

Mass Privatization and Mortality: Is Job Loss the Link?

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Was mass privatization responsible for the increased mortality in postcommunist societies during the 1990s? This claim appears in a recent article in the British medical journal *Lancet*, and has been subsequently reported in many newspapers.² The article documents a robust correlation between the extent of privatization and the adult male mortality rate using country-level data for about 24 economies of Eastern Europe and the former Soviet Union. A storm of controversy among defenders and attackers of “shock therapy” policies has ensued. While much of the discussion is ideological, legitimate questions can be raised about various aspects of the methodology of the article, including the use of country-level data to study death and ownership—phenomena that are inherently micro. Related issues concern possible confounding effects—alternative explanations for the correlation—although the *Lancet* analysis does control for a large number of variables and considers a variety of statistical approaches.

What requires more attention is the question of causality: how could changing ownership from state to private have raised mortality? The *Lancet* authors theorize that privatized firms cut employment, and then refer to the extensive evidence on the negative impact of unemployment on health to link job loss to mortality. But is the first step valid; that is, does privatization systematically lead to substantial job loss? The *Lancet* article provides no evidence on this question.

In a recent study forthcoming in the *Economic Journal* that I have written with David Brown and Almos Telegdy, we find that the answer is a clear “no.”³ Our analysis is not at the country level, as in the *Lancet* article. The problem with such aggregated data is that a variety of confounding influences may explain the results—just the sort of issues that have heated up the blogosphere, but that may never be resolved simply because they cannot be measured. Instead, our analysis uses data on nearly every manufacturing firm inherited from the socialist period in four major transition economies: Hungary, Romania, Russia, and Ukraine. The firm is the level at which decisions on employment are made, and with our data we directly observe ownership, employment, and many other variables. Equally important, we observe firms for many years (up to 20 years in these databases), so we can follow the path of employment and other variables for long periods both before and after privatization takes place. We also observe firms that are never

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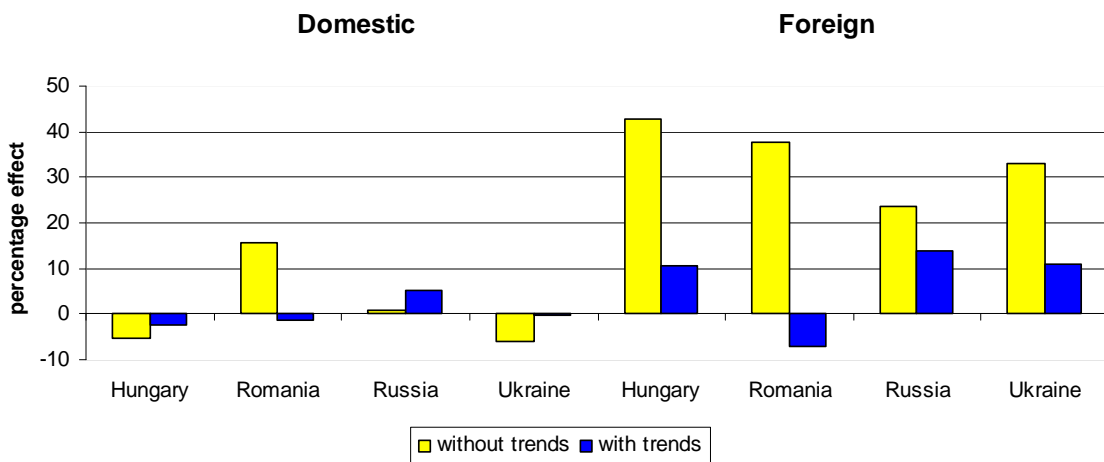
² See Stuckler, David, Lawrence King, and Martin McKee, “Mass Privatisation and the Post-Communist Mortality Crisis: A Cross-National Analysis,” *Lancet*, published online, January 15, 2009.

³ Brown, J. David, John S. Earle, and Almos Telegdy, “Employment and Wage Effects of Privatisation: Evidence from Hungary, Romania, Russia, and Ukraine,” forthcoming in *Economic Journal*. Working paper version: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1267829. Also see Brown, J. David, and John S. Earle, “Gross Job Flows in Russian Industry before and after Reforms: Has Destruction Become More Creative?” *Journal of Comparative Economics*, Vol. 30(1), 96–133, March 2002; Brown, J. David, John S. Earle, and Almos Telegdy, “The Productivity Effects of Privatization: Longitudinal Estimates from Hungary, Romania, Russia, and Ukraine,” *Journal of Political Economy*, Vol. 114(1), 61–99, February 2006; and Brown, J. David, and John S. Earle, “Job Reallocation and Productivity Growth in the Ukrainian Transition,” *Comparative Economic Studies*, Vol. 48(2), 229–251, June 2006.

privatized, which together with those that are not yet privatized (but will be) can form a control group in examining the effect of privatization on employment within a particular industry and year. The ability to compare firms within industries and years—apples with apples, rather than apples with oranges—is another benefit of analyzing data at the level of the decision-maker, rather than the aggregate.

Analyzing these data with several statistical methods to control for possible biases due to selection of firms for privatization, we find no evidence that privatization systematically lowers firm-level employment. Figure 1 contains results with two alternative methods: one incorporates firm fixed effects to control for selection bias in the level of employment, and the other adds firm-specific trends to control for selection bias in the growth of employment (labeled “without trends” and “with trends” in the figure, respectively). The estimated effects of privatization to domestic owners are generally positive, and where they are negative the magnitudes are very small and usually statistically indistinguishable from zero. The estimated effects of foreign privatization are almost always positive, large, and statistically significant, generally implying a 10–30 percent expansion of employment following the foreign acquisition. The estimated foreign privatization effect in Romania is the largest negative value, but it is only -7.1%, and is statistically insignificantly different from zero. In the country with the most (in)famous mass privatization, Russia, the domestic privatization effects are positive, and when estimated with trends the effect is the largest of any of these four countries. Analysis of the long time series in data shows that the absence of negative employment effects of privatization is the consequence neither of delayed restructuring several years after privatization nor of pre-privatization downsizing, which is negligible in these economies.

Figure 1: Estimated Privatization Effect on Employment



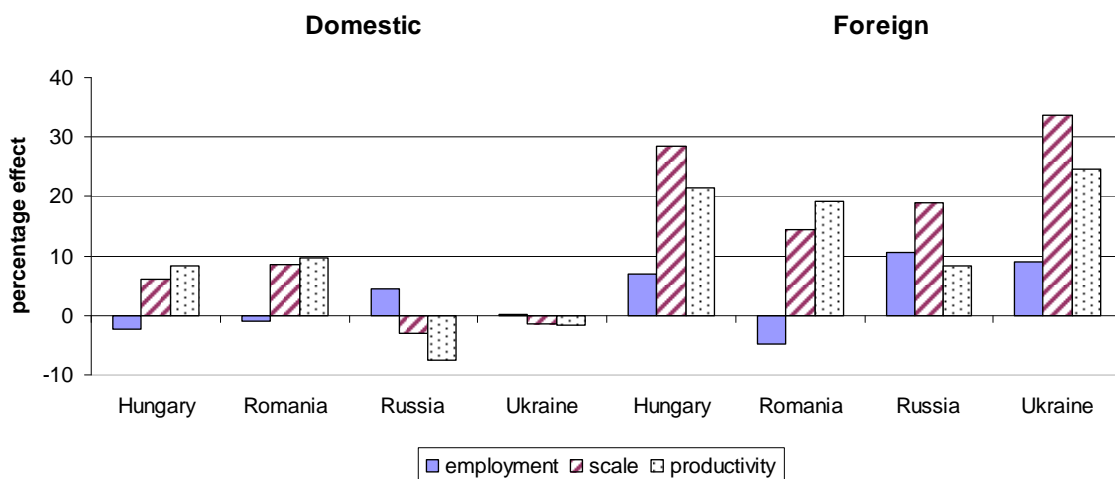
Source: Brown, J. David, John S. Earle, and Almos Telegdy, “Employment and Wage Effects of Privatisation: Evidence from Hungary, Romania, Russia, and Ukraine,” forthcoming in *Economic Journal*.

These empirical results strongly contradict the notion, frequently assumed but little investigated, that large job cuts follow privatization. Why is this assumption empirically incorrect? One possibility is that privatization simply matters very little for firm behavior: new private owners do not restructure and therefore do not lay off workers. Our research investigates this possibility by decomposing the employment effects of privatization into two components, which we label

“productivity” and “scale” effects. Holding the firm’s scale—its level of production—constant, an increase in productivity tends to lower employment. Holding constant the level of productivity, an increase in scale tends to raise it.

Our empirical analysis of these mechanisms finds that privatization tends to raise both productivity and scale; results are displayed in Figure 2. Both effects are much larger in firms privatized to foreign investors, with 10–25 percent increases in productivity, and 15–40 percent increases in scale. The dominance of the scale over the productivity effect implies the positive impact of privatization that we observe on employment. Privatization to new domestic owners in Hungary and Romania also yields positive productivity and scale effects, but they are smaller (6–10 percent) than the corresponding foreign effects, and the productivity effects slightly dominate the scale effects, resulting in the very small negative impacts of privatization on employment in these cases. The productivity and scale effects of domestic privatization are also positive but very small in Ukraine, and they nearly exactly cancel, leaving a tiny positive impact on employment. Domestic privatization in Russia is the outlier, with negative estimated effects on both productivity and scale, but the drop in productivity exceeds the fall in scale, resulting in a positive net employment impact.

Figure 2: Decomposition of the Employment Effect into Scale and Productivity Effects (estimates with trends)



In no case, therefore, do we observe substantial job cuts due to privatization. The causal link hypothesized in the *Lancet* article is not supported by the firm-level data. Nor is it supported by other studies we have carried out of layoffs and worker turnover in privatized firms.⁴ Of course, it is possible that some other link, not suggested by the article and unrelated to employment outcomes, could explain the observed privatization-mortality correlation at the country level. Our analysis suggests that further progress on this question would benefit from analysis of data at the level where the action occurs: individual data in the case of death, and firm data in the case of privatization.

⁴ E.g., Brown, J. David, John S. Earle, and Vladimir Vakhitov, “Wages, Layoffs, and Privatization: Evidence from Ukraine,” *Journal of Comparative Economics*, Vol. 34(2), 272–294, June 2006; Brown, J. David, and John S. Earle, “The Reallocation of Workers and Jobs in Russian Industry: New Evidence on Measures and Determinants,” *Economics of Transition*, Vol. 11(2), 221–252, June 2003.