Comments

Miguel Urquiola: Cowan, Micco, and Pagés make the case that the rise of Chilean unemployment after 1998 is in line with what one would expect given the interaction of an external demand shock with wage rigidity. They further argue that minimum wage policies and wage rigidity explain the historically high, slowly declining unemployment in Chile. The authors assemble an impressive amount of data and perform a large number of exercises to back up these claims, and the paper is a stimulating and worthwhile contribution. While it contains useful direct evidence on the issues raised, many of its results should be viewed as offering solid, but nonetheless circumstantial evidence for the above points. My comments on the paper raise a number of concerns that I hope will point to avenues for further research.

The paper's first claim is that the rise in unemployment that Chile experienced after 1998 is in line with what one would expect—that it was merely a fall in output not compensated by a reduction in wages. The authors contrast this assertion with previous analyses in Chile, which suggest that it might reflect labor-saving technological change. The evidence they cite comes from a labor demand model with out-of-sample predictions for 1999–2001, together with a time series analysis that finds no evidence of structural change. These results show that the slowdown in employment growth is consistent with predictions based on the behavior of wages and output, but they do not establish that the outcome would have been different if only wages had been more flexible. For instance, up to mid-2004 the United States experienced a recovery (one that was much more robust than Chile's recovery in the period considered in the paper) with lower-thanexpected employment growth. In this case, the most common explanations concerned not wage rigidity, but rather stubbornly weak business confidence leading to lower hiring than past experience suggested. Might employment demand in Chile have similarly stagnated even if wages had fallen?

Moreover, the above set of exercises in some sense simply assumes that wages in Chile are rigid. To establish this directly, the authors present two

additional findings. First, they point out that throughout the slowdown, real wage growth was never negative, either overall or for different occupational groups. It would be useful to see the evolution of productivity among these groups, as well, particularly since overall productivity continues to rise throughout the period. Second, the paper appeals to cross-country evidence on the relation between changes in real wages and changes in employment, presented in figure 5. Based on this figure, the authors conclude that "real wages in Chile are among the most rigid in the group of emerging economies." While suggestive, such international comparisons are not sufficient for establishing this assertion—and in any case the statement could be more precise. Could it be, for instance, that other countries have exactly the same nominal wage rigidity as Chile, but are simply characterized by higher inflation? Could adjustment be occurring along other margins (such as the number of hours worked), and could these play a bigger role in Chile than elsewhere?

The authors then turn to how policy might have aggravated this situation. In particular, after 1998 the average public sector wage and the minimum wage began growing faster than average and unskilled wages, whereas before they had moved roughly in lockstep. This partially reflects preestablished minimum wage increases legislated in 1997 for the 1997–2000 period. This is interesting (and potentially counterproductive) policy. It could be further exploited in future work, since it would seem to provide interesting variation. For instance, presumably the increase in the minimum wage was more binding and therefore had larger effects in some regions of Chile than in others. The paper does show some evidence of regional variation, and this type of finding is very useful in establishing that the policy was indeed potentially detrimental in its interaction with falling demand. Future work could advance in this area by controlling, for instance, for preexisting trends. One might also uncover announcement effects beginning in 1997, as well as region-specific effects.

The paper also explores the fact that in 1997 a number of jobs were paying above the 1997 minimum wage, but below the 2000 minimum. The evidence indicates that these jobs disappeared—few jobs in 2000 pay wages below the 2000 minimum level. A slight problem here is that the kink appears somewhat above the 2000 minimum wage, both in general and for construction.

In a final section, the authors present two exercises to address the fact that high and slowly declining unemployment seems to have been a feature of the Chilean economy not just in the past five years, but in the past twenty-five years. First, they illustrate that contracts in Chile last a relatively long time and are subject to indexation; a simulation shows that this slows adjustment to shocks. Second, they estimate private wage regressions that use the minimum wage and lagged inflation as explanatory variables. All variables have the expected signs, but as the authors note, these results do not necessarily uncover causal relationships.

In short, Cowan, Micco, and Pagés present an extensive case for why the Chilean government might want to pay attention to wage flexibility—and to be particularly careful about the timing of minimum wage increases.

Jaime Saavedra: The Asian crisis hit Chile with a sharp reduction in employment growth, which fell to 0.5 percent a year for the period 1997–2000, while private employment growth fell to 1.0 percent. Cowan, Micco, and Pagés show that this reduction is consistent with a stable demand function conditional on changes in wages and output. Consequently, they argue, expected or actual institutional changes did not induce structural breaks or changes in labor demand decisions.

The authors then attribute the impact of output changes on employment to real wage rigidities. In other words, they hypothesize that the Chilean labor market adjusted through quantities, not prices. In fact, real wages increased across the board despite the economic contraction, although increases were higher for professionals and technicians than for unskilled workers. The authors show that among countries where output fell in the 1990s, Chile and Argentina stand out as cases of real wage rigidity and relatively high employment elasticities. More compelling international evidence might result from comparing Chile with other Latin American countries where adjustment occurred primarily through prices, at least until inflation was high. Chile registered one of the largest drops in the employment-population ratio in the region in the late 1990s. The Chilean labor market clearly adjusts through quantity to an important degree.

The authors show that real wages did not fall despite the slowdown in GDP growth and the increase in unemployment. To support the fact that Chilean wages are more rigid than in other countries, they compare Chile to an arbitrary set of countries in years marked by negative growth episodes. In that sample, they find that countries with low wage elasticity tend to have high employment elasticity. This evidence is suggestive rather than definitive, since it is based on only a few countries and a few particular

years. Work by Gonzalez, however, supports this negative relation: he finds that when inflation is low, wage elasticities tend to be low and employment elasticities high. A more comprehensive analysis is needed to support the view that Chilean real wages are truly rigid, at least in relative terms.

Given that Chile's inflation is low, the authors go on to explore the reasons for nominal wage rigidity in Chile. Simple observation of the data reveals that private wages moved hand in hand with productivity, but both minimum and public sector wages rose even faster—in particular, faster than the mean wages of unskilled workers. Econometric analysis highlights the influence of the minimum wage and the indexation of contracts in determining private nominal wages. One surprising result of this analysis is the finding that indexation extends to most private wage contracts, despite the fact that only 8 percent of workers participate in collective agreements.

The authors show that minimum wages had a direct impact on overall wages. Given that the average private wage moved in a manner somewhat consistent with productivity, however, firms may have used the changes in the minimum wage to realign wages to their right level based on accumulated productivity increases. Also, the evidence that the minimum wage's influence increased during the crises may be related to either sluggish behavior on the part of firms or a reduction of flexibility at the microeconomic level over the period.

The authors report that the rigidities caused by minimum wages have a negative (but small) impact on employment, concentrated in low-skill sectors. These results are somewhat consistent with findings by Cunningham, who systematizes evidence for Brazil, Colombia, and Mexico and reports clear negative employment effects from minimum wage increases in the first two cases.³ Depending on the moment in the cycle and the structure of hiring and firing costs, an increase in the minimum wage can generate layoffs, reductions in hiring, or employment recompositions toward temporary employment or the informal sector. The paper does not explore which of these possibilities is more plausible in the Chilean case. However, if informality, for example, is taken into account, both wages and employment may be more flexible than what is reported here.

- 1. Gonzalez (1999).
- 2. The authors report employment-output elasticities and real wage—output elasticities for only one year, and both seem to be very low!
 - 3. Cunningham (2003).

A related question is how other labor market institutions allow for this type of adjustment. One institutional feature that is key in this analysis is firing costs, which affect the ability of firms to adjust to shocks through changes in their employment level and composition. Chile's firing costs are below the Latin American average (which is driven up mainly by the Andean countries), but they are above those of the OECD countries. This raises an important empirical question—namely, whether the low employment growth is related mainly to slow job creation rather than to layoffs. At the peak of the slowdown in 1999, discussions began in Chile about a labor code reform, which might have induced firms to behave under the assumption of a possible regime change. Reforms oriented toward increasing the tax burden of businesses were also introduced. Expected increases in taxes, minimum wages, and firing costs are a good set of variables for explaining low business confidence. Firms anticipating these changes could have postponed investment, reduced output, and increased layoffs. The paper's results indicating a stable demand function are not necessarily inconsistent with a negative effect of expected labor reforms, an explanation that the authors dismiss.

Finally, given that the paper addresses the general issue of how the labor market adjusts in Chile, it would have been interesting to further explore the role of firing costs and the ability of firms to lay off workers earning near-minimum wages. Are these layoffs concentrated among large or small firms? Do some of these workers move to the informal sector? The authors present a low employment elasticity for 1999. Is that related to high firing costs in Chile? Is this compensated by hours of work? These issues need to be further explored in order to better understand how the labor market adjusts in Chile.

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