



# Firm-Level Pay Policies and the Labor Market

Pay policies can have broad implications resulting in low, “rigid” wages and volatile unemployment.

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*The views expressed in this article are not necessarily those of the Federal Reserve Bank of Philadelphia or the Federal Reserve System.*

**W**hen we study the labor market, we need to think about larger firms. The bulk of U.S. private sector employment takes place in firms of 50 or more employees, making these firms important for overall labor market outcomes.

When we think about larger firms, we also need to think about firm-level policies. It is through these policies that a firm’s leadership shapes how its firm operates. The policies are codified in within-firm rules governing decision-making as well as firm behavior.

In addition to directly influencing an individual firm, these policies indirectly influence the broader labor market, because that is where these firms interact with each other. Given the widespread use of such policies, it is worthwhile to go beyond the individual firm to consider such interactions and what they imply for wages and hiring.

Recently, researchers have argued that firm-level pay policies help explain why wages appear to be “rigid” (meaning that wages’ response to the business cycle is limited) and why firms adjust wages only infrequently in response to changing econom-

ic conditions. Firm-level pay policies can also help explain why adjustments in employment and wages are asymmetric—specifically, why employment rises gradually when economic conditions improve but falls sharply as they deteriorate, and why wages are more likely to rise than fall.

## The Concept and Related Evidence

A firm's pay policy—that is, how the firm plans to compensate its workers—is generally implemented via firm-level rules governing pay. Under such rules, coworkers in similar positions and with similar skills are treated similarly, and the rules indicate how the firm plans to pay these workers relative to similar workers at other firms. The rules are typically formalized in a salary structure, which involves a set of pay grades, each with a corresponding salary range for workers within that grade. The firm uses the salary structure to determine each worker's pay.

Industry surveys of human resources professionals offer a broad perspective on the prevalence of such structures. According to these surveys, as many as 85 percent of larger firms report using a formal salary structure to determine worker compensation.<sup>1</sup> The structure is important because it maps the firm leadership's views on worker compensation onto individual worker wages.

According to the surveys, the midpoint of each salary range typically targets a relevant "market wage," or the wage that workers in similar positions are generally paid in the labor market. The corresponding salary range then allows the firm to adjust the worker's pay for further differences in skill or performance. Large firms also often have different salary structures for different types of positions within the firm.

Salary structures are adjusted at regular intervals to reflect changing market conditions, but not on a continual basis. Most firms adjust their salary structures annually; some adjust theirs even less frequently. Understandably, evaluating changing market conditions across a range of different types of positions is not a small task. This means that wages tend to adjust to changing economic conditions with some lag.

Even though the survey evidence indicates that firm pay policies and related salary structures are widespread, evaluations of how they shape wages are hampered by the lack of sufficiently detailed information about job and worker characteristics in wage data.<sup>2</sup> To overcome these limitations, I turn to economic theory instead.

## A Model with Firm-Level Pay Policies

Recently, I've used a theoretical model to consider the implications of firm-level pay policies for wages, hiring, and unemployment.<sup>3</sup> The model uses tools from modern macroeconomics to consider labor markets that, as a reflection of real-world labor markets, involve searches on the part of workers and firms. In both the model and the real-world labor market, when firms seek to hire, they post vacancies; unemployed workers search for the right vacancy; and firms and workers eventually match, starting an employment relationship. This approach enables the model to speak to how firm-level pay policies affect labor

market characteristics economists care about, such as the extent of vacancy creation across firms, the rate at which unemployed workers find jobs, and market levels of employment and unemployment.

To capture firm-level pay policies, the model *constrains* each firm to pay similar workers within the firm the same salary but *allows* each firm to choose the level of this salary relative to its competitors. The model thus enables us to identify the implications of such constraints on firms and the labor market.

According to the model, firm-level pay policies lead to lower wages. To understand why, consider how firms set wages. In the model, firms face a situation in which their current and future wages influence their hiring today, because more workers apply for the firm's vacancies when these workers expect higher wages. More job applicants, in turn, leads to more hires at the firm. Due to this link between wages and hires, firms should find it profitable to offer attractive wages, even though that means having to pay workers more.

However, that same firm's existing workers are already engaged with work rather than actively searching for a new position, which makes them generally willing to continue working for somewhat less than it takes to attract a new worker.<sup>4</sup> When a firm decides on firm-level pay, it balances its desire to be attractive to job applicants with its desire to pay its existing workers no more than necessary. A firm-level pay policy thus makes offering attractive wages more costly for a firm and, as a result, we expect firms to pay lower wages.

Lower wages in turn make creating vacancies more profitable for firms, resulting in firms' creating more vacancies and ultimately also hiring more workers. This means that unemployed workers find jobs faster, and employment rises. However, taking both wages and employment into account, these shifts in labor market outcomes appear to favor firm profitability at the expense of workers. So, even though equal treatment with peers sounds desirable, these shifts in labor market outcomes can make such policies less desirable from the worker's perspective.

## Rigid Wages and Volatile Unemployment

Changing economic conditions bring large shifts in unemployment. For example, during the Great Recession, unemployment increased from less than 5 percent in 2007 to as much as 10 percent in 2009. Economic downturns typically involve unemployment rising by about 40 percent of its long-run average level as the economy transitions from peak of expansion to bottom of trough.<sup>5</sup>

Unemployment causes economic distress for households, so why don't wages adjust to prevent a surge in unemployment during a recession? Economic theory implies that if wages were to fall sufficiently in a downturn, firms could continue to employ workers without a pronounced increase in unemployment. Instead, wages appear to exhibit a limited response to changing economic conditions, a phenomenon that has long puzzled economists.<sup>6</sup>

It turns out that firm-level pay policies also influence how much wages respond to changes in economic conditions, with implications for how much unemployment responds to those

changes. Such policies leave workers with a smaller share of the gains from economic activity, relative to their employers. This results in wages that are also less responsive to changes in economic conditions over the business cycle. Such policies thus offer one explanation for why wages are rigid: The wage increases seen in expansions and declines seen in contractions become smaller in the context of firm-level pay policies.

For firms, wage rigidity translates into greater cyclical variability in the profitability of hiring because wages do not fully adjust to changes in economic conditions.<sup>7</sup> As a result, the labor market becomes more volatile over the business cycle. When the labor market enters a contraction, vacancies decline more than they otherwise would. This makes it harder for the unemployed to find work, and unemployment rises more than in the absence of such policies. Correspondingly, expansions bring greater increases in vacancies and declines in unemployment than they would absent such policies. This aspect of firm-level pay policies allows us to make sense of the volatility observed in real-world labor markets.

For example, manufacturing is a setting in which formal salary structures are perhaps most straightforward to implement, due to individual worker output being easier to measure than in other settings. Manufacturing is also known as a very cyclically sensitive industry, with unemployment that clearly varies more over the business cycle than economywide unemployment.

## Infrequent Wage Adjustment

It's not just that wage adjustments are limited in size: They are also infrequent. As noted above, survey evidence indicates that firms typically revise their salary structures on an annual basis, and sometimes even less frequently than that. Direct evidence confirms this pattern. For their 2021 *American Economic Review* article, Princeton University professor John Grigsby, University of Chicago professor Erik Hurst, and ADP Research Institute cohead Ahu Yildirmaz used wage data from a large, nationwide payroll processing firm and found that a substantial share—as much as 35 percent—of workers typically see no change in their wages from one year to the next. They calculated that, on average, wages change only once every 1.5 years. This frequency is consistent with evidence from other countries.<sup>8</sup>

Why would wages be adjusted so infrequently when doing so is costly for firms and workers? Firm-level pay policies can help us answer this question.

Given the commitment problem affecting wage setting, revising wages less frequently—say, annually rather than monthly—can increase a firm's profitability by preventing the firm from later departing from its originally preferred plan (which it knows it will want to do).

Of course, revising wages less frequently also limits the firm's ability to respond to changing economic conditions in a timely fashion, and the costs associated with a delayed response could outweigh its benefits. However, the research found that, despite these costs, it can be profitable for a firm to adopt a strategy of

See **The Commitment Problem Affecting Wage Setting.** ↓

infrequent wage adjustment.

If all firms adopt infrequent wage adjustment, that undoes some of the effects of firm-level pay policies discussed above, raising the level of wages and making workers better off. In the context of firm-level pay policies, infrequent wage adjustment can thus be beneficial for workers.

## Hiring Freezes and Asymmetric Labor Market Adjustment

Firm-level pay policies can also give rise to hiring freezes—that is, a firm's decision to pause hiring when economic conditions deteriorate, allowing the firm's workforce to shrink through attrition (rather than layoffs). A hiring freeze is another example of a firm-level policy.<sup>9</sup> In the model I used in my research, firm-level pay policies can trigger a hiring freeze if the level of employment in the labor market is high relative to prevailing economic conditions.

As discussed above, in the context of firm-level pay policies, hiring firms set wages that balance their desire to be attractive in hiring with their desire to pay existing workers no more than necessary. But attempting to hire becomes less profitable when employment is high because vacancies yield fewer hires when there are fewer workers searching for work—which makes firms want to reduce their hiring. What happens in the model is that, instead of all firms scaling down their hiring across the board, some firms withdraw from hiring altogether while others continue to hire. We thus see, in line with real-world labor markets, some firms freezing their hiring while others continue to hire.

The reason we see different firms responding differently is that withdrawing from hiring allows a firm to pay distinctly lower wages, causing some firms to prefer to withdraw—but as these firms withdraw, that also makes room for the remaining firms to profitably hire.<sup>10</sup>

When do we expect to see hiring freezes in particular? When the economy enters a contraction and the profitability of hiring falls across the board. In the model, the onset of hiring freezes in a contraction translates to a fluid drop in total vacancies in the labor market that makes it hard for the unemployed to find work, and unemployment rises. The U.S. labor market is characterized by a continual and substantial churn of workers from one job to another, and when hiring slows down, unemployment quickly rises.

Due to the hiring freezes, contractions play out quickly, whereas expansions involve a more muted increase in vacancies across firms. The more muted increase in vacancies leads to more gradual improvement in the conditions unemployed workers face in searching for work and a more gradual decline in unemployment.

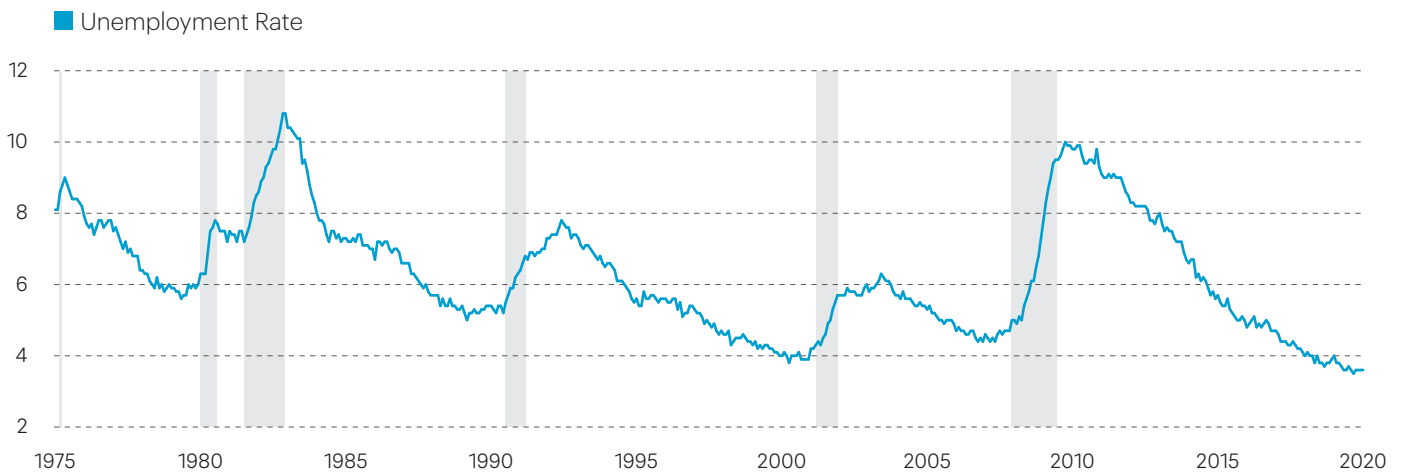
These patterns connect with the asymmetry seen in the U.S. labor market, in which both hiring and employment typically increase gradually in an economic expansion but decline quickly in a contraction. This asymmetry manifests itself in the evolution of the U.S. unemployment rate, with sharp increases followed by gradual declines (Figure 1).<sup>11</sup>

The model has predictions for wages as well, since firms

FIGURE 1

## Employment and Hiring Typically Increase Gradually in Economic Expansions but Decline Quickly in Contractions

This asymmetry manifests itself in the evolution of U.S. unemployment, with gradual declines followed by sharp increases. Monthly unemployment rate, percent, seasonally adjusted, 1975–2020



**Data Source:** U.S. Bureau of Labor Statistics, Unemployment Rate [UNRATE] via FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/UNRATE>, December 16, 2024

**Notes:** The unemployment rate represents the number of unemployed as a percentage of the labor force. Labor force data are restricted to people 16 years and older who currently reside in one of the 50 states or the District of Columbia, who do not reside in institutions (for example, penal and mental facilities, homes for the aged), and who are not on active duty in the U.S. Armed Forces. Shaded areas indicate U.S. recessions as determined by the National Bureau of Economic Research (NBER).


make joint decisions about vacancy creation and wages. The asymmetry in vacancy creation—whereby contractions involve a burst of hiring freezes while expansions involve more gradual increases in vacancies—is associated with asymmetry in wage dynamics as well.

In the model, firms offer more attractive wages when they are seeking to hire more workers. In a contraction, some firms withdraw from hiring, leaving those firms that continue to hire *hiring relatively more workers than they would have absent the freezes*. This means that the hiring firms also *offer higher wages than they would absent the freezes*. For this reason, wages fall relatively less in a contraction than they increase in an expansion.

The model also features an increase in wage risk in a contraction, because workers employed at the freezing firms are paid less than workers at hiring firms. Downturns thus also involve an increased likelihood of especially low pay for the unlucky workers in freezing firms—as well as workers who lose their jobs remaining unemployed longer.

These predictions connect with empirical research highlighting the fact that wage dynamics feature asymmetry. Empirically, wages are more likely to rise than fall, a property referred to as “downward wage rigidity,”<sup>12</sup> in the spirit of the asymmetry in the model. Downturns have also been shown to involve elevated earnings risk, with an increased likelihood of especially low pay, both for workers who remain at the same firm and those who do not.<sup>13</sup>

## Conclusion

Economic theory often abstracts from the role organizational constraints play in the real world. In the labor market context, the focus of many analyses has been, for example, on trying to find the best possible compensation package structure to incentivize a worker to work hard, which should then maximize firm profitability. While this may be the appropriate approach when thinking about a key player such as a CEO, most workers are not CEOs. Most workers in regular jobs are treated as one of many, and their pay is determined accordingly, within the confines of the constraints in place at their organization. In my research, I seek to think about the implications of such constraints on labor market outcomes, connecting them to well-known puzzles in the labor market. I view this work as a first stab in developing such organizational linkages within a macroeconomic model framework. More work remains to be done to develop related evidence as well as the theory. 

## The Commitment Problem Affecting Wage Setting

When setting wages, firms face a commitment problem: A firm would like to plan to pay attractive wages in the future, but once the future arrives, it would like to depart from this plan and pay lower wages instead.

To understand why, consider a firm that is planning its current and future wages. Its desire to offer attractive wages today is tempered by the presence of its existing workers (if it has any), because the same high wages that attract job applicants make existing workers more expensive for the firm. The firm's wage plan thus involves lower wages today. But when the firm thinks about future wages, it understands that planning on low wages in the future will limit its ability to hire *at each point in time before that future date arrives*, because job applicants will be deterred by the low expected future wages. Due to this greater adverse effect of low future wages on hiring, the firm prefers to plan on higher wages for the future. In short, the firm would like to plan to pay higher wages in the future but pay less today.

But this logic implies that if the firm rethinks its wage plan once the future arrives, it would again prefer to pay lower wages at that point. These ingredients give rise to a commitment problem: The firm would prefer to depart from its original plan if given the opportunity to revise that plan later. In such circumstances, a firm might prefer to prevent itself from departing from its plan by fixing its wages for a longer period.

in unemployment. This work, however, is complicated by the Fed's dual mandate, which requires that it also keep inflation in check.

**7** Ultimately, the economic environment determines how much wages respond to changing conditions.

**8** See Grigsby et al. (2021) and references therein. Lamo and Smets (2009) discuss evidence pertaining to Europe.

**9** See, for example, Lambert (2020), Kelly (2023), and McGlaufflin and Burleigh (2024).

**10** The labor market becomes less congested when some firms withdraw from hiring, allowing the remaining firms to continue to profitably hire.

**11** The asymmetry seen in the data stems in part from the burst of separations of existing employment relationships typically seen at the onset of a contraction; there is no corresponding burst of hires at the onset of an expansion. The theory highlights the role of the hiring margin instead.

**12** See, for example, Grigsby et al. (2021) and references therein.

**13** Storesletten et al. (2004) documented that recessions involve increased earnings risk, while subsequent research by Guvenen et al. (2014) highlight that recessions involve an increase in the likelihood of especially low earnings. Busch et al. (2022) argue that this is also true for wages. In the model, recessions involve an increased likelihood of especially low pay due to the possibility of hiring freezes, as well as unemployment spells becoming longer (as finding work becomes harder).

## Notes

**1** See, for example, WorldatWork Compensation Programs and Practices Survey (2022) and Bewley (1999).

**2** For additional evidence supporting the prevalence of firm-level pay policies, Hazell et al. (2022) show that large firms often offer the same pay across locations, with 40–50 percent of wages being identical. Related evidence for firms hiring internationally is discussed by Hjort et al. (2022). For recent empirical papers that have sought to incorporate measures of a worker's position within a firm into analyses of labor market outcomes, see Bayer and Kuhn (2023) and Bagga (2024).

**3** See Rudanko (2023, forthcoming).

**4** Caldwell et al. (2025) discuss evidence that while searching workers generally apply to firms they perceive as paying higher wages, employed workers are often unwilling to search for a new job, or leave their existing one, despite possible gains in pay from doing so.

**5** See Shimer (2005).

**6** Of course, unemployment doesn't occur in a vacuum. The Federal Reserve has long employed systematic policy actions to preserve a maximum sustainable level of employment—and thus avoid increases

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