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Chapter Author: Judith K. Hellerstein

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**Comment** Judith K. Hellerstein

Siegel, Simon, and Lindstrom's chapter "Ownership Change, Productivity, and Human Capital: New Evidence from Matched Employer-Employee Data" provides us with another important example of the power of matched employer-employee data to describe and illuminate various aspects of employment dynamics. Although there are now many examples of matched data sets around the world,<sup>1</sup> in many ways we are still just beginning to explore the dimensions over which they can be constructed and analyzed. Using a new matched data set from Sweden, Siegel, Simon, and Lindstrom's chapter provides an important new contribution as the first paper to examine employment dynamics across heterogeneous workers that are associated with ownership change.<sup>2</sup>

At the start of the chapter, the authors provide a comprehensive review of the literature on the impact of ownership change on productivity and employment. One of the striking aspects in this literature is how difficult it is to tease out the true effects of ownership change. The first problem is with (mis)measurement: in particular, measurement error in inputs to production, such as capital, can be really problematic. A second and related problem is the treatment of ownership change as exogenous. Both of these problems manifest themselves into the existence of unobservables in the estimating equation that can lead to biased estimates of the impact of ownership change on outcomes.

Given all of this, the authors of this chapter take the very reasonable approach of treating their results as descriptive in nature, rather than representing causal relationships. Indeed, there is much to be learned from the descriptive conditional correlations they present. For example, there actually is strong suggestive evidence that assuming that ownership change is exogenous, or uncorrelated with the error term in the estimation equation, is an untenable assumption. Ownership change does not happen randomly. This is seen most clearly in figure 11.2 and table 11.9, column (2), where it is clear that total factor productivity is lower pre-ownership change for plants that will change owners in the future relative to plants that will not change owners, and indeed, that this relative gap actually grows in the years prior to ownership change. The lack of valid instruments makes it hard to imagine how one would tease out the actual effects of ownership change,

Judith K. Hellerstein is an associate professor of economics at the University of Maryland and a research associate of the National Bureau of Economic Research.

1. For a description of early work using matched employer-employee data and a description of early data sets, see Abowd and Kramarz (1999).

2. Related papers using administrative data to examine worker turnover with mass layoff (but not ownership change) include Jacobson, Lalonde, and Sullivan (1993) and Lengermann and Vilhuber (2002).

but in some sense the first-order fact that needs to be known is that ownership change is associated with other dramatic changes in the establishment.

The existence of matched employer-employee data such as is used in this chapter allows for an analysis not only of how the ownership change is associated with changes in the characteristics of workers in jobs in establishments, but also allows for worker-level analyses of the relationship between ownership change and job flows of specific workers in and out of plants that experience ownership change relative to those that do not. This chapter provides a nice analysis along both of these dimensions.

Table 11.10 and figures 11.5 through 11.10 show clearly how ownership change is associated with changes in the characteristics of workers in these establishments. Interestingly, while there are statistically significant increases in the age, experience, and earnings of workers in establishments that experience ownership change, as well as increases in the percentage of workers who are male, these results are not quantitatively big, measured either relative to the mean of these variables in the sample or when thinking about them in terms of standard deviations. The process of labor adjustment, as measured in terms of composition of workers, appears to be a gradual process, which may reflect the impact of strong union contracts, something that the authors note as being important in the Swedish labor market, and something that is worth formal exploration in the future. Another aspect of this that is not analyzed fully in this chapter is labor adjustment on the hours margin. Hours adjustments may be easier to make than employment adjustments, but as the authors note in footnote 16, while there appears to be a big hours adjustment associated with ownership change, it is only apparent in the year prior to ownership change. This hours adjustment accounts fully for the dip in mean earnings in (only) that year. It is not clear whether this is a statistical anomaly or reflects something structural about the way that ownership change actually occurs.

Tables 11.11 through 11.16 provide interesting and important first snapshots of the churning of workers in and out of establishments as measured at the individual level. The findings in these tables are not fully comparable to the establishment-level findings because these are raw figures rather than regression-adjusted figures,<sup>3</sup> and they do not contain standard errors that allow for statistical inference. Nonetheless, they show how regressions based on what is happening at the level of the establishment have the potential to mask important churning by individual workers. For example, tables 11.11 and 11.14 suggest that education is associated with higher rates of job (establishment) mobility, and moreover, that ownership change appears to be associated with yet higher rates of both departure and ac-

3. It would be straightforward to include establishment-level controls in regressions at the individual level where the dependent variable was a binary indicator for mobility, and where standard errors were clustered at the establishment level. The results would then be directly comparable to the findings from the establishment-level regressions that the authors present.

cession for more educated workers. Further research into the extent and type of churning using individual-level observations from matched data will surely lead to an even more robust understanding of job mobility in manufacturing generally in Sweden, and the relationship specifically between ownership change and heterogeneous churning.

Siegel, Simon, and Lindstrom provide an excellent first look at how ownership change is associated with labor dynamics across different types of workers. This type of analysis can only be done with rich longitudinal data on workers and the establishments in which they work; data that must include detailed information on the establishments themselves (including, obviously, the ownership structure), and information on the demographic characteristics of the workers. These are very large data requirements, indeed. The hope is that data sets as rich as the one in this chapter will continue to be constructed in many countries and utilized in research to better our understanding of productivity and heterogeneous labor in dynamic economies.

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