KEVIEW

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Commentary

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his fine paper fits into a growing literature in macroeconomics that emphasizes the idea that it is difficult, if not impossible, to understand aggregate fluctuations without understanding the underlying behavior of heterogeneous microeconomic agents. It is self-evident that individual households, workers and businesses have heterogeneous characteristics and are subject to idiosyncratic events that yield dramatically different outcomes at the microeconomic level. This heterogeneity in microeconomic outcomes typically dwarfs aggregate fluctuations so that for most households and businesses, the macro economy is a relatively unimportant factor in determining their fortunes. In spite of this overwhelming micro heterogeneity, macroeconomists have traditionally abstracted from this heterogeneity because the common view is that the micro heterogeneity washes out in the aggregate. Thus, macroeconomists have traditionally developed models describing the behavior of the typical firm or the typical worker and worried relatively little about the differences in outcomes across economic agents.

The growing availability of micro panel data on households and businesses (and in some cases linked employer-employee micro data) has made it increasingly clear that this traditional approach misses important aspects of aggregate fluctuations. That is, there is often a strong connection (albeit with questions about the direction of causality) between the aggregate fluctuations and the nature and extent of heterogeneity of outcomes across agents. Technically, the issue is often whether there is a connection between the fluctuations in the first and higher moments of the distributions of outcomes. In the current paper, this is precisely the question, as the paper investigates the relationship between the distribution of wage adjustments at the micro level and inflation.

The paper is primarily an empirical exercise. The question at hand is whether changes in the rate of inflation have a neutral effect on the distribution of wage adjustments at the micro level. A simple view is that inflation should affect all participants similarly (i.e., all relevant parties simply care about real wages) and thus inflation should have little or no impact on the distribution of wage adjustments. The striking finding that emerges is that inflation is dramatically non-neutral in terms of its impact on the distribution of wage adjustments. Moreover, the pattern of nonneutrality is quite interesting. Wage changes at the upper tail of the wage change distribution respond to a much greater extent than wage changes in the lower tail of the wage distribution. The authors also investigate two related interesting questions about the nature of this non-neutrality. First, they ask the question as to whether there are bellweather jobs—in the sense that perhaps the non-neutrality is such that wages respond to inflation for some types of jobs more quickly than for others. They find little or no evidence for bellweather jobs. Second, they ask the question about whether this non-neutrality has changed over time, with a particular emphasis on the 1990s. The motivation for the focus on the latter is the popular perception that wage responses to inflation have been mitigated during the 1990s due to increased job insecurity and that this would, in turn, impact the nature of the non-neutrality. They find little or no evidence of changes in the non-neutrality.

While I find the basic facts and related empirical exercises quite interesting, this work is somewhat difficult to interpret, given the lack of much of an overall conceptual framework to help us understand the possible sources of connections between changes in inflation and changes in the

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distribution of wage adjustments. This is not really a criticism of the current paper, but rather illustrates the need for a conceptual framework to help interpret these interesting findings. Put differently, we need to consider the sources of heterogeneity in wage adjustments at the most basic level and how this heterogeneity is likely to interact with changes in the rate of inflation.

Many factors may be at work in the underlying distribution of wage adjustments. Changes in relative labor supply and labor demand for workers of different characteristics (both those that are easily observable to the researcher and those that are not) are obviously important in this context. The institutional structure (e.g., unionization) and differences in the manner that wages are determined by sector or firm also are likely to be important.

In considering these alternative possible factors, in light of the findings in this paper, it is useful to consider what we know about changes in the structure of labor markets during the sample period for this analysis. One of the primary recent empirical findings from applied labor economics research is the observation that there have been systematic increases in the dispersion of wages across workers during the last few decades. While the sources of this rising wage inequality are still somewhat in dispute, there is a growing consensus that this rising wage inequality is due to a rising relative demand for skilled workers. The sources of the latter might be changing technology (broadly defined) or changing world markets but, nevertheless, the return to being skilled has risen during this period of time. These fundamental changes in the dispersion of wages are closely linked to the changes in the distribution of wage adjustments. Moreover, the rising wage inequality was especially dramatic during the 1970s and 1980s—a period in which the rate of inflation is high and there are large associated changes in the distribution of wage adjustments. Thus, one question that arises is whether any aspects of their findings are spurious. Perhaps what is driving the results are the underlying factors

that cause rising wage inequality and that the timing of these factors corresponds to a period with many dramatic changes in the U.S. economy.

Another related and relevant hypothesis is that it is no coincidence that the observed long-run structural adjustments in the labor market were bunched during this period of volatile business-cycle fluctuations. That is, either the business-cycle fluctuations caused a change in the timing of the structural adjustment, or the businesscycle fluctuations were partly due to the intense period of structural adjustment. Moreover, since this period of turbulence in labor markets is also associated with high and volatile rates of inflation, this may underlie the connection between inflation and the distribution of wage adjustments. All of this discussion is speculative, however. The main point is that it will be difficult to sort out the factors that generate this paper's interesting results without a conceptual structure (and associated empirical analysis) to help us understand the factors driving the distribution of wage adjustments and the potential link to inflation. More generally, the question is whether the results are driven mostly by the turbulent events of the 1970s and 1980sa period in which there were substantial fluctuations in macro variables like inflation and unemployment, and a period of substantial structural change in the economy and labor market.

I have some other relatively minor concerns about specific aspects of the analysis. While the CSS appears to be a very rich and unique dataset, there are concerns about the representativeness of the sample. It is intended to be representative of large employers in the area. Since the sample period here is so long, these concerns may be especially important. That is, not only is one concerned about how representative the sample is at a given moment, but also whether its representativeness has changed over time. A somewhat related concern is that their analysis is in terms of the unweighted wage adjustment distribution —an interesting alternative would be to consider the hours-weighted wage-adjustment distribution. If their results are driven by occupation/employers with small hours weights, then the results are of less interest.

Finally, the authors make a relatively big deal about the finding of weak or negative autocorrelations in wage adjustments. They want to interpret this as evidence against bellweather occupation and jobs. This interpretation may be correct, but there may be a number of factors underlying the weak or negative autocorrelations in changes observed in the data. For example, it may be that wage adjustments are lumpy at the micro level (due perhaps to some rigidities or fixed adjustment costs) which can lead to weak and negative autocorrelation. This would yield a very different interpretation of the findings. To sort out these alternatives, we need more structure and further analysis.

To sum up, this paper represents an installment on a very nice research agenda with a rich and unique dataset. This particular installment offers some interesting new "facts." While there may be some concerns about the robustness of these facts to measurement concerns and about whether the results are idiosyncratic to the turbulence of the 1970s and 1980s, they are interesting and deserve further consideration. We need more structure to interpret and understand these new facts, but that awaits another installment from these authors or in studies stimulated by these new facts.

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