, as shown later in the article, unemployment is consistently higher than for the country as a whole, appears to reflect economic distress to a lesser extent than does the U.S. unemployment rate.¹⁶

Examining the data for the entire period, however, a different picture emerges. The average rate of unemployment for the 6 discontinuous years considered, after the adjustment, is 5.64 percent contrasted with 5.68 percent for the United States for the same 6 years. Disregarding the slight overadjustment, differences in the definitions themselves

Rates of unemployment and labor underutilization

Of the 10 rates, R-1 through R-10, all but R-2 and R-10 are calculated as a proportion of the labor force. R-2 counts "discouraged workers" among the unemployed in the numerator, so they are added to the labor force in the denominator as well. R-10 is not an unemployment rate at all but a measure of the working poor, so it is given as a proportion of total employment.

R-1 *Open unemployment rate:* Persons in the labor force who did not work for at least one hour in the reference week (the previous full work week) or do any unpaid family work, as a percent of the labor force. This is the official unemployment rate.

R-2 *Alternative unemployment rate:* Open unemployed, plus persons who expect to begin work within the next 4 weeks, plus persons not in the labor force, but who are available for work and who looked for work at some time in the past (the hidden unemployed), as a percent of the labor force and the hidden unemployed.

R-3 *Real economic pressure rate:* Open unemployed and employed seeking a second job, as a percent of the labor force.

R-4 *Real preference pressure rate:* Open unemployed and employed seeking a new job, as a percent of the labor force.

R-5 *General pressure rate:* Open unemployed and employed seeking either a new job or a second job, as a percent of the labor force.

R-6 *Part time less than 15 hours and unemployment rate:* Open unemployed and employed working less than 15 hours a week, as a percent of the labor force.

R-7 *Part time for economic reasons and unemployment rate:* Open unemployed and employed working less than 35 hours a week for economic reasons, as a percent of the labor force.

R-8 *Part time less than 35 hours and unemployment rate:* Open unemployed and employed working less than 35 hours a week, as a percent of the labor force.

R-9 *Insufficient income and unemployment rate:* Open unemployed and employed who earn less than the minimum wage, as a percent of the labor force.

R-10 *Critical conditions of the employed rate:* Employed working less than 35 hours a week for economic reasons, working more than 35 hours a week while earning less than the minimum wage, or working more than 48 hours a week while earning less than 2 times the minimum wage, as a percent of total employment.

Though these various rates may give a more complete picture of hardship experienced by Mexico's workforce, none quite captures the phenomenon of the informal sector and its marginal, insecure, and relatively unproductive labor. R-2 bears a resemblance to the U.S. unemployment measure in that it incorporates among the unemployed those who are waiting to start work in the next month (although, as noted earlier, since 1994, such individuals must have actively sought work in the past month to be included in the labor force, and, thus, among the unemployed). It goes further by including, as well, those who had become discouraged and suspended their job search. It does not, however, add to the unemployed those who are temporarily laid off, nor does it add to the labor

may explain why Mexico's urban unemployment rate remains lower than the overall rate in the United States. Despite that, these adjustments fail to account for the large number of people in Mexico who are counted as employed, but who still live around the economy's margins. These people have only a small counterpart in the United States.

Complementary rates

Because the conventional unemployment rate does not adequately reflect the ability of the economy to provide suitable jobs, Mexico's *Instituto Nacional de Estadística, Geografía, e Informática* (National Institute of Statistics, Geography and Informatics, or INEGI) has developed a number of alternatives. The official or *open* rate suggests by its name that there are a number of people in the country whose *de facto* unemployment or underutilization is hidden. This official rate is accompanied in the monthly statistics by nine

additional measures. (See box for a description and evaluation of each of the alternative measures.) These complementary rates of unemployment, underemployment, and employment with very low remuneration are intended to give a more complete picture of the state of the labor market. They are derived from the Urban Employment Survey and published monthly. Yearly averages from 1991 to 1998 are in table 3.¹⁷

All the alternatives except the last (R-10) simply incorporate other measures of presumed hardship into the open unemployment rate. One way of evaluating their effectiveness as measures of hardship is to examine how they performed in the crisis year of 1995. Were they generally more sensitive to the downturn than was the open unemployment rate?

In fact, they were not. For R-2 through R-8, the increases in the rates in 1995 are all substantially explained by the increases in the rates of their R-1, or open unemployed, components. The increase in R-9 goes considerably beyond the

force unpaid family workers working less than 15 hours a week. There are enough similarities, on balance, between R-2 and the U.S. method of unemployment measurement to explain, to a degree, the fact that R-2 and the rate adjusted to U.S. concepts both average 1.6 percentage points higher than R-1 in the years reported. There are enough differences, however, that R-2 should not be seen as a surrogate for unemployment as it would be measured in the United States.

R-3 through R-5 are measures of job dissatisfaction or inadequacy added onto R-1, and provide no indication of why the new job might be sought. The marginal nature of the existing job is only one of a number of possible explanations. The remarkable thing here is how low these rates remained throughout the period, with R-5—which simply combines R-3 and R-4—not reaching double digits even during the crisis conditions of 1995. The same low expectations, relative to the alternative, that keep so many people out of the formal job market could well be responsible for the low level of job search generally, whether the potential searchers are currently employed or not. (The connection between high levels of informal employment and low levels of search for formal jobs was noted in a letter from INEGI, July 6, 2000. To support the observation, the Institute further notes that the 1996 survey of microscale operations found that less than 5 percent of own-account workers would have been willing to shift to salary work. The relatively greater opportunities for those with little formal education in the informal sector, they note, would also explain why many potential employers in the manufacturing sector in the last couple of

years complain of labor shortages at the same time that the size of the informal sector remains great.)

In the case of R-6, adding on those working 15 hours or less a week might capture a few who have no other choice, but it probably includes more who do. Workers in the informal sector can no more afford to work so few hours than they can afford to be unemployed. R-7, which adds to the category of unemployed those persons working less than 35 hours a week for economic reasons, does not capture the informal sector because the economic reasons are defined quite narrowly, suggesting that the condition is only temporary. The economic reasons are a cut-back in production, owing to a failure of sales, of financing, of raw materials, or of equipment. It does not include all those who are working so few hours simply because they have no other choice. R-8, on the other hand, is probably too broad a definition because, like R-6, it would include a number of people who choose to work limited hours.

That leaves R-9 and R-10, which would seem to capture best the marginal workers of the informal sector of the economy. Each attempts to bring into the measure the working poor. Unfortunately, each relates income to the minimum wage, not allowing sufficiently for the decline in the value of the minimum wage resulting from inflation. The minimum wage has periodically been increased, but the increases have not kept pace with inflation. (In 1994, for instance, the real minimum wage was 60 percent below its 1981 level. See *OECD Economic Surveys, Mexico, 1996–1997* [Paris, Organization for Economic Cooperation and Development, 1996], p. 94.)

Table 3. Unemployment rates and underutilization rates in Mexico, more urban areas, 1991–99

[In percent]

| Geographic coverage, year and quarter | R-1 Open unemployment rate | R-2 Alternative unemployment rate | R-3 Real economic pressure rate | R-4 Real preference pressure rate | R-5 General pressure rate | R-6 Part-time less than 15 hours and unemployment rate | R-7 Part-time for economic reasons and unemployment rate | R-8 Part-time less than 35 hours and unemployment rate | R-9 Insufficient income and unemployment rate | R-10 Critical conditions of the employed rate |
|--|-------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------|---|---|---|--|--|
| 16 urban areas 1991 | 2.6 | 4.2 | 3.5 | 4.0 | 4.8 | 6.1 | 4.8 | 20.8 | 11.7 | 14.3 |
| 34-37 urban areas 1992 ¹ | 2.8 | 4.8 | 4.0 | 4.4 | 5.5 | 6.5 | 5.3 | 21.6 | 10.9 | 14.1 |
| 1993 ² | 3.4 | 5.6 | 4.8 | 5.3 | 6.6 | 7.7 | 6.3 | 23.0 | 12.4 | 14.2 |
| 37-45 urban areas 1994 ³ | 3.7 | 5.9 | 4.6 | 5.4 | 6.4 | 7.8 | 6.2 | 22.3 | 11.3 | 13.7 |
| 1995 ⁴ | 6.3 | 8.6 | 7.7 | 8.3 | 9.8 | 10.7 | 8.5 | 25.7 | 16.2 | 15.7 |
| 1996 ⁵ | 5.4 | 6.4 | 6.8 | 7.3 | 8.7 | 10.0 | 7.3 | 25.3 | 17.2 | 16.6 |
| 1997 ⁶ | 3.7 | 4.6 | 4.8 | 5.4 | 6.6 | 8.3 | 5.4 | 23.4 | 16.4 | 16.6 |
| 1998 ⁷ | 3.1 | 4.1 | 4.0 | 4.6 | 5.4 | 7.3 | 4.6 | 21.4 | 14.5 | 14.5 |
| 1999 ⁷ | 2.5 | 3.4 | 3.1 | 3.5 | 4.0 | 6.1 | 3.8 | 19.1 | 12.8 | 13.2 |

¹ Average calculated from first two quarters covering 32 cities and last two quarters covering 34 cities.
² Covers 34 cities in first quarter, 35 in second, 36 in third, and 37 in fourth.
³ Covers 37 cities in first two quarters, 38 in third, and 39 in fourth.
⁴ Covers 39 cities.
⁵ Covers 41 cities January and February; 43 cities the rest of the year.
⁶ Covers 44 cities.
⁷ Covers 45 cities.

NOTE: See box for full definition of the rates. Rates are yearly averages from the monthly Urban Employment Survey.

SOURCE: 1993, Fleck and Sorrentino, p. 23; 1994–96, INEGI, *Cuaderno de Información Oportuna*, table 2.16, various issues; 1997–99, INEGI, *Indicadores de Empleo y Desempleo*, various issues.

unemployment increase, but it and R-10 are flawed measures. Each measure attempts to incorporate poverty into the rate by including those persons whose wages are either below the minimum wage or are only slightly above, but who work long hours. The legal minimum wage that is used for this measure, however, has not kept pace with inflation; consequently, there is a downward bias in each of these rates.

Had R-9 been fully adjusted for inflation, it would have captured, primarily in 1995, the rise in open unemployment and the effect on the lowest paid wage earners of the fall in the real wage. To the extent that anyone working for less than the legal minimum wage is not formally employed in an establishment that obeys the labor laws, this rate also would have captured some of the growth in informal sector employment in 1995, although informal sector workers are not necessarily so poorly paid.

In sum, the one measure of worker hardship among the overabundance of alternatives that might have been clearly superior to the unemployment rate cannot be relied upon because of its downward bias. The conventional unemployment rate remains, then, the natural fallback position, even with its weaknesses.

The informal sector 'buffer'

Compared with the United States, Mexico still exhibits many of the characteristics of a developing country. Table 4 shows

that roughly 20 percent of Mexico's employed workers are in agriculture, compared with only 3 percent in the United States.¹⁸ The birth rate in Mexico, as of 1997, was 25 per 1,000, compared with 15 per 1,000 in the United States, and the overall level of per capita output and income is much lower.¹⁹ Hourly compensation of manufacturing production workers in 1999 in Mexico was only 12 percent of compensation for such workers in the United States (down from 22 percent in 1980 and 17 percent in 1994).²⁰ In 1996, Mexico's per capita gross domestic product was 28 percent of the U.S. level when measured at purchasing power parities.²¹ Indeed, the existence of a large, relatively unproductive informal sector is both a major cause and a consequence of Mexico's lower gross domestic product per capita. Income is also substantially less equally distributed in Mexico than it is in the United States.²²

Mexico has no program of unemployment compensation, which is another obvious reason for its low unemployment rate.²³ Few people can afford the time it might take to look for the most desirable job. In some cases, mandated severance pay provides some cushion, scaled up in accordance with the number of years the dismissed worker has been employed. Rather than facilitating an extended period of job search, thus pushing up the rate of unemployment, as unemployment compensation does, severance pay, on balance, likely reduces the rate of unemployment. The dismissed worker might feel less financial pressure to look for work

immediately, but when the employer is unable to save anything near the full cost of a worker's salary by laying him off, he may be discouraged from doing so in the first place.²⁴

Such legally-mandated, employer-borne employment protection of a type that is more stringent in Mexico than in most industrialized countries also contributes to the size of the informal sector.²⁵ Employers are driven, or tempted, to work outside the purview of labor regulators. Mexico is said to suffer from an "informality trap" because of the narrow base of employers upon whom social security contributions (IMSS), a housing fund (INFONAVIT), and the new individual accounts for retirement (SAR) must fall.²⁶

Mexico's large urban informal sector and migration, both back to the countryside and to the United States, are particularly important in hard economic times, acting as a buffer to inhibit the growth of open unemployment.²⁷ Evidence presented below indicates that the urban informal sector performed its task quite well in 1995. A closer examination reveals some of the reasons for the sector's resilience through good times and bad.

Low capital expense and great ease of entry are basic characteristics of informal businesses.²⁸ Informal workers in Mexico are usually self-employed or one of just a few workers, including the owner-employer, in a small enterprise. Most are in retail trade or services. Those who are classified as manufacturers are usually making food and beverages or garments, activities requiring skills possessed by many household workers.²⁹ Often they are in family operations with members of the family working for no wage or salary, and family and business finances are intermingled.

Surveys in Mexico have found that 60 percent of informal businesses have no fixed address outside the home, and more than 80 percent borrowed no money to finance their operations. The life of the business tends to be quite short, particularly for the smallest firms, and business incomes are low.³⁰ Wages also are low and fringe benefits are minimal or nonexistent. To the extent that they evade required labor laws, registration requirements, and often taxes as well, informal enterprises can be considered illegal.³¹ The main safety net against failure in an informal enterprise is that low legal, technical, and financial barriers make it relatively easy for a new one to be started.

Definitions. For the purpose of measurement, the urban informal sector has been variously defined as the self-employed and workers in firms with five or fewer employees; self-employed, unpaid workers, and domestics; unpaid workers and those making less than the minimum wage; workers not insured with social security; and workers in businesses not registered with Mexico's Tax Bureau, to name just a few. Of recent estimates of relative size of the urban informal sector, the lowest is 20.3 percent of urban employment (1993). The definition of the sector in this case is simply

"employed in businesses not registered with the Tax Bureau."³² The highest is 54.0 percent of urban employment (1995), where the definition includes all own-account workers (excluding administrative workers, professionals, and technicians), unpaid family workers, and employers and employees working in establishments with fewer than 5 or 10 persons engaged, depending on available information. Paid domestic workers were excluded.³³

The 1993 System of National Accounts recommended by the United Nations adopted a standardized definition of the informal sector put forth by the Fifteenth International Conference of Labour Statisticians in that same year. There, "informality" is defined in terms of characteristics of the enterprise in which a person works rather than in terms of the characteristics of the person or the job. Informal enterprises are defined as household operations, with household finances and business finances virtually indistinguishable from one another. To rule out certain household enterprises that clearly don't belong in the informal sector, a requirement also was established that there be some type of nonregistration with proper governing bodies, of either the enterprise or its employees, and that there be a maximum size. The actual maximum size was not specified, leaving some flexibility for national institutional differences.³⁴ Using those criteria, the 1998 Survey of Micro-enterprises in Mexico determined that 29.5 percent of total nonfarm employment was in the informal sector.³⁵

Indications are that productivity in the informal sector is quite low. A 1980 study estimated that the urban informal sector accounted for only 10.4 percent of Mexican gross domestic product.³⁶

In the United States in 1996, the self-employed (including the incorporated self-employed) constituted 10.5 percent of civilian employment; in Mexico the comparable proportion was 28.7 percent.³⁷ In Mexico, in 1996, 50.4 percent of the nonfarm employed labor force worked in establishments with five or fewer employees.³⁸ No direct comparison with the United States is possible. However, in 1996, in the United States only 14.9 percent of nonfarm employment covered by unemployment insurance was in establishments with nine or fewer employees. For those in establishments with four or fewer, the number was 6.5 percent.³⁹ Virtually all U.S. workers are covered by the unemployment insurance program except for the self-employed and railroad workers. Assuming that all the self-employed—who were 9.6 percent of the total employed outside agriculture in 1996—were working in establishments with very few, if any, employees, the percentage of workers in such small establishments remains far lower in the United States than in Mexico.⁴⁰

The employment buffer. Table 4 reveals some of the working components of the informal sector buffer. Total employ-

Table 4. Employment in Mexico, 1991, 1993, and 1995–98

| Characteristic | 1991 | 1993 | 1995 | 1996 | 1997 | 1998 |
|--|----------------|----------------|----------------|----------------|------------|------------|
| Total employment | | | | | | |
| Total | 30,534,083 | 32,832,680 | 33,881,068 | 35,226,036 | 37,359,758 | 38,617,511 |
| Less urban areas | 16,180,190 | 17,618,427 | 18,434,667 | 19,126,938 | 20,068,342 | 20,414,619 |
| More urban areas ¹ | 14,353,893 | 15,214,253 | 15,446,401 | 16,099,098 | 17,291,416 | 18,202,892 |
| In establishments | | | | | | |
| with five or fewer employees | 16,317,694 | 18,453,522 | 19,890,223 | 20,253,492 | 21,152,983 | 21,717,240 |
| In establishments | | | | | | |
| with six or more employees | 14,216,389 | 14,379,158 | 13,990,845 | 14,972,544 | 16,206,775 | 16,900,271 |
| Without any employment benefits | 18,530,101 | 20,908,139 | 22,042,368 | 22,673,196 | 24,686,705 | 24,399,054 |
| With some employment benefits | 11,739,761 | 11,676,699 | 11,536,046 | 12,332,697 | 12,356,412 | 13,963,520 |
| Covered by social security ² | 11,015,583 | 11,318,250 | 10,963,583 | 11,365,917 | 12,277,333 | 13,264,083 |
| Covered by social security ³ | 10,545,898 | 10,657,482 | 10,567,948 | 11,035,109 | 11,184,431 | 12,558,402 |
| Self-employed | 9,612,380 | 10,129,526 | 10,045,405 | 10,115,284 | 10,879,739 | 10,961,622 |
| In agriculture, forestry, hunting, or fishing | 8,189,759 | 8,842,774 | 8,378,344 | 7,921,686 | 9,020,277 | 7,817,369 |
| Percentage of total employment: | | | | | | |
| Less urban areas | 53.0 | 53.7 | 54.4 | 54.3 | 53.7 | 52.9 |
| More urban areas ¹ | 47.0 | 46.3 | 45.6 | 45.7 | 46.3 | 47.1 |
| In establishments | | | | | | |
| with five or fewer employees | 53.4 | 56.2 | 58.7 | 57.5 | 56.6 | 56.2 |
| In establishments | | | | | | |
| with six or more employees | 46.6 | 43.8 | 41.3 | 42.5 | 43.4 | 43.8 |
| Without any employment benefits | 61.2 | 64.2 | 65.6 | 64.8 | 66.6 | 63.6 |
| With some employment benefits | 38.8 | 35.8 | 34.4 | 35.2 | 33.4 | 36.4 |
| Covered by social security ³ | 34.8 | 32.7 | 31.5 | 31.5 | 30.2 | 32.7 |
| Self-employed | 31.5 | 30.9 | 29.6 | 28.7 | 29.1 | 28.4 |
| In agriculture, forestry, hunting, or fishing | 26.8 | 26.9 | 24.7 | 22.5 | 24.1 | 20.2 |
| | 1991–98 | 1991–93 | 1993–95 | 1995–98 | | |
| Annual percentage change | | | | | | |
| Total | 3.4 | 3.7 | 2.6 | 4.5 | | |
| Less urban areas | 3.4 | 4.3 | 2.3 | 3.5 | | |
| More urban areas ¹ | 3.5 | 3.0 | .8 | 5.6 | | |
| In establishments | | | | | | |
| with five or fewer employees | 4.2 | 6.3 | 3.8 | 3.0 | | |
| In establishments | | | | | | |
| with six or more employees | 2.5 | .6 | -1.4 | 6.5 | | |
| Without any employment benefits | 4.0 | 6.2 | 2.7 | 3.4 | | |
| With some employment benefits | 2.5 | -.3 | -.6 | 6.6 | | |
| Covered by social security ² | 2.7 | 1.4 | -1.6 | 6.6 | | |
| Covered by social security ³ | 2.5 | .5 | -.4 | 5.9 | | |
| Self-employed | 1.9 | 2.7 | -.4 | 3.0 | | |
| In agriculture, forestry, hunting, or fishing | -.7 | 3.9 | -2.7 | -2.3 | | |

¹ Areas with 100,000 or more inhabitants.

² From the Social Security Institute statistics on covered employees.

³ From the National Employment Survey.

Note: Absolute and relative data for employees with social security and employment benefits excludes "employed" persons waiting to start a new job.

Source: INEGI, National Employment Survey, various years, *Cuaderno de Información Oportuna*, various years, (Social Security Institute statistics).

ment actually rose from 1993 to 1995, while gross domestic product and consumption fell. The rise was greater in the less urban areas than in those more urbanized. It was greater still among employees with no employee benefits, and greatest of all among workers in establishments with five or fewer employees.⁴¹ Employment fell among those with some employment benefits, particularly those covered by social security as recorded by the Social Security Institute. Except for the fact that self-employment declined slightly, the image that emerges is that of the informal sector shoring up the employment situation during an economic downturn. The indicators of informal employment generally rose faster than did employment overall, while indicators of formal employment were all falling. Employment in establishments with six or more employees, among those with some employment benefits, and among those covered by social security all declined at an annual rate of between 1 percent and 2 percent.

Migration. Migration to the United States may have played some role in keeping the unemployment rate from rising any higher than it did.⁴² The U.S. economy was in the middle of an expansion and the fall in the peso made U.S. wages all that much more attractive. Even so, if emigration had been the entire explanation, overall employment in Mexico would not have continued to rise.

Agricultural employment. That the employment situation was so much better in 1995 in the less urban areas than in the more urban areas cannot be attributed to agriculture. Employment rose in spite of, rather than because of, what was going on with agricultural employment. The fluctuations in agricultural employment in the time period under observation appear to be so capricious that one must look to other explanations such as flaws with the data collection—in this more difficult data-collection area—or changes in agricultural policy designed to replace subsistence farming with more competitive market farming. One explainable anomaly is the large increase in agricultural employment in 1997, which occurred because the survey that year for rural areas was late, extending into the third quarter, and it captured a large number of seasonal agricultural workers who had not been counted in other years.

Nonagricultural employment. In table 5, agriculture is removed from the picture, which greatly clarifies the situation. The growth of employment during the 1993–95 period is much more pronounced in the less urban areas, in small establishments, and among workers without employment benefits. Furthermore, the apparent anomaly of declining self-employment in the period is eliminated. Nonagricultural self-employment rose even more than did nonagricultural employment in establishments with five or fewer employees.

Informal sector ups and downs. The disproportionate growth in the indicators of informality, except for self-employment, can also be seen from 1991 to 1993, a period when real gross domestic product grew at an annual rate of 2.8 percent. (See table 5.) After the across-the-board relative growth of informal sector indicators from 1993 to 1995, the trend reversed during the 1995–98 period when real gross domestic product grew at a robust 5.6-percent annual rate. Employment in small establishments, employment without any benefits, and self-employment all grew more slowly than did employment overall. The small exception is that the formal indicator of “covered by social security” grew slightly more slowly than did overall employment.

The change in the trend since 1995 was not enough to prevent informal indicators from growing faster in general than overall employment during the 1991–98 period. The one exception here is “self-employment,” which grew slightly less.

Legislated reform. Social security participation might have been influenced by a reform in social security that was enacted in December 1995 and went into effect in July 1997. The reform, among other things, increased the length of participation (working in a job with mandatory social security contributions) from 500 weeks to 25 years to qualify for eventual retirement benefits. It also slightly increased the guaranteed minimum benefit at retirement while strengthening the link between workers’ contributions and benefits. In Mexico, the social security system also includes health benefits, and reforms in that aspect of the system might be most significant. The contributions required of employers were substantially reduced and it became easier for those in the informal sector to participate voluntarily in the social security program.

The continued fall in the proportion of the workers participating in social security in 1996 and 1997 (which can be seen in the percentage of the total column in table 5) might reflect anticipation of the changes. In particular, the common practice of leaving the system after the required 500 weeks of participation may have accelerated briefly. The small surge in 1998, then, might reflect an end of that practice as workers became locked into the new 25-year participation requirement. It might also reflect new participants taking advantage of what is, overall, a more attractive program, a program that is also specifically aimed at reducing the size of the informal sector.⁴³

Two Mexicos

Measured unemployment is lower and the indicators of informality are greater in Mexico’s less urban than in its more urban areas. In 1991, the rate of unemployment, at 2.4 percent, was only slightly lower in the former than in the latter.

| Characteristic | 1991 | 1993 | 1995 | 1996 | 1997 | 1998 | | |
|---|------------|------------|------------|------------|------------|------------|---------|--|
| Total employment | | | | | | | | |
| Total | 22,344,324 | 23,989,906 | 25,502,724 | 27,304,350 | 28,339,481 | 30,800,142 | | |
| Less urban areas | 8,281,632 | 8,972,820 | 10,237,264 | 11,425,846 | 11,309,325 | 12,758,557 | | |
| More urban areas ¹ | 14,062,692 | 15,017,086 | 15,265,460 | 15,878,504 | 17,030,156 | 18,041,585 | | |
| In establishments with five or fewer employees | 10,418,191 | 11,656,595 | 12,974,490 | 13,755,124 | 14,090,457 | 15,244,503 | | |
| In establishments with six or more employees | 11,926,133 | 12,333,311 | 12,528,234 | 13,549,226 | 14,249,024 | 15,555,639 | | |
| Without any employment benefits | 10,966,533 | 12,626,352 | 14,216,823 | 15,268,060 | 16,223,115 | 17,130,326 | | |
| With some employment benefits | 11,192,962 | 11,205,017 | 11,064,812 | 11,849,497 | 11,891,316 | 13,478,928 | | |
| Covered by social security | 10,089,206 | 10,234,845 | 10,165,702 | 10,615,378 | 10,788,994 | 12,148,125 | | |
| Self-employed | 5,669,406 | 5,917,838 | 6,644,053 | 6,913,796 | 7,307,990 | 7,766,943 | | |
| Percentage of total nonagricultural employment: | | | | | | | | |
| Less urban areas | 37.1 | 37.4 | 40.1 | 41.8 | 39.9 | 41.4 | | |
| More urban areas ¹ | 62.9 | 62.6 | 59.9 | 58.2 | 60.1 | 58.6 | | |
| In establishments with five or fewer employees | 46.6 | 48.6 | 50.9 | 50.4 | 49.7 | 49.5 | | |
| In establishments with six or more employees | 53.4 | 51.4 | 49.1 | 49.6 | 50.3 | 50.5 | | |
| Without any employment benefits | 49.5 | 53.0 | 56.2 | 56.3 | 57.7 | 56.0 | | |
| With some employment benefits | 50.5 | 47.0 | 43.8 | 43.7 | 42.3 | 44.0 | | |
| Covered by social security | 45.5 | 42.9 | 40.2 | 39.1 | 38.4 | 39.7 | | |
| Self-employed | 25.4 | 24.7 | 26.1 | 25.3 | 25.8 | 25.2 | | |
| | 1991–98 | | 1991–93 | | 1993–95 | | 1995–98 | |
| Annual percentage change | | | | | | | | |
| Total | 4.7 | | 3.6 | | 3.1 | | 6.5 | |
| Less urban areas | 6.4 | | 4.1 | | 6.8 | | 7.6 | |
| More urban areas ¹ | 3.6 | | 3.3 | | .8 | | 5.7 | |
| In establishments with five or fewer employees | 5.6 | | 5.8 | | 5.5 | | 5.5 | |
| In establishments with six or more employees | 3.9 | | 1.7 | | .8 | | 7.5 | |
| Without any employment benefits | 6.6 | | 7.3 | | 6.1 | | 6.4 | |
| With some employment benefits | 2.7 | | .1 | | -6 | | 6.8 | |
| Covered by social security | 2.7 | | .7 | | -3 | | 6.1 | |
| Self-employed | 4.6 | | 2.2 | | 6.0 | | 5.3 | |
| ¹ Areas with 100,000 or more inhabitants and state capitals. | | | | | | | | |
| NOTE: Absolute and relative data for employees with social security and employment benefits excludes “employed” persons waiting to start a new job. | | | | | | | | |
| SOURCE: INEGI, National Employment Survey, various years. | | | | | | | | |

(See table 6.) By 1993, however, a considerable gap had opened up between them as the number of unemployed actually fell in the less urban areas, while it was rising substantially in the more urban areas. The gap widened in 1995, as the more urban areas were harder hit by the economic downturn. The gap narrowed somewhat through 1997, but then expanded slightly again in 1998. Throughout the period from 1991 to 1998, the number of unemployed grew at

an annual rate of 7.7 percent in the more urban areas, while it declined in the less urban areas.

If the official unemployment rate were to be based upon a survey of the entire country and not just the more urban areas, it would be even lower than the one reported. In the 6 years during which both the National Employment Survey and the Urban Employment Survey were taken, the nationwide unemployment rate averaged 1.1 percentage points

Table 6. Mexico's unemployment in more urban areas versus less urban areas, 1991, 1993, and 1995-98

| Characteristic | 1991 | 1993 | 1995 | 1996 | 1997 | 1998 |
|--|----------------|----------------|----------------|----------------|------------|------------|
| Labor force | 31,229,048 | 33,651,812 | 35,558,484 | 36,580,746 | 38,344,658 | 39,507,063 |
| More urban areas | 14,706,007 | 15,705,194 | 16,554,068 | 17,052,788 | 17,906,946 | 18,793,502 |
| Less urban areas | 16,523,041 | 17,946,618 | 19,004,416 | 19,527,958 | 20,437,712 | 20,713,561 |
| Open unemployed | 694,965 | 819,132 | 1,677,416 | 1,354,710 | 984,900 | 889,552 |
| More urban areas | 352,114 | 490,941 | 1,107,667 | 953,690 | 615,530 | 590,610 |
| Less urban areas | 342,851 | 328,191 | 569,749 | 401,020 | 369,370 | 298,942 |
| Open unemployment rate (percent) | 2.2 | 2.4 | 4.7 | 3.7 | 2.6 | 2.3 |
| More urban areas | 2.4 | 3.1 | 6.7 | 5.6 | 3.4 | 3.1 |
| Less urban areas | 2.1 | 1.8 | 3.0 | 2.1 | 1.8 | 1.4 |
| Annual percentage change | | | | | | |
| | 1991-98 | 1991-93 | 1993-95 | 1995-98 | | |
| Labor force | 3.4 | 3.8 | 2.8 | 3.6 | | |
| More urban areas | 3.6 | 3.3 | 2.7 | 4.3 | | |
| Less urban areas | 3.3 | 4.2 | 2.9 | 2.9 | | |
| Open unemployed | 3.6 | 8.6 | 43.1 | -19.1 | | |
| More urban areas | 7.7 | 18.1 | 50.2 | -18.9 | | |
| Less urban areas | -1.9 | -2.2 | 31.8 | -19.3 | | |

NOTE: The "more urban areas" are those with 100,000 or more inhabitants and state capitals.
SOURCE: INEGI, National Employment Survey, various years.

lower than this urban rate.⁴⁴ Applying that difference to the entire period yields a national average unemployment rate of 2.6 percent from 1991 to 1999 (unadjusted to U.S. concepts). Employment in general is more likely to be informal in the less urban areas. The following tabulation shows informal employment indicators, by percent of total area employment, in 1998.⁴⁵

| | <i>More urban areas*</i> | <i>Less urban areas</i> |
|--|--------------------------|-------------------------|
| Not covered by social security | 53.2 | 87.1 |
| Without any employee benefits | 48.1 | 77.4 |
| In establishments with five or fewer employees | 42.7 | 68.3 |
| Self-employed | 22.9 | 33.2 |
| Unpaid workers | 4.9 | 4.5 |
| Domestic workers | 4.8 | 4.5 |

*100,00 or more inhabitants and state capitals.

Two types of work often counted as informal—unpaid and domestic labor—have been added to the indicators. Except for domestic workers (a very small category) the measures of informality for the less urban areas are far higher than those for the more urban areas.

In some of the poorer and more rural states, the percent of the population covered by social security is less than a

third as great as the percent covered in richer states. Following is the percent of population covered by social security in 1995.⁴⁶

| | <i>Percent</i> |
|-------------------------------------|----------------|
| Northern states | |
| Coahuila | 75.4 |
| Nuevo Leon | 72.1 |
| Sinaloa | 58.1 |
| Pacific region | |
| Jalisco | 49.2 |
| Poorer states in South and interior | |
| Puebla | 33.3 |
| Guerrero | 34.1 |
| Oaxaca | 24.4 |
| Chiapas | 23.5 |

As noted previously, unemployment in Mexico appears to be something that only those with some economic comfort can afford. The unemployed are also better educated than average. (See table 7.) In 1995, chosen because it was the year of highest unemployment in the period, the phenomenon can be observed in both the more urban and the less urban areas. Unemployment is not only lower for the generally less educated, but it is also lower in every education category in the less urban than in the more urban areas.

The highest unemployment rate observed for any education category was 8.3 percent, the rate of those with incom-

Table 7. Labor force and unemployment in Mexico, by education, more urban areas versus less urban areas, 1995

| Education | All | | | More urban areas | | | Less urban areas | | |
|---|------------------|--------------|------------------------------|------------------|--------------|------------------------------|------------------|--------------|------------------------------|
| | Percent of total | | Unemployment percentage rate | Percent of total | | Unemployment percentage rate | Percent of total | | Unemployment percentage rate |
| | Labor force | Unemployment | | Labor force | Unemployment | | Labor force | Unemployment | |
| Total | 100.0 | 100.0 | 4.7 | 100.0 | 100.0 | 6.7 | 100.0 | 100.0 | 3.0 |
| No education | 10.8 | 4.4 | 1.9 | 4.1 | 3.3 | 5.5 | 16.7 | 6.5 | 1.2 |
| Incomplete primary | 20.9 | 14.2 | 3.2 | 11.3 | 8.9 | 5.3 | 29.2 | 24.4 | 2.5 |
| Complete primary | 21.4 | 18.2 | 4.0 | 19.6 | 16.5 | 5.6 | 22.9 | 21.6 | 2.8 |
| Complete and incomplete high school ... | 27.9 | 39.6 | 6.7 | 35.1 | 43.3 | 8.3 | 21.6 | 32.5 | 4.5 |
| More than high school | 19.0 | 23.6 | 5.9 | 29.8 | 28.0 | 6.3 | 9.5 | 15.1 | 4.8 |

NOTE: The "more urban areas" are those with 100,000 or more inhabitants and state capitals.
SOURCE: INEGI, National Employment Survey, 1995, table 9.

plete or complete high school education in the more urban areas. The next highest was 6.3 percent, the rate for those with more than a high school education in the more urban areas. The lowest two rates, 1.2 and 2.5 percent, were for those with no education and incomplete primary education, respectively, in the less urban areas.

Demonstrating further the contrast between the regions, the labor force was more concentrated among the better educated in the more urban areas, where 64.9 percent had at least some high school education, and among the less educated in the less urban areas. In the less urban areas, only 31.1 percent of the labor force had at least some high school education, while 16.7 percent had no education at all, more than four times as great a percentage as the 4.1 percent in the more urban areas. The greater concentration of workers among the better educated tended to raise the average unemployment rate in the more urban areas, while the concentration of workers among the lesser educated, who are also predominant in the informal sector, lowered the average unemployment rate in the less urban areas.

Segmented market versus flexible wages

An alternative explanation has been extended for the relative rigidity of employment and unemployment in Latin America in the face of an economic decline. Instead of unemployment going up as it does in the United States, the main adjustment is a fall in real wages. Real wages can be reduced more easily in Latin America partly because of high rates of inflation. To reduce real wages, employers need only to hold the line on nominal wages or raise them at lower rates than the rate of inflation.⁴⁷

Indeed, the consumer price index (CPI) in Mexico went up by almost a third in the first 6 months of 1995, and, as noted previously, real wages plunged after having gone up steadily since 1988.⁴⁸ The real wage aspect of the alterna-

tive theory of rigid employment holds true, then, for the country's most recent economic shock, as it did previously for a protracted period after the financial crisis touched off by falling oil prices in 1981. On the employment side, however, the alternative explanation holds true mainly just for the informal sector. Table 4 shows that all the indicators for formal employment declined from 1993 to 1995. Had a National Employment Survey been taken in 1994, a steeper decline would no doubt have been revealed. Declining real wages, which permit employers to lower costs when revenues are falling without laying off employees, probably somewhat mitigated the reduction in formal employment.

The existence of a large informal sector in other large Latin American countries might explain the downward rigidity of employment in those countries almost as well as it does in Mexico. In 13 Latin American countries, urban informal sector employment averaged 47 percent of total urban employment, according to estimates by the International Labor Office in the mid-1990s. These countries include Argentina at 46 percent and Brazil at 48 percent.⁴⁹

Maquiladoras and export-led growth

The relative expansion of the informal sector in Mexico would have been even greater in the 1990s than it was had it not been for the growth of Mexico's in-bond manufacturing system. Begun in 1965, the *maquiladora* program, as it is called, takes advantage of a provision in U.S. trade law that provides for import duties to be paid only upon the value added to U.S. components. Most *maquiladoras* are subsidiaries of large multinational corporations assembling finished products from components received primarily from the United States. *Maquiladora* employment has increased every year since 1982.⁵⁰

Even with the steady increase, *maquiladora* employment

still constitutes only 2.6 percent of total employment and 14.6 percent of manufacturing employment. Including indirect employment generated by *maquiladoras* would, of course, raise both proportions. But because most of these firms' backward and forward product linkages, as well as their financial linkages, are with the exterior, the rise would have been very small.⁵¹

Regarded not as an anomalous enclave in Mexico's economy, but as representative of a larger phenomenon, the growth of *maquiladora* employment takes on added importance. Since the beginning of the North American Free Trade Agreement and the fall of the peso in 1994, exports in general from Mexico have soared. In 1998, \$64.4 billion in merchandise was exported from non-*maquiladora* plants versus \$53.1 billion from *maquiladora* plants. From 1994 through 1998, non-*maquiladora* exports grew annually by \$14.1 billion while *maquiladora* exports grew by \$7.4 billion annually. From 1991 through 1994, non-*maquiladora* exports grew only by \$2.5 billion annually versus *maquiladora* export growth of \$3.5 billion annually. Altogether, in current U.S. dollar terms, exports grew at the extraordinary annual rate of 17.9 percent from 1994 through 1998.⁵²

The direct jobs created by these exports are not in the informal sector. Workers in manufacturing for export are typically wage and salary workers, they work in establishments with more than five employees, and most receive fringe benefits of some kind. A continuation of this rate of export-led growth would, in due time, effect large changes in Mexico's labor structure.

Virtuous circle

Commentators on Mexico at the OECD wrote hopefully in 1996:

The way forward is to introduce a range of measures that would favour formal activity. With the shift from informality to formal activity, the tax base would increase; this in turn would allow a reduction in tax rates without weakening the position of public finances, and/or improved delivery of services to workers and firms

in the formal sector, thereby strengthening incentives to switch to formal activity.⁵³

They refer to it as a "virtuous circle."

Mexico did move forward in the 8 years under consideration in terms of job creation. Employment grew at an annual percentage rate of 3.4 percent from 1991 to 1998. By this measure, Mexico compares very favorably with the United States and Canada, which had annual growth rates in employment of 1.6 percent and 1.5 percent, respectively, during the period. Mexico's compares even more favorably with those of such countries as the United Kingdom (0.8 percent) and Japan (0.3 percent).⁵⁴ It would also appear that Mexico is more than meeting its growing requirement for jobs, because the annual rate of growth of the working age population was 2.5 percent.⁵⁵ Even the number of employed persons covered by social security and employees in establishments with six or more employees grew at least that fast.

Although overall employment may have grown, the "virtuous circle" remained elusive. Two of the three main indicators of informal employment, "in establishments with five or fewer employees," and "without any employment benefits," grew at a much greater annual rate than did employment generally. If agriculture is excluded, the trends are even more pronounced for these indicators, and self-employment grew at a faster rate than overall employment as well. Informal employment was apparently a more dominant factor in Mexico in 1998 than in 1991. The economic downturn in 1995 played a large part in these developments, but it only accelerated a trend that was recognizable from 1991 to 1993.

Since 1995, however, most indicators of formal employment relative to total employment have grown. Three factors help explain these changes: recovery from the disproportionate effect of the economic downturn on the formal sector, a substantial rise in exports, and reforms in the social security system. It remains to be seen whether this is the beginning of a long-term trend in Mexico away from informal sector employment or only a brief interruption of a trend in the opposite direction. □

Notes

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¹ A great deal has been written about the informal sector in developing countries since British anthropologist, Keith Hart, coined the term in 1970. See his "Small-Scale Entrepreneurs in Ghana and Development Planning," *The Journal of Development Studies*, April 1970, pp. 104–20, and "Informal Income Opportunities and Urban Employment in Ghana," *Journal of Modern African Studies*, January 1973, pp. 61–89 (reprinted in several readers). Revealing the widespread current ac-

ceptance of the concept, the International Labour Office included "urban informal sector employment" among the 18 indicators in its new reference work, *Key Indicators of the Labour Market, 1999* (Geneva, International Labour Office, 1999). For important contributions to what they describe as the "immense" literature on the informal sector see note 2 in Donald C. Mead and Christian Morrison, "The Informal Sector Elephant," *World Development*, October 1996, pp. 1611–19.

² Real wages in manufacturing were still 20 percent below their 1994 level as of September 1998. The 1998 average of real wages in retail trade was 15 percent below, and of wholesale trade was 21 percent below, the 1994 average. Manufacturing real wages are from *OECD Economic Surveys, Mexico, 1998–1999* (Paris, Organization for Economic Cooperation and Development, 1999), p. 32. The yearly averages for real wages in trade are calculated from INEGI, *Cuaderno de Información*

Oportuna, September 1999, table 2.27.

³ To receive no employee benefits at all means that the worker gets no end-of-year bonus, paid vacation, profit sharing, social security (IMSS), civil servants' social security (ISSSTE), saving system for retirement (SAR), housing allowance, medical or health benefits, or any other fringe benefit that he or she might volunteer to the interviewer.

⁴ A small establishment might be a retail outlet of a chain of stores or the local office of a larger organization. It could be a well-capitalized small operation that pays its workers well and scrupulously abides by all the labor and the tax laws. A self-employed person could be a doctor, lawyer, engineer, or some other type of highly skilled and well-paid contractor. Even someone with no employment benefits could be a member of the professional class and quite far from what is generally understood as the informal sector.

⁵ This assumption may not be entirely valid with respect to employment benefits because of changes in the social security program in 1997, discussed later in the article.

⁶ Susan Fleck and Constance Sorrentino, "Employment and Unemployment in Mexico's Labor Force," *Monthly Labor Review*, November 1994, pp. 3–31.

⁷ Calculated from the open unemployment rate in table 3.

⁸ Bureau of Labor Statistics, "Comparative Civilian Labor Force Statistics, Ten Countries, 1959–1999," April 17, 2000, table 2, <http://stats.bls.gov/special.requests/ForeignLabor/flsflorc.pdf> (visited Nov. 13, 2000).

⁹ Fleck and Sorrentino, pp. 12–16.

¹⁰ Unlike Mexico's survey, the U.S. survey has no question that directly asks if the respondent is waiting to start a new job. Rather, those answering that they have a job but also respond that they did not work in the past week are asked why they did not work. If they reply they were waiting to start a new job, they are potentially counted as unemployed. They are dropped from the labor force and not counted as unemployed unless they respond positively to an additional question concerning whether or not they actively sought work in the past 4 weeks.

¹¹ Employed persons in Mexico are defined as those who are 12 years old or older and, in the reference week (the week prior to their interview), (1) worked at least one hour for barter or money or were self-employed; or (2) did any work at all as an unpaid family or nonfamily worker; or (3) were temporarily absent from work because of illness, vacation, travel, personal reason, or studies and were *paid* while on leave (no time limit is placed on the absence as long as the person is paid); or (4) did not work or receive pay, but expected either to begin a new job or to return to work within the next 4 weeks. The unemployed are defined as persons 12 years old and older who, in the reference week, did not work for 1 or more hours or do any unpaid family work and (1) were available for work and actively sought work in the previous 4 weeks or (3) had sought work in the past 1–2 months and were waiting (a) for the next season to begin or (b) for a reply to a job application; or have intentions to call upon potential employers within the next few days. The sum of the employed and the unemployed, in Mexico as elsewhere, is the labor force, though in Mexico it is called the economically active population, consistent with the terminology of the International Labour Organization.

¹² The reported unemployment rates from which adjustments are made differ somewhat from the unemployment rate in table 3 even though only urban areas are considered in each case. That is because the numbers come from the two different major household surveys, and the so-called "more urban areas" of the National Employment Survey include additional cities to those covered by the Urban Employment Survey. (See the appendix.) Another reason why they differ is that the National Employment Survey, also noted in the appendix, is a snapshot taken in the second quarter of the given year whereas the Urban Employment Survey annual number is an average of the results of twelve monthly surveys.

¹³ The Mexican questionnaire asks for the dates when the job search

begins and when the respondent last sought work. The interviewer is urged to make sure that the search has been uninterrupted between the two dates. This is one of the factors considered to determine if the search is serious even though the respondent might not have sought work in the past 4 weeks. Some other factors considered are if they are awaiting a response to a job solicitation or if they are recuperating from an illness.

¹⁴ The published tables of the National Employment Survey break at 12 through 14 years old instead of 12 through 15, so the precise effect of including all four year-age groups cannot be calculated with readily available data.

¹⁵ When gross domestic product fell by 0.5 percent in 1991, the U.S. rate of unemployment rose to 6.8 percent, from 5.6 percent the previous year. Total employment fell by 0.9 percent. Before that, in 1982, a drop in GDP of 2.0 percent had resulted in an unemployment rate of 9.7 percent, up from 7.6 percent the previous year. Total employment fell by 0.9 percent then, as well. GDP numbers are from Bureau of Economic Analysis, National Income and Product Accounts, <http://www.bea.doc.gov/bea/dn/gdplev.htm> (visited Nov. 13, 2000); unemployment statistics are from "Comparative Civilian Labor Force Statistics, Ten Countries, 1959–1999," table 2.

¹⁶ The relatively low continuing unemployment for 1995 is apparently not a result of the fact that the National Employment Survey, which produced the statistics referred to here, is taken only in the second quarter of the year. The average unemployment for the year from the Urban Employment Survey, as observed in table 3, was 6.3 percent. That survey reported an unemployment rate of 6.5 percent in the second quarter. These are both lower than the unadjusted "snapshot" rate of 6.7 percent rate of the more urban areas in the National Employment Survey. See *Cuaderno de Información Oportuna*, March 1996, table 2.1, for quarterly unemployment rates in 1995.

¹⁷ For a more complete discussion of what each rate measures, see the Fleck-Sorrentino article. The R-1 definition has changed slightly. Anyone out on strike is now considered employed. Previously, a striking worker was considered employed only if he or she expected to return to work in less than 4 weeks. Another alternative rate described in Fleck and Sorrentino has been discontinued.

¹⁸ U.S. data are from "Comparative Civilian Labor Force Statistics, Ten Countries, 1959–1999," table 7. "Agriculture," in each case, is defined as "agriculture, forestry, hunting, and fishing."

¹⁹ *World Development Indicators, 1999*, The World Bank (Washington, DC, 1999), table 2.2.

²⁰ Bureau of Labor Statistics press release, September 7, 2000, "International Comparisons of Hourly Compensation Costs for Production Workers in Manufacturing, 1999, Supplementary Tables," table 4.

²¹ Mexico's per capita measured at current exchange rates was only 12 percent of U.S. GDP per capita, reflecting, to a degree, the plummet in the value of the peso beginning in late December 1994. For a full treatment of the peso crisis and its aftermath, see *OECD Economic Surveys, Mexico, 1994–1995* (Paris, Organization for Economic Cooperation and Development, 1995). The per capita GDP comparisons are from their *OECD Economic Surveys, 1998–1999*, basic statistics, international comparisons, unnumbered fold-out page.

²² *World Development Indicators, 1999*, table 2.8. The Gini index, given in the cited table, is a measure of income inequality. On a scale from 0 to 100, 0 represents perfect income equality and 100 complete income inequality. In 1995, the Gini index in Mexico was 53.7; in 1994, the Gini index in the United States was 40.1.

²³ An alternative to unemployment compensation was initiated in 1992, however, with the creation of the SAR (individual accounts for retirement), a pension fund program in addition to Mexico's social security program administered by private banks. Deposits in the SAR can be drawn upon during periods of unemployment, but only after one has contributed for 5 years, so it would not have come into play during the period under study. The sums provided are also very small.

²⁴ In the case of collective dismissals for routine economic reasons, employers are required by law to pay a lump-sum equivalent of three months wages to all dismissed workers plus a seniority premium of 12 days of salary per year of employment with that employer, with a ceiling of two minimum wages. In the case of individual dismissals without a very strictly defined “just cause,” an additional 20 days of salary per year is added to the above if the worker has more than 15 years of service. Additional severance requirements may be part of collective agreements. *OECD Economic Surveys, 1996–1997*, p. 98.

²⁵ *OECD Economic Surveys, 1996–1997*, p. 96.

²⁶ *OECD Economic Surveys, 1996–1997*, pp. 100–01.

²⁷ *OECD Economic Surveys, 1996–1997*, pp. 64–65.

²⁸ Low capital intensity, small size, and illegality to one degree or another, were the three measures for informality used by Mead and Morrison, op. cit., in their seven-nation study. They found a good deal of variability among the countries, none of which was Mexico, in the degree to which these features intersected. They conclude that the term, “informal sector,” may be appropriate for examining an individual country, but definitional problems make multicountry comparisons difficult.

²⁹ A 1996 analysis from the Urban Employment Survey of microenterprises (6 or fewer employees) found that 33 percent of such firms defined as “informal” were in commerce, 33 percent in services, and 23 percent in manufacturing. The remainder was in an “other” category that includes construction and transportation. Informal microenterprises were 72 percent of all manufacturing firms, 58 percent of service firms, and 51 percent of commercial firms. See Ricardo Rodarte, “*Experiencias en la medición del sector informal en México*,” INEGI, *Notas, Revista de Información y Análisis*, no. 5, 1998, p. 22.

³⁰ Fleck and Sorrentino, pp. 13–14. Reports of generally low incomes must be regarded with some reservation, however. Underreporting of income to survey takers and tax collectors alike is likely to be greater in the informal sector.

³¹ See Nestor Elizando, “Illegality in the Urban Informal Sector of Mexico City,” in Victor E. Tokman, ed., *Beyond Regulation, The Informal Economy in Latin America* (Boulder and London, Lynne Rienner Publishers, 1992), pp. 55–83. Although labeled “illegal,” the term does not include criminal, underworld activities as commonly understood in the United States.

³² *OECD Economic Surveys, 1996–1997*, p. 73. See also Fleck and Sorrentino, p. 12, for a collection of earlier estimates.

³³ *Key Indicators of the Labor Market*, pp. 180 and 186.

³⁴ More details are in Ralf Hussmanns and Farhad Mehran, “Statistical definition of the informal sector: International standards and practices,” 52nd session of the International Statistical Institute, Helsinki, Finland, August 9–18, 1999. Further information may be found at <http://www.stat.fi/isi99/proceedings/arkisto/varasto/huss0772.pdf> (visited Nov. 7, 2000).

³⁵ INEGI letter, May 11, 2000. The wide discrepancy between this figure and the much higher percentage of employed persons receiving no fringe benefits of any kind, the Institute points out, bespeaks a flexibility in labor relationships in Mexico that is not so well captured by the “formal vs. informal” dichotomy. Workers paid by the job on a contract basis by formal enterprises could account for a substantial part of this discrepancy.

³⁶ Clara Jusidman, *The Informal Sector in Mexico*, Occasional Paper Number 1, prepared for the U.S. Department of Labor and Secretariat of Labor and Social Welfare of Mexico, September 1992, p. 19. A Spanish version of this report was also published as *El Sector informal en México* (Mexico City, Secretaría del Trabajo y Previsión Social, Subsecretaría “B,” 1993). Jusidman refers simply to a study by INEGI for her 10.4 percent figure, but no indication is given as to what definition of the informal sector was used. By any definition of Mexico’s informal sector

that has been offered, this percentage is much lower than the percentage of employment in the informal sector.

³⁷ The U.S. percentage is from Marilyn E. Manser and Garnett Picot, “The role of self-employment in U.S. and Canadian job growth,” *Monthly Labor Review*, April 1999, p. 16. Official U.S. statistics for self-employment exclude the incorporated self-employed. Mexican statistics include them. The U.S. percentage here is in accord with Mexico’s definition. The Mexico percentage is presented in table 4 of this article. Mexico tabulates workers on their own account separately from owner-employers. The two are combined here, consistent with the International Labour Office definition of self-employed. Owner-employers were 4.8 percent of total employed workers in Mexico in 1996. The United States includes both those without paid employees (own-account workers in Mexico) and those with employees in its definition of self-employed. Removing high-income professionals from the self-employed would probably make the disparity between the two countries even greater. On the other hand, when commentators speak of the “informal” sector, they often mean only the urban informal sector, as opposed to the “traditional” or “subsistence” agriculture sector. If Mexico’s many small family farms were to be excluded from this measure, the disparity between the countries would be somewhat reduced. The self-employed were 25.3 percent of total nonagricultural employment in Mexico in 1996 (table 5) and 7.4 percent of U.S. nonagricultural employment in the same year (Bureau of Labor Statistics, *Employment and Earnings*, March 1997, Table A-6). Assuming the incorporated self-employed were the same percentage of nonagricultural self-employed as of the total self-employed, 9.5 percent of nonagricultural workers in the United States would have been self-employed by Mexican concepts.

³⁸ See table 5. More workers are in establishments of small size than in firms of small size because an establishment can be a part of a larger organization. That is why this percentage is greater than previous estimates of informality based upon firm size.

³⁹ Bureau of Labor Statistics, *Employment and Wages, Annual Averages, 1996*, table 9. Neither the household nor the establishment surveys for the United States break down employment by establishment size.

⁴⁰ Manser and Picot, p. 16, for U.S. nonagricultural self-employed.

⁴¹ As stated earlier in note 3, to receive no employee benefits at all means that the worker gets no end-of-year bonus, paid vacation, profit sharing, social security (IMSS), civil servants’ social security (ISSSTE), saving system for retirement (SAR), housing allowance, medical or health benefits, or any other fringe benefit that he or she might volunteer to the interviewer. One could hardly find a better definition of a member of the informal sector. As far as the small scale of operations is concerned, it would have been better to have statistics on those working in firms, as opposed to establishments, with five or fewer employees, but these numbers are not readily available.

⁴² Net emigration from Mexico to the United States from 1990 to 1995 is estimated at 1.39 million. The Mexican-born population living in the United States is estimated to have increased 1.9 million from 1990 to 1996. See *Binational Study on Migration between Mexico and the United States*, Commission on Immigration Reform, United States, and Ministry of Foreign Affairs, United Mexican States, 1997, p. iii.

⁴³ See *OECD Economic Surveys, 1996–1997*, pp. 120 and 151; *1997–1998*, pp. 71–81, and 88–119; *1997–1999*, pp. 118–21; Marco A. Espinosa-Vega and Tapen Sinha, “A Primer and Assessment of Social Security Reform in Mexico,” *Economic Review*, First Quarter, 2000 (Federal Reserve Bank of Atlanta), pp. 1–23. Espinosa-Vega and Sinha note (pp. 3–4) that the retirement benefit increase, on average, was so small for those contributing past the 10th year of work that the incentive was quite strong to drop out or evade payments into the old program after the 10-year mark had been reached.

⁴⁴ Calculated from differences in open unemployment rates in tables 3 and 6.

⁴⁵ Data are from INEGI, National Employment Survey, 1998, tables 3.28, 3.30, 3.39, 3.53

⁴⁶ Data are from *OECD Economic Surveys, Mexico, 1997–1998*, p. 96.

⁴⁷ See Jose Antonio González Anaya, “Labor Market Flexibility in Thirteen Latin American Countries and the United States, Revisiting and Expanding Okun Coefficients” (Washington, DC, The World Bank, 1999).

⁴⁸ The 1995 CPI changes are from *Cuaderno de Información Oportuna*, May 1997, table 3.1; additional real wage observations are from *OECD Economic Surveys, 1996–1997*, pp. 87–91.

⁴⁹ *Key Indicators of the Labour Market*, pp. 179–80. These are the same thirteen countries as were examined in the González Anaya study.

⁵⁰ INEGI, *Industria Maquiladora de Exportación*, February 2000, p. 8.

⁵¹ *OECD Economic Surveys, 1996–1997*, p. 92.

⁵² *Cuaderno de Información Oportuna*, December 1996, table 4.6; March 1997, table 4.8; and December 1999, table 4.8.

⁵³ *OECD Economic Surveys, 1996–1997*, p. 9.

⁵⁴ “Comparative Civilian Labor Force Statistics, Ten Countries, 1959–1999,” table 2.

⁵⁵ INEGI, National Employment Survey, 1998, table 2.2.

Appendix: The surveys

The *Instituto Nacional de Estadística, Geografía e Informática* (INEGI), created through a governmental reorganization in 1983, introduced the National Employment Survey in 1988. This was the first generally reliable household survey of employment representative of the nation as a whole. The survey and the published results, from the beginning, have been probing and thorough, revealing a wide range of characteristics of Mexico’s labor market. The primary shortcoming in these beginning years was that the survey was not conducted regularly. The next National Employment Survey wasn’t made until 1991. After that, surveys were taken in 1993 and 1995. Since 1995, the surveys have been conducted annually.

From the beginning, the National Employment Surveys have been conducted only in the second quarter of the year. Because of differences in the questionnaire and sample design in all but the largest urban areas, 1988 lacks comparability with the later years. That leaves only the period from 1991 to 1998 for a relatively clear, consistent picture of overall employment in Mexico.¹

For larger urban areas only, labor information has been more readily available for a longer period. The Urban Employment Survey was initiated in 1983 covering 12 cities on a quarterly basis. It first overlapped with and then replaced the Continuous Occupational Survey, which for most of the years of its existence had covered only the three largest cities, Mexico City, Guadalajara, and Monterrey. In 1985 the survey questionnaire was revised and enlarged and the coverage was expanded to 16 cities. Since 1987, this survey has been conducted on a monthly basis. Coverage jumped to 34 cities by the end of 1992, and, with subsequent regular increases, now stands at 45 cities.

The expanding coverage of the Urban Employment Survey makes comparisons over time somewhat problematic, but the benefits outweigh this disadvantage.² Observers now are able to trace on a monthly basis a number of labor market indicators for individual cities, cities that previously were

statistically invisible; the monthly aggregates are more truly representative of the entire country than before, particularly the measures of the rate of unemployment; and because the Urban Employment Survey has never been more than a partial view of labor in the country, the lack of comparability over time is of lessened consequence. If one wants to know what is happening, for instance, to overall employment or to the overall labor force over time, then the National Employment Survey still must be consulted.

Note that the National Employment Survey itself is divided into “more urban” and “less urban” areas. The relatively stable “more urban” portion should not be confused with the Urban Employment Survey with its steadily expanding coverage. The more urban coverage of the National Employment Survey, throughout the period, consists of the coverage of the Urban Employment Survey plus additional areas of “high population density.” Those additional areas are cities with a population of 100,000 or more and state capitals, whether or not they meet the 100,000-person minimum. Employment in the more urban areas, as defined, ranged from a high of 47.0 percent of total national employment in 1991 to a low of 45.6 in 1995.

Notes to the appendix

¹ A new questionnaire was introduced in 1995, and there is one modification that is most noteworthy. Previously, persons on strike were counted as employed, but only if they expected to return to work within 4 weeks. Under the revised system, anyone on strike is counted as employed. This also conforms with the practice in the United States. Because virtually no striking worker expects to stay out on strike for more than 4 weeks, this change should have a minimal effect on the final employment or unemployment figures.

² With the expanded coverage, official unemployment has been consistently lower by about one-tenth of a percentage point than would have been the case had the survey continued to cover only 16 cities. (The information on the 16-city rate was obtained from an e-mail from INEGI, May 11, 2000. The official unemployment rate is from table 3 of this article.)