

Comments

Naércio Menezes-Filho: This interesting paper on the costs of job displacement in Mexico is commendable for several reasons. First, it deals with an important issue, namely, the earnings trajectory of individuals who change their jobs. While there is an established literature on this subject for developed countries, studies on developing countries are scant, despite the fact that most of the recent reforms that provoked labor reallocation occurred in the latter, where the problems of poverty and inequality are severe. Second, the paper addresses this issue using very good data—essentially a census of private firms in the formal sector of the Mexican economy—over a long period. Finally, the analysis is thorough, as the authors submit their results to various robustness tests using different subsamples. The main drawback of the paper lies in the interpretation of the results, as I detail below.

The paper does not fully distinguish among the different explanations for the costs of displacement. It presents interesting graphical analyses of the wage changes for different periods and regions of displacement, but it offers very little formal statistical analysis as to whether these differences are statistically significant (apart from two figures in appendix B). The authors could have pooled the data and explicitly tested for differences in the displacement effect across regions and periods or included indicators of labor conditions at the time of displacement, such as regional unemployment, directly in the regression. Moreover, institutions and inequality may differ across regions in Mexico. Their explanatory power should be tested as well, if the aim is to provide a formal test of the different explanations for the displacement effect. It does not suffice to state that inequality and institutions vary less within Mexico than across countries, so they are not likely to be the main explanations for the different costs of displacement.

The authors could also have spent more time interpreting the results, since reconciling them with the theory is not straightforward. The model

predicts, for example, that postdisplacement wages should be lower in the north than in the central and border regions, but figures 4 and B2 show exactly the opposite, as wages fall by more in the border and central areas. The results change completely in figure 5, where the panel sample is used, (and again in figure 6, panel A), yet the authors do not present a fully convincing explanation for these changes.

The main problem with the data is that, as in other studies, the authors cannot distinguish between displacements and voluntary separations. As figure 3 shows, the rate of involuntary displacements varies over time, reaching its peak in 1995, when displacement seems to be most damaging to the worker. Does this rate vary across regions, as well? This selection problem could explain some of the variation in displacement effects documented in the paper. To minimize this selection problem, the authors focus on workers from displacing firms, that is, firms that contracted more than 60 percent between the third and fourth quarters of a given year (30 percent in another subsample). According to the authors, these workers are less likely to have voluntarily separated from their firm than workers in firms that did not implement such massive layoffs. But why were these workers displaced instead of the workers who continued working at the displacing firm? According to the model, the displaced workers were those with expected wages above the new proposed wage. If this is the case, why were their wages falling prior to displacement, as the various figures show?

Another question that deserves a more careful explanation is why product and labor market conditions vary so much across regions and over time. The paper does not investigate the reasons for such differences in any detail. Do good firms and workers, for example, endogenously locate in the border regions so as to enjoy its good prospects? Is this choice driven by unobservables? In other words, an endogeneity problem may underlie the differences in the displacement effect across regions.

In sum, this paper represents an important step toward better understanding the displacement problem in developing countries. The results as a whole are very interesting, but they deserved a more careful explanation, especially in view of the selection problems mentioned above.

Omar Arias: The paper discusses the impact of displacement (resulting from layoffs or voluntary separation) on future earnings performance using Mexican data. The topic is certainly of utmost relevance for Latin America and the Caribbean in light of the limited reform of overly protective job regulations and the need for well-designed support for displaced workers.

The paper provides an extensive and concise review of the literature in this area and presents novel results that highlight the heterogeneous potential earnings impacts of displacement depending on labor market conditions. The paper will be useful for both researchers and policymakers to better understand the role of factors mediating the impact of displacement on earnings and factor these into policy design.

The paper uses a unique panel data set for a large sample of Mexican workers registered in social security over a reasonably long period. The authors discuss the methodological difficulties of isolating the impact of displacement on future earnings. Three sets of issues merit special attention: the problems caused by omitted variables and self-selection (sample composition biases); attrition or incomplete employment spells (censoring biases); and the existence of heterogeneous impacts. The first two refer to the inability to appropriately control for worker and firm characteristics that may be correlated with both displacement probabilities and post-displacement earnings, to the restriction to workers with social security registration (that is, formal sector), and to the possibility that workers who drop out of the sample may have different characteristics and earnings performance than those who stay. The paper proposes several ways to address these issues and discusses the implications for the robustness of the results. The third point relates to the fact that average postdisplacement earnings may vary widely across workers depending on context-specific factors and workers' skills. The paper argues that the empirical results favor an important role for varying labor market conditions over that of local institutions and inequality. I focus my comments on some questions for future research with regard to the methodological approach and the robustness of the empirical evidence to discern competing explanations of impacts.

Although not framed in this way, the paper deals with an impact evaluation problem, in which the treatment effect corresponds to the change in displaced workers' earnings. The counterfactual is given by the change in earnings that would have occurred had these workers not been displaced, and it is approximated by the change in earnings of comparable nondisplaced workers. This raises issues familiar from the impact evaluation literature: identifying the parameter(s) of interest, whether the control (comparison) groups are good proxies of the counterfactual, and validity of the identifying assumptions. The recent evaluation literature highlights that alternative treatment (impact) parameters could be of interest, although they are not always identifiable. For example, one may want to measure the average impact of displacement (the effect on any randomly selected worker),

the average effect on the treated (the impact on formal workers actually displaced), or a local average effect on the treated (the impact for workers close to displacement thresholds, such as those fired first in a recession).¹ These parameters have different interpretations and, more important, lead to different implications regarding the impact of displacements. For example, the latter parameter tends to capture impacts on marginal workers (that is, those displaced at the margin during layoffs). These impacts may depend on both observed skills (for example, human capital measures like years of education or tenure) and unobserved skills (such as individual ability or labor market connections). The parameter thus fails to fully capture the impact of large-scale layoffs such as those that would occur in major recessions or economic restructuring. The paper analyzes multiple treatment groups that seem to resemble local average impacts, and it is not entirely clear that the estimated effects readily generalize to the impacts of displacements of any size or to well-defined groups of workers. Consequently, the results may have limited application for interventions targeted to massive numbers of workers.

The question of the validity of comparison groups is fundamental to the results. Lacking other identifying restrictions, this boils down to whether earnings trends prior to displacement were the same in the displaced (treated) and nondisplaced (control) samples. The paper does not explicitly discuss this identifying condition. It does not seem to hold for all of the displaced samples considered since wages decline prior to displacement in some regions or periods. If these trends were not matched in the corresponding comparison groups of nondisplaced workers, it would raise questions of possible biases arising from dissimilar composition of the samples (that is, differences in worker characteristics across groups) or mean reversion (in which earnings eventually move back towards their mean). It would be useful for future work to discuss these issues in detail.

The paper maintains that the results support a greater role for labor market conditions in mediating the impacts of displacements vis-à-vis other factors such as labor institutions and inequality. While well argued and suggestive, this claim deserves further exploration in future studies. First, the reported similarity of inequality levels within Mexico does not conform to results from other studies that find significant differences in inequality levels across Mexican regions.² The reported Gini coefficients are

1. For a clear exposition of this, see Moffitt (1999).
2. See, for example, Andalón-López and López-Calva (2002).

obtained from the sample of formal sector workers under study (who are likely to have equally dispersed earnings across regions), while the relevant statistics should cover the entire local labor markets. Second, varying regional capacities to enforce labor legislation may lead to de facto regional differences in relevant regulations. Finally, it is ultimately difficult to separate labor market conditions (outcomes), such as unemployment, from the characteristics of labor institutions. For example, differences in the enforcement of regulations that prescribe high severance payments or nonwage benefits correlate with differences in the rates of unemployment or informal employment.

Thus the reported variation in displacement effects across regions and time does not support definitively disregarding the potential role of inequality and institutions in mediating the impacts of displacement. Future empirical research should delve further into the questions raised by the new results of the paper and their implications for informing the design of policies to better balance protection against job loss and more flexible labor regulations in the region.

References

- Abbring, Jaap H., and others. 2002. "Displaced Workers in the United States and the Netherlands." In *Losing Work, Moving on: International Perspectives on Worker Displacement*, edited by Peter J. Kuhn, pp. 105–94. Kalamazoo: W. E. Upjohn Institute for Employment Research.
- Andalón-López, Mabel, and Luis López-Calva. 2002. "The Many Mexicos: Income Inequality and Polarization in Urban Mexico during the 1990s." Paper prepared for the Cornell-LSE-WIDER Conference on Spatial Inequality. Cornell University, London School of Economics, and the World Institute for Development Economics Research, London, 28–30 June.
- Bender, Stefan, and others. 2002. "Worker Displacement in France and Germany." In *Losing Work, Moving on: International Perspectives on Worker Displacement*, edited by Peter J. Kuhn, pp. 375–470. Kalamazoo: W. E. Upjohn Institute for Employment Research.
- Burda, Michael C., and Antje Mertens. 2001. "Estimating Wage Losses of Displaced Workers in Germany." *Labour Economics* 8(1): 15–41.
- Caballero, Ricardo J., Eduardo M. R. A. Engle, and John C. Haltiwanger. 1997. "Aggregate Employment Dynamics: Building from Microeconomic Evidence." *American Economic Review* 87(1): 115–37.
- Carrington, William J. 1993. "Wage Losses for Displaced Workers: Is It Really the Firm that Matters?" *Journal of Human Resources* 28(3): 435–62.
- Clark, Don P., Henry W. Herzog Jr., and Alan M. Schlottmann. 1998. "Import Competition, Employment Risk, and the Job-Search Outcomes of Trade-Displaced Manufacturing Workers." *Industrial Relations* 37(2): 182–206.
- Conroy, Michael E., and Sarah E. West. 2000. "The Impact of NAFTA and the WTO on Chiapas and Southern Mexico." In *Poverty or Development: Global Restructuring and Regional Transformations in the U.S. South and the Mexican South*, edited by Richard Tardanico and Mark Rosenberg, pp. 41–55. New York: Routledge.
- Couch, Kenneth A. 2001. "Earnings Losses and Unemployment of Displaced Workers in Germany." *Industrial and Labor Relations Review* 54(3): 559–72.
- Davis, Steven J., and John C. Haltiwanger. 1992. "Gross Job Creation, Gross Job Destruction, and Employment Reallocation." *Quarterly Journal of Economics* 107(3): 819–63.
- . 1999. "Gross Job Flows." In *Handbook of Labor Economics*, vol. 3B, edited by Orley Ashenfelter and David Card. Amsterdam: Elsevier.
- De la Rica, Sara. 1995. "Evidence of Preseparation Earnings Losses in the Displaced Worker Survey." *Journal of Human Resources* 30(3): 610–21.
- Fairris, David, and Edward Levine. 2004. "Declining Union Density in Mexico, 1984–2000." *Monthly Labor Review* 127(9): 10–17.
- Fallick, Bruce C. 1996. "A Review of the Recent Empirical Literature on Displaced Workers." *Industrial and Labor Relations Review* 50(1): 5–16.

- Farber, Henry S. 2003. "Job Loss in the United States, 1981–2001." Working paper 471. Princeton University, Industrial Relations Section.
- Feenstra, Robert C., and Gordon H. Hanson. 1997. "Foreign Direct Investment and Relative Wages: Evidence from Mexico's *Maquiladoras*." *Journal of International Economics* 42(3): 371–93.
- Gonzaga, Gustavo. 2003. "Labor Turnover and Labor Legislation in Brazil." *Economía* 4(1): 165–222.
- Hamermesh, Daniel S. 1989. "Labor Demand and the Structure of Adjustment Costs." *American Economic Review* 79(4): 674–89.
- Hanson, Gordon H. 1998. "North American Economic Integration and Industry Location." *Oxford Review of Economic Policy* 14(2): 30–44.
- Hashimoto, Masanori. 1979. "Bonus Payments, On-the-Job Training, and Lifetime Employment in Japan." *Journal of Political Economy* 87(5, part 1): 1086–104.
- . 1981. "Firm-Specific Human Capital as a Shared Investment." *American Economic Review* 71(3): 475–82.
- Heckman, James, and Carmen Pagés. 2000. "The Cost of Job Security Regulation: Evidence from Latin American Labor Markets." Working paper 7773. Cambridge, Mass.: National Bureau of Economic Research.
- Helwig, Ryan T. 2001. "Worker Displacement in a Strong Labor Market." *Monthly Labor Review* 124(6): 13–28.
- Howland, Marie, and George E. Peterson. 1988. "Labor Market Conditions and the Reemployment of Displaced Workers." *Industrial and Labor Relations Review* 42(1): 109–22.
- Jacobson, Louis S., Robert J. LaLonde, and Daniel G. Sullivan. 1993a. "Earnings Losses of Displaced Workers." *American Economic Review* 83(4): 685–709.
- . 1993b. *The Costs of Worker Dislocation*. Kalamazoo: W. E. Upjohn Institute for Employment Research.
- Kaplan, David, Gabriel Martínez González, and Raymond Robertson. 2004. "Worker and Job Flows in Mexico." Macalester College.
- Kletzer, Lori G. 1998. "Job Displacement." *Journal of Economic Perspectives* 12(1): 115–36.
- Kreichel, Ben, and Gerard A. Pfann. 2003. "Heterogeneity among Displaced Workers." Paper prepared for the conference on Analyses of Labor Reallocation. W. E. Upjohn Institute and the University of Michigan Business School, William Davidson Institute, Augusta, Mich., 21–23 August.
- Kuhn, Peter J. 2002. "Summary and Synthesis." In *Losing Work, Moving on: International Perspectives on Worker Displacement*, edited by Peter J. Kuhn, pp. 1–104. Kalamazoo: W. E. Upjohn Institute for Employment Research.
- Maloney, William F. 1998. "Are Labor Markets in Developing Countries Dualistic?" Policy research working paper 1941. Washington: World Bank.
- . 2004. "Informality Revisited." *World Development* 32(7): 1159–78.

- Maloney, William F., and Tom Krebs. 1999. "Quitting and Labor Turnover: Microeconomic Evidence and Macroeconomic Consequences." Policy research working paper 2068. Washington: World Bank.
- Marcal, Leah E. 2001. "Does Trade Adjustment Assistance Help Trade-Displaced Workers?" *Contemporary Economic Policy* 19(1): 59–72.
- McLaughlin, Kenneth J. 1991. "A Theory of Quits and Layoffs with Efficient Turnover." *Journal of Political Economy* 99(1): 1–29.
- Menezes-Filho, Naércio. 2004. "Costs of Displacement in Brazil." University of São Paulo.
- Moffitt, Robert A. 1999. "Models of Treatment Effects When Responses Are Heterogeneous." *Proceedings of the National Academy of Sciences* 96(12): 6575–76.
- Panagides, Alexis, and Harry A. Patrinos. 1994. "Union-Nonunion Wage Differentials in the Developing World: A Case Study of Mexico." Policy research working paper 1269. Washington: World Bank.
- Revena, Ana, Michelle Riboud, and Hong Tan. 1994. "The Impact of Mexico's Retraining Program on Employment and Wages." *World Bank Economic Review* 8(2): 247–77.
- Robertson, Raymond. 2000. "Wage Shocks and North American Labor Market Integration." *American Economic Review* 90(4): 742–64.
- . 2004. "Relative Prices and Relative Wages: Evidence from Mexico." *Journal of International Economics* 64(2): 387–409.
- Robertson, Raymond, and Donald H. Dutkowsky. 2002. "Labor Adjustment Costs in a Destination Country: The Case of Mexico." *Journal of Development Economics* 67(1): 29–54.
- Ruhm, Christopher J. 1991a. "Are Workers Permanently Scarred by Job Displacements?" *American Economic Review* 81(1): 319–24.
- . 1991b. "Displacement Induced Joblessness." *Review of Economics and Statistics* 73(3): 517–22.
- Stevens, Ann Huff. 1995. "Long-Term Effects of Job Displacement: Evidence from the Panel Study of Income Dynamics." Working paper 5343. Cambridge, Mass.: National Bureau of Economic Research.
- . 1997. "Persistent Effects of Job Displacement: The Importance of Multiple Job Losses." *Journal of Labor Economics* 15(1, part 1): 165–88.
- . 2001. "Changes in Earnings Instability and Job Loss." *Industrial and Labor Relations Review* 55(1): 60–78.
- Stevens, Margaret. 1994. "A Theoretical Model of On-the-Job Training with Imperfect Competition." *Oxford Economic Papers* 46(4): 537–62.