Good jobs: The importance of who you work for

David Card

David Card is Class of 1950 Professor of Economics at the University of California–Berkeley, and Director of the Labor Studies Program at the National Bureau of Economic Research. He delivered the annual Robert J. Lampman Memorial Lecture at Madison in May 2013. This article is adapted from his lecture.

Most microeconomic research on poverty focuses on individual behavior and decision-making: examples include the choice of schooling, responses to welfare programs and tax reforms, and decisions about marriage and family. Most people, however, if asked to identify the key to economic success, will say "getting a good job." During the recent recession, many workers, especially older ones, have lost good, high-paying jobs and have not been able to replace them, thus suffering large, persistent losses in income. One might think that someone who was working at a high-paying job could find another employer who would be willing to hire him or her at nearly the same wage. But in reality, getting a good job is hard, and often takes many years. Losing a good job—especially for older workers—can mean the end of a rewarding career and relegation to the secondary sector, where many jobs are part-time, and few offer health insurance or pension benefits.

In this article, I will argue that having a "good job" is mainly about working at a "good firm" that offers a higher wage for all (or nearly all) its employees. To many people, I suspect this is obvious. To economists, it's a major puzzle. On one hand, good firms appear to be more productive than other firms, and some of the higher pay at these jobs appears to be due to a sharing of the fruits of this higher productivity between the firm and its workers. Standard economic theory has a hard time explaining the wide variation in productivity we see in modern economies like the United States. In theory, competition should drive out the unproductive firms and only the most productive will survive. The reality is obviously different. On the other hand, even if a firm is highly productive, why should it pay its workers more than the "market wage"? Is it possible that by offering a higher wage, a good firm makes its workers more productive, and can therefore offset its higher wage costs?

After discussing the emerging evidence on the importance of firm-specific wage policies—whereby some firms pay more than average for a given worker, while other firms pay less—I turn to a review of some of the major facts about the labor market behavior and outcomes that appear to be intimately related to these policies, including the effects of recessions, the nature of careers, and the wage gaps between women and men.

Background

In the standard working model that economists use to study the labor market, firms do not come into play; different industries are acknowledged, but all firms are considered to be the same. These kinds of models are regularly used to consider the effect on the labor market of many issues that affect poverty and low-income workers, including trade, immigration, human capital, minimum wages, and occupational choice.

There is now a newer class of models, arising out of the "new trade" literature, that do take firms into consideration.[1] This set of models acknowledges differences between employers, such as the willingness to experiment with newer technology, which may, for example, help to explain why some firms will take advantage of a fall in tariff barrier to enter the export market, while others will not. However, even in this newer class of models, each worker is considered to be paid the "market wage," and there is no special link between the firm that employs an individual worker and his or her income. One good, high-paying firm is equally beneficial to all of the workers in the labor market, regardless of whether they work for that firm or not.

What do we know from earlier work?

Earlier work can provide some insight into the role of firms in the labor market. For example, studies of the behavior of unionized firms over time conducted by labor economists in the 1980s showed that even at a large well-established firm, individual wages would still rise and fall with the labor market, and were thus relatively sensitive to outside conditions.[2] Another finding from this literature is that wages adjust slowly, and, during an era of inflation, can be out of equilibrium for extended periods. The problem with this literature is that it studies groups of workers covered by the same union contract. There are no individual workers in the data, only "job categories." Thus, these models do not allow for the possibility that workers at some firms are paid more than workers at other firms because they are better workers.

In the 1970s and 1980s, another set of studies drew on new, large data sets that came out of the War on Poverty and the surge in interest in income and poverty dynamics. These data sets allowed individual workers to be followed over time. This body of work showed that there is a large amount of job mobility, particularly among young workers, and that many of the wage gains made by workers in the early years of their careers came not from wage increases on the job, but from moving to a better job.[3] Another finding was that older workers tended to settle into long-lasting jobs.[4] Finally, a number of studies looking at why income fluctuations occur, and how they translate to consumption and family well-being, found

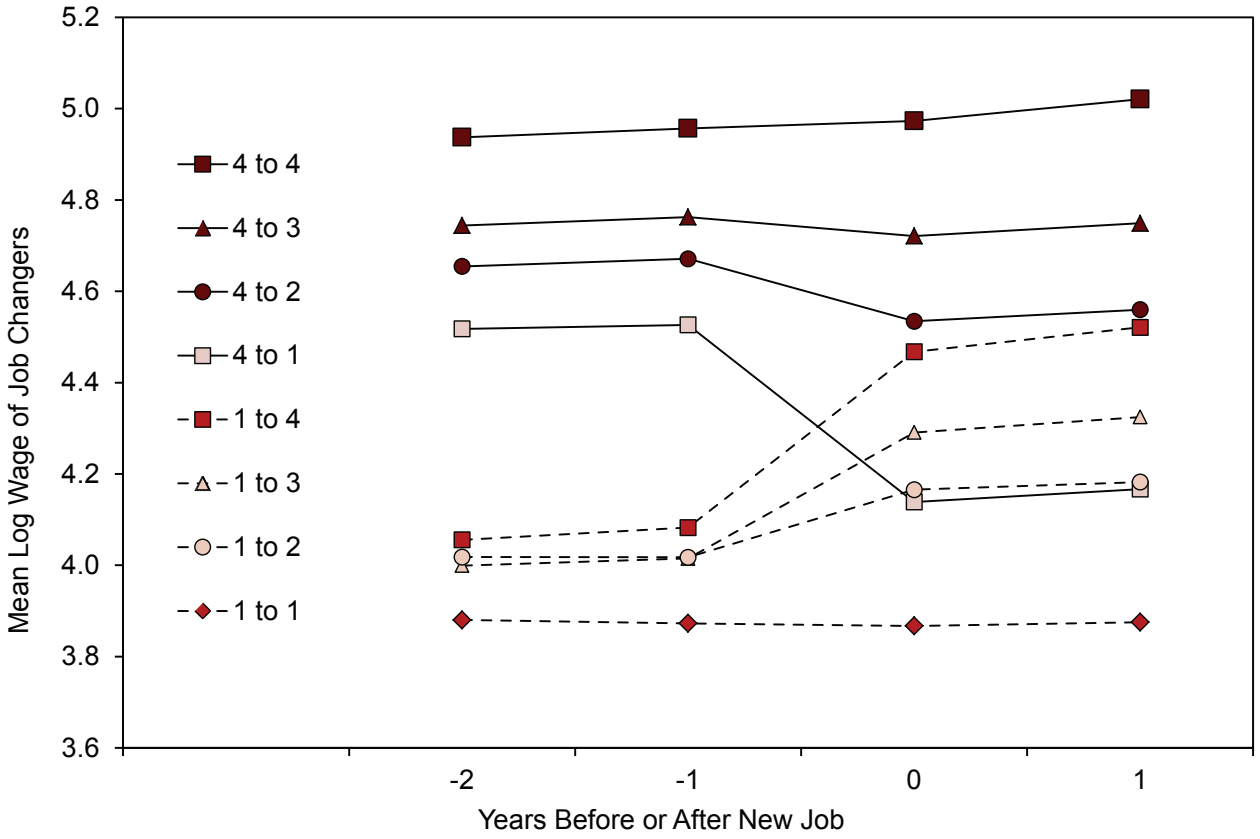

Figure 1: Mean wages of job changers, classified by quartile of mean wage of coworkers.

Notes: Figure shows mean log wages of male workers observed during 2002 through 2009, who changed jobs in 2004 through 2007, held the preceding job for two or more years, and held the new job for two or more years. "Job" refers to the establishment from whom each worker received the most earnings in the year, excluding part-time work. Each job is classified into quartiles based on mean wage of coworkers.

Source: D. Card, J. Heining, and P. Kline, "Workplace Heterogeneity and the Rise of West German Wage Inequality," *Quarterly Journal of Economics* 128, No. 3 (August 2013): 967–1015.

an important "job" component in the level and variance of wages and earnings.[5]

One important lesson from this work is the distinction between "match effects" and "firm effects." Match effects reflect the degree of fit between a particular individual's skills and characteristics, and the needs of a particular firm. Firm effects refer to a firm-wide characteristic (most often, the level of pay) that all workers receive when they work at a given firm. The prevailing view in economics is that the reason people tend to do better when they move to another job is because of the match effect. That is, the new employer is not necessarily a better firm for everyone, but is a better firm for the new employee. Under this perspective, having a successful career means both learning the necessary skills, and also figuring out which employer can make the best use of your particular characteristics.

During the recession of 1982, considerable research was done on displaced workers. In particular, researchers using Pennsylvania Unemployment Insurance data were able to document that workers who lost their jobs during that recession suffered very large and persistent wage losses.[6] Subsequent research looking at job losses more broadly, found that wage losses are substantially bigger during recessions than during economic expansions.[7] These findings led some economists to question whether these wage losses were too big, and too persistent, to be driven primarily by match effects. Perhaps, indeed, there was some other major factor in wage determination besides simply how well a particular employee fit with a particular firm.

Another type of research using firm-level data provides information on firms' "productivity," or the value of sales minus inputs and fair payment for capital to the firm's owners. This research has documented the high level of variation in productivity and wages across firms, even within the same industry.[8] Again, what is lacking in this literature from the labor market point of view is information on workers.

Finally, we come to a new strand of research, which uses matched data on workers and firms. This research has shown that you can break down a person's wage into two main components: (1) a part that captures what they would earn no matter where they worked, and (2) a wage premium associated with a particular firm.[9] This paradigm, which al-

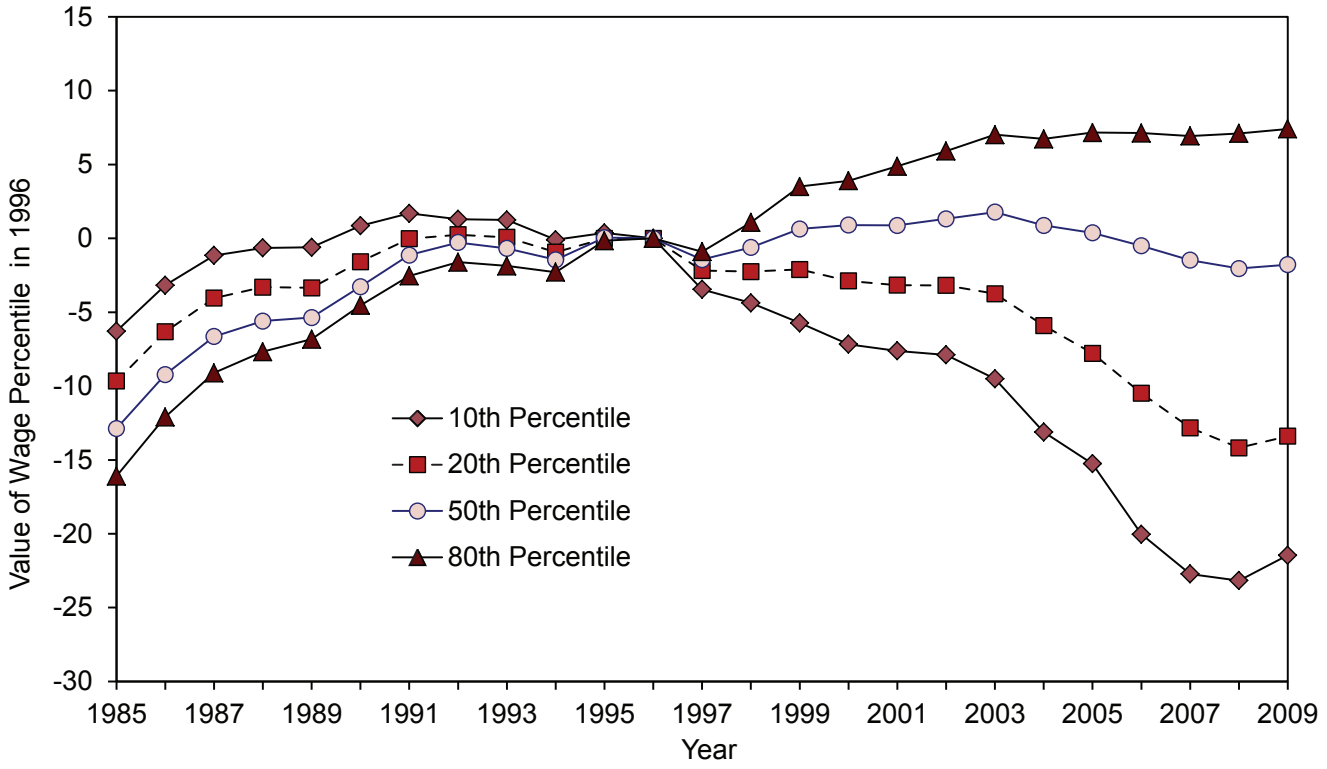

Figure 2: Trends in percentiles of real log daily wages for West German men.

Note: Figure shows percentiles of log real daily wage for full-time male workers in their main job, deviated from the value of the same percentile in 1996, and multiplied by 100.

Source: D. Card, J. Heining, and P. Kline, "Workplace Heterogeneity and the Rise of West German Wage Inequality," *Quarterly Journal of Economics* 128, No. 3 (August 2013): 967–1015.

lows heterogeneity in both workers and firms, is what I am going to build on. It is worth noting that despite acceptance by (some) labor economists, this has not been a widely-embraced template to date, partly because it is very difficult to come up with a precise economic theory of what this model represents. Nonetheless, I believe that this model can be very helpful in explaining rising inequality and other aspects of the labor market. While I would like to be able to apply this framework to the rise in U.S. wage inequality, I have not been able to obtain the data to do so. Instead, much of my work in this area uses available data from Germany, Austria, and Italy.

How much do firms matter in wage setting?

The first issue I examine with this framework is how much firm effects matter in wage levels. In a recent paper with Joerg Heining and my colleague Patrick Kline, we use data on male workers in West Germany who changed jobs, and find that those who moved to a firm with higher paid coworkers received a wage increase, while those who went to a firm with lower-paid coworkers sustained a wage decrease.[10] Figure 1 shows the time profile of average daily wages in the two years before a worker changes jobs, and the two years after. Surprisingly, the gains and losses for those who move between firms with higher and lower average co-worker pay are approximately symmetric: the gain in going from a low-paying firm to a high-paying firm is similar to the loss in moving in the opposite direction. Another feature visible in Figure 1 is that there is no clear trend in pre- or post-transition wages; those who ended up with wage losses after the transition did not experience wage slippage on the job before the transition.

Next, looking at full-time male workers in West Germany, we consider data from 1985 through 2009, a time period that comprises four distinct eras: 1985 through 1991, largely before the 1990 reunification, when the economy was doing relatively well; 1990 through 1996, after reunification, a time of substantial immigration from East Germany and a very slow recovery from the 1990 recession; 1996 through 2002, when the economy was doing very poorly relative to the rest of Europe; and 2002 through 2009, during a period of dramatic economic recovery.[11]

Figure 2 shows wage trends over the entire period 1985 through 2009, with percentage point deviations from the group-specific wage level in 1996 for four groups ranging from the 10th percentile (the lowest-skilled workers) to the 80th percentile (the highest-skilled workers). From 1996 to 2009, real wages fell about 20 percent for the lowest-skilled workers, while rising about 5 percent for the highest-skilled. While average overall wages dropped slightly over this period, more notable is the

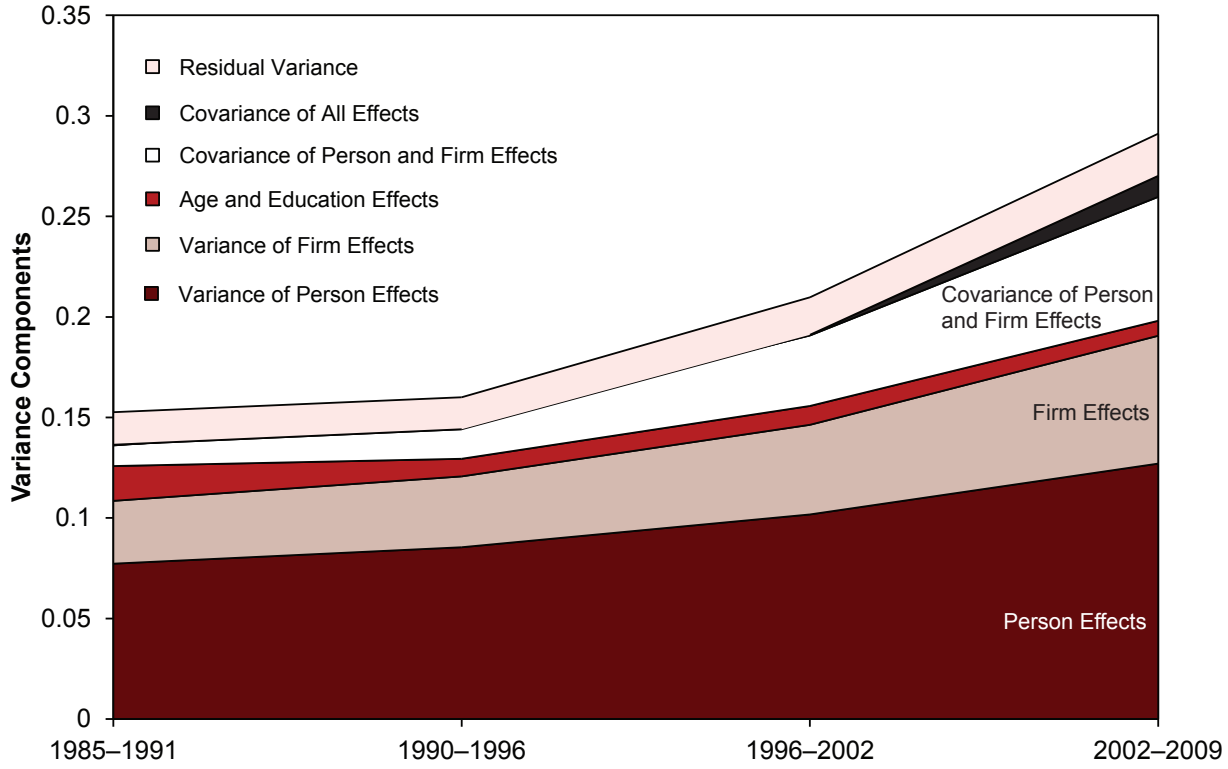

Figure 3: Decomposition of variance of log wages.

Source: D. Card, J. Heining, and P. Kline, "Workplace Heterogeneity and the Rise of West German Wage Inequality," *Quarterly Journal of Economics* 128, No. 3 (August 2013): 967–1015.

very large expansion of inequality between the top and the bottom. A similar analysis done for the United States with the turning point being 1979 rather than 1996 would look nearly identical; between 1979 and 1992, wages dropped dramatically for the lowest-skilled workers while growing a modest amount for the highest skilled, and the overall average wage dropped slightly.

A simple but useful measure of wage inequality in the West German labor market is the variance of log wages for full-time male workers. Figure 3 shows a decomposition of the trend in this variance between the four (overlapping) time periods. The total variance in log wages starts at a relatively low level and rises over time, rising particularly steeply after 1996. The component of this variance due to differences in the "portable" component of wages that different workers bring to the labor market (person effects), rises gradually over the period. The component of variance due to a rise in the dispersion of the firm effects in wages—the part attributed to higher or lower wage premiums offered to different workers at different employers, also rises steadily over time. The covariance between the person and firm effects starts as a very small component of variance but rises dramatically. This trend reflects the rapid increase in the probability that a highly skilled worker is employed by a firm that offers *all* of its workers a larger wage premium. This rising tendency for the highest-skilled workers to get the best jobs is a major driver of rising wage inequality in Germany. Finally, there is some variance that is left over after accounting for person effects, firm effects, the covariance between the two, and the role of other control variables; this residual variance is relatively small and does not increase at all in size over the period. This means that nearly all of the rise in inequality can be explained by these three components: person effects, firm effects, and match effects.

Interpretation

The implications of these findings have not yet been exhaustively explored, but there are several things that we do know that can help us interpret these results. For one, firms that pay higher wages survive longer; this means that they are more profitable, despite the higher labor costs. It is also the case that jobs at high-wage firms tend to last longer; thus, it does not appear to be the case that workers at those firms are worked so hard that they prefer to work less hard elsewhere for a lower wage. There has been some modest widening of wage premiums over time between firms that have persisted over the entire period; however, the main source of rising inequality between firms in Germany is the emergence of low-wage firms that specialize in hiring low-wage workers. This appears to be happening in the United States as well, although we do not have the data to establish that with certainty.

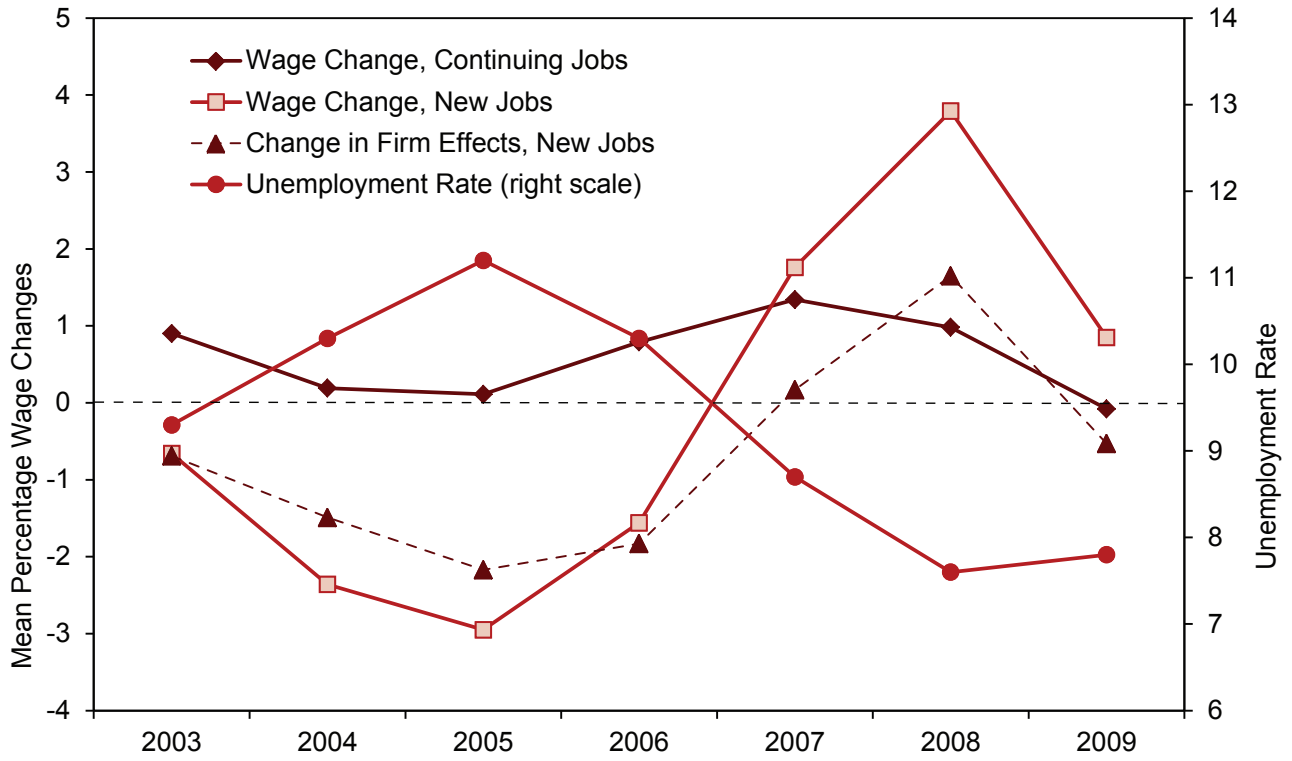

Figure 4. Cyclicality in wage changes for continuing and new jobs.

Source: D. Card, J. Heining, and P. Kline, "Workplace Heterogeneity and the Rise of West German Wage Inequality," *Quarterly Journal of Economics* 128, No. 3 (August 2013): 967–1015.

One possible interpretation of the wage premiums offered by the best-paying firms in Germany is "rent-sharing"; that is, workers at more profitable firms are paid a share of the higher profits—perhaps because they have some bargaining power, or a successful union. Rent sharing does not appear to be the whole story, however. Recent studies of rent-sharing (including one I conducted with co-authors using data for workers and firms in Italy) typically find quite a small response of wages to shifts in firm profitability, such as the opening up of trade, or the granting of a patent.[12]

The good news for poverty research is that the firm-specific wage premium appears to be the result of higher productivity, rather than the cause. For example, a case study of a company that switched from hourly pay to piece rates found that the firm got more productivity out of their workers after the change, but the workers also earned more.[13] Workers who did not like the new system left, while the new workers who came in had much higher productivity. This reflects what appears to have happened in Germany on a larger scale; the emergence of new kinds of firms with new kinds of pay policies, which attracted the more highly skilled workers, got more productivity out of them, and paid them substantially more.

What other features of the labor market can be explained by firm wage premiums?

Firm effects may also be useful in explaining other features of the labor market besides wage inequality. For example, why do wages change during the business cycle, and to what extent do wages change for people who switch jobs, compared to people who stay in the same job? During a recession, wages tend to drift down because (1) the wage at a given job does not keep up with inflation, and (2) job changes during a recession tend to generate wage decreases. Again, this pattern can be largely explained by firm effects. Figure 4 shows that in Germany during the 2000s, as the economy went through first a recession and then an expansion, wages for continuing jobs stayed fairly flat, while wages for job changers dropped steeply during the recession, and rose even more during the expansion. The dotted line on the figure shows how much of this is explained by knowing the average wage premium paid by the firms being switched between; this line accounts for nearly all the difference in wage changes between continuing jobs and new jobs. Also important is where the jobs come from. The relative share of new jobs that are in the bottom quintile of job quality tracks very closely with the unemployment rate; if you are trying to get a job during a recession, most of the new jobs available will be low-paying ones.

Another labor market feature that can be informed by firm effects is early career progression. Figure 5 compares annual wage increases for two groups of young workers, those who changed jobs and those who stayed in their first job, over the first five years of their careers. On average, there is a large wage gain after the first year of employment, then smaller wage gains each following year. Those who change jobs achieve even larger wage gains. About two-thirds of that

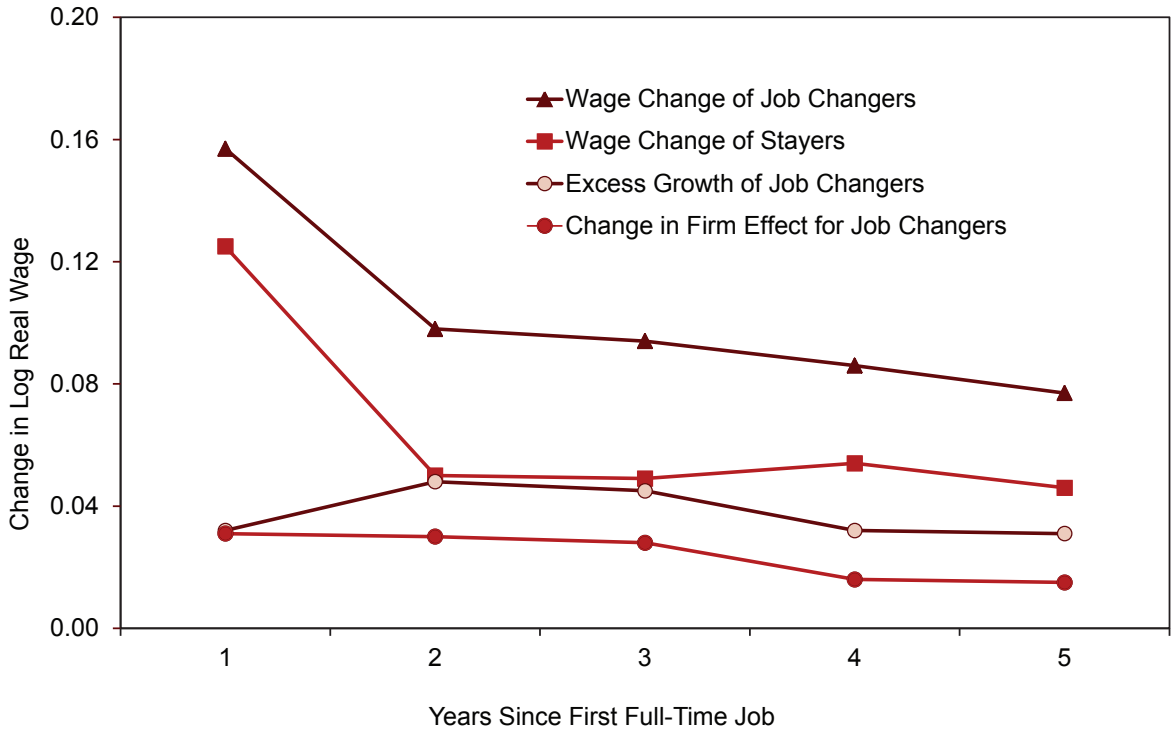

Figure 5. Wage gains to job mobility in the first five years of a career.

Note: The sample includes German men who had their first full-time job during 1986 or 1987 at age 22 to 24.

Source: D. Card, J. Heining, and P. Kline, "Workplace Heterogeneity and the Rise of West German Wage Inequality," *Quarterly Journal of Economics* 128, No. 3 (August 2013): 967–1015.

difference is attributable to the tendency of young workers to move to firms with larger firm-specific pay premiums. In other words, a large share of career wage growth appears to be related to the process of finding a job in a "good firm."

Finally, firm effects can be useful in understanding gender-based wage gaps. Firms with higher proportions of female employees tend to pay less than those with higher proportions of male employees, with a wage difference between all-female and all-male firms of about 15 percent. How much of this gap is explained by all employees at a given firm being paid less, and how much to women being paid less than men? In a study using data from Portugal, my colleagues and I found that 20 to 25 percent of the average gender gap is because women are clustered at firms where both men and women are paid less.[14] A smaller, but still potentially important share is explained by the fact that women seem to get a little less out of working for "good firms"—perhaps because they spend less time and effort bargaining for the highest possible wage. While we do not have the data to do a similar analysis in the United States, the limited analysis that has been done leads me to believe that about the same proportion of the U.S. wage gap between men and women is attributable to gender distribution among firms.

What else might be related to firm wage premiums?

There are other wage gaps that may be related to firm-specific wage premiums. For example, I believe that a substantial portion of the racial wage gap can be explained by differential access to better-paying jobs. There is also an education gap, documented in the German data. Heining, Kline, and I found that nearly all the rise in return to education in Germany can be explained by an increasing concentration of highly educated workers at firms that pay higher wages to everybody. The benefits of being at the higher-paying firms are increasingly going to those with more education. Finally, work on wage patterns among immigrants in Portugal found that about one-third of the rise in wages after arrival in the country can be attributed to new immigrants beginning in low-paying jobs, then gradually transitioning to better-paying firms.

There are a couple of other areas where I believe this framework could be very helpful. One is networks, such as friends and other social groups. I believe an examination of network structures would document the utility to job-seekers of having people with high-paying jobs in their social networks. Similarly, this model could be useful in looking at inter-

generational correlation in earnings. Data from Scandinavia show that a very large proportion of young blue-collar workers start out working at a firm that one of their parents works at.[15] This means that if your parent has a good job, you are more likely to get a good job.

Conclusions

A framework that acknowledges the importance of firm-specific wage premiums represents an important new direction in which we could take labor market analysis, and appears to be quite helpful in explaining rising wage inequality. Other areas in which this paradigm may be helpful include cyclical wage variation, early career progression, and gender wage gaps. There is still considerable theoretical work to be done in explaining the empirical results, but what has been found so far appears to be quite useful in understanding how the labor market works. It is really important to get a good job, now more than ever.■

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[1]See for example, M. J. Melitz, "The Impact of Trade on Intra-Industry Reallocations and Aggregate Industry Productivity," *Econometrica* 71, No. 6 (November 2003): 1695–1725.

[2]See for example, W. C. Riddell, "The Empirical Foundations of the Phillips Curve: Evidence from Canadian Wage Contract Data," *Econometrica* 47, No. 1 (January 1979): 1–24.

[3]R. H. Topel and M. P. Ward, "Job Mobility and the Careers of Young Men," *Quarterly Journal of Economics* 107, No. 2 (May 1992): 439–479.

[4]R. E. Hall, "The Importance of Lifetime Jobs in the U.S. Economy," *The American Economic Review* 72, No. 4 (September 1982): 716–724.

[5]See, for example, J. M. Abowd and D. Card, "On the Covariance Structure of Earnings and Hours Changes," *Econometrica* 57, No. 2. (March 1989): 411–445.

[6]L. S. Jacobson, R. J. Lalonde, and D. G. Sullivan, "Earnings Losses of Displaced Workers," *The American Economic Review* 83, No. 4 (September 1993): 685–709.

[7]S. J. Davis and T. M. von Wachter, "Recessions and the Cost of Job Loss," NBER Working Paper No. 17638, December 2011.

[8]See C. Syverson, "What Determines Productivity?" *Journal of Economic Literature* 49, No. 2 (June 2011): 326–365.

[9]See, for example, J. M. Abowd, F. Kramarz, and D. N. Margolis, "High Wage Workers and High Wage Firms," *Econometrica* 67, No. 2 (February 1999): 251–333.

[10]D. Card, J. Heining, and P. Kline, "Workplace Heterogeneity and the Rise of West German Wage Inequality," *Quarterly Journal of Economics* 128, No. 3 (August 2013): 967–1015.

[11]There is some overlap between these periods, described in detail in Card, Heining, and Kline, "Workplace Heterogeneity and the Rise of West German Wage Inequality."

[12]See D. Card, F. Devicienti and A. Maida, "Rent-Sharing, Hold-up, and Wages: Evidence from Matched Panel Data," *Review of Economic Studies* (forthcoming 2013).

[13]E. P. Lazear, "Performance Pay and Productivity," *The American Economic Review* 90, No. 5 (December 2000): 1346–1361.

[14]D. Card, A. R. Cardoso, and P. Kline, "Bargaining and the Gender Wage Gap: A Direct Assessment," UC Berkeley Center for Labor Economics Unpublished Working Paper, August 2013.

[15]F. Kramarz and O. N. Skans, "When Strong Ties are Strong—Networks and Youth Labor Market Entry," working paper, Institute for Evaluation of Labour Market and Education Policy, Uppsala, Sweden, 2011.