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## Comment

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Chemin and Wasmer attempt the first evaluation, to my knowledge, of French labor market interventions using the technique known as regional difference-in-differences, first popularized in labor economics by Ashenfelter (1978) and now one of the workhorses of empirical labor economics. Their paper uses regional variation in labor market institutions, long thought to be nonexistent in France, to make a first pass at evaluating three interventions: the 1989 welfare law that established a minimum income for individuals above age 25 regardless of employment status (*Revenu Minimum d'Insertion*), the 1978 changes to the national sick leave policy (*indemnisation complémentaire*), and the 1998–2000 phase-in of the French 35-hour workweek (*réduction du temps de travail*). My discussion will focus on the last of these experiments because it was the one that motivated the present paper and because the authors' other work indicates that they have studied this intervention more carefully than the first two.

In each case, the preliminary evaluation, which is all they provide in this paper, makes use of institutional differences in the Alsace-Moselle region of France (technically a political region, Alsace, and a political *département*, Moselle). This region has been (infamously) disputed between France and Germany and was last subject to German national law from 1870 to 1918. As a vestige of this era, the political entities (*départements*) within Alsace-Moselle retain as local law some of the original German laws. Essentially, whenever the historical German laws were more generous than the prevailing French national laws, the Alsace-Moselle region was permitted to retain the more generous provisions. This regional variation provides the setting for the authors' difference-in-difference evaluation of the three interventions. As French national laws became more generous over time, they created changes in the rest of the country that did not occur as sharply in Alsace-Moselle because in that region the applicable laws were already more generous.

For example, the French 35-hour workweek (the Aubry laws) was a massive labor market intervention orchestrated over more than 5 years and involving mandates, subsidies, and cajoling of major employers and unions. It was one of the most pervasive policies aimed at the labor market by any developed economy since the Thatcher reforms of the British labor markets. And it appears to have been a colossal failure, at least in its stated goal of inducing French employers to hire more employees and work each one less intensively.

Kramarz et al. (2008) performed a very thorough evaluation of the phased implementation of the Aubry laws over the period 1997–2005, focusing on outcomes at the establishment level. They stress the following conclusion:

In the short run, firms that went to thirty-five hours benefited from the policy, in particular low-productivity firms (because payroll tax subsidies were disproportionately directed to them) to the detriment of firms that stayed at thirty-nine hours. Hence, in the short run, employment was redirected to low-productivity firms adopting the policy. Then, in the medium run, the breath of air coming from the subsidies stopped working and the firms that had moved to thirty-five hours started to fail massively, while the survivors appear to have benefited from these deaths. (171)

In their longer paper, Chemin and Wasmer (2008) use the regional variation in Alsace-Moselle to identify the incremental effect of a 10% change in the mandatory hours/fixed-wage regime. Their first step is to verify that this region actually experienced a 10% less effective change, at least over the period 1998–2000. This 10% difference arises from the fact that two additional annual holidays were accorded to workers in Alsace-Moselle by the German laws but were not accorded to other French workers, including those in nearby Lorraine. When the Aubry laws were first enforced, employers in Alsace-Moselle counted these two days as “already-implemented” hours reductions. Hence, the Aubry laws were less effective (by 10%) in this region. In 2003, French courts disallowed this interpretation and restored the historical privilege of two additional paid vacation days accorded to Alsace-Moselle by the vestigial German laws.

The second step of the Chemin and Wasmer difference-in-difference evaluation is to estimate the incremental effect of the workweek regime change on employment and unemployment (only unemployment is discussed in the present paper). They hypothesize that the contrast between Alsace-Moselle and the rest of France will show that the laws were less effective in Alsace-Moselle. In the present paper, the results

for unemployment are implausibly large and have the opposite sign of what was predicted. The authors assert that they needed to refine their control group, effectively using difference-in-difference-in-difference estimates. This is precisely what they have done in the longer paper, where they find that the new workweek regime was associated with a reduction in hours that was 0.38 (+/-0.17) hour per week less effective, almost exactly the 0.4 hour less effective (10% of 4 hours per week) that they predicted. Having validated their quasi-experimental design, they compute triple-difference estimates of the effects on employment. Their statistical analysis withstands multiple validity experiments (control groups): firm size (<20 treated differently by the law), sector (some collective bargaining agreements were less protective), and occupation (self-employed not affected). The authors conclude that the case for increased employment/decreased unemployment from the full regime is questionable. I agree but note that the estimated employment and unemployment effects in the longer paper had the correct sign and were sufficiently imprecise to admit of ambiguity.

What is the best strategy to estimate the effect of the 39- to 35-hour workweek reduction? That is still not clear. Although the standard microeconomic technique of difference-in-differences can be applied to individuals, as in the present paper and the authors' longer paper cited above, this is not the only source of evidence. Kramarz et al. apply the methodology to firms, where they find the results quoted earlier. Furthermore, mandatory hours reductions coupled with mandatory wage increases leaving earnings unchanged provide a strong incentive to substitute more productive (higher-wage) individuals for less productive (lower-wage) workers. This is what happened in France in the Mitterrand era workweek reduction from 40 to 39 hours (Crépon and Kramarz 2002). This appears to be what has happened with the Aubry laws. National productivity/hour statistics confirm the increase in productivity and the nonincrease in employment.

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