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Wage premia for newly hired employees

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HIGHLIGHTS

- We study drivers of wage differentials between new hires and incumbent employees.
- Detailed data with job-specific information on many firms in one industry are used.
- Newly hired employees earn on average significantly higher wages than incumbents.
- Relative wage premia differ between hierarchical levels and functional areas.
- The specificity of human capital is a key driver for new hires' wage premia.

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ABSTRACT

We investigate wage differences between newly hired and incumbent employees in identical functions using detailed personnel data from a large number of banks. We first show in a formal model of job switching that (i) incumbents earn less than new recruits when human capital is mostly general but (ii) the opposite is the case if specific human capital is sufficiently important. In the empirical analysis we find that, on average, new hires earn more than comparable incumbents but – using a novel measure for the importance of specific human capital – these wage premia indeed strongly depend on human capital specificity.

1. Introduction

Since the publication of the seminal work by Doeringer and Piore (1971), it has often been claimed that firms can partially shield their employees from external market forces; hence, it is important to study internal labor markets. Starting with the important contributions of Waldman (1984), Baker et al. (1994a), Baker et al. (1994b), and Gibbons and Waldman (1999), a large number of empirical and theoretical papers have thus far explored the structure of internal labor markets and the relationship between internal mobility and external hiring (see, for instance, Chan (1996), Brett and Stroh (1997), Waldman (2003), and Bidwell and Keller (2013)). However, less research has been conducted in this literature on the wage differential between incumbent employees and new recruits in the same job. However, this variable yields substantial information on the extent to which external market forces indeed determine the wage formation within firms, as in perfectly competitive labor markets, there should be no difference between the wages of new hires and incumbents with identical characteristics.

We can make use of a unique data set spanning a large fraction of firms in the banking and financial services sector and providing detailed information on the jobs, hierarchical levels, company, and region, as well as information on the individual employees such as wages, bonus payments, age, and firm tenure. We use this data set to study the determinants of wage differentials between newly hired and incumbent

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employees. In particular, we argue that (i) in jobs for which the human capital is mainly general new recruits earn wage premia relative to incumbents in the same job, but (ii) these wage premia are smaller or even negative when firm-specific human capital is more important for employee performance.

We start by analyzing a dynamic formal model to illustrate the theoretical reasoning. In the model, firms in an industry compete against each other for the service of employees who acquire (general and specific) human capital over time. Employees have mobility costs which may vary over time but are serially correlated. We first demonstrate that in jobs for which only general human capital is acquired, firms will always offer a lower wage to incumbent employees than the market wage paid by competing firms. The reason for this is that due to mobility costs, employees are not fully compensated for increases in general human capital. However, we then demonstrate that if employees also acquire firm-specific skills, this result can be reversed, as paying below-market wages becomes too risky for employers because these firm-specific skills are lost when the employee leaves. Finally, we show that positive wage premia for new hires can – depending on the extent to which specific human capital is acquired – coexist with both positive or negative returns to tenure for incumbent employees, as there are countervailing effects: On the one hand, a longer tenure signals high mobility costs, which raises the power of employers; on the other hand, as there is uncertainty about the mobility costs, employers pay higher wages to employees with more firm-specific human capital.

In the empirical part, we analyze the wage premia paid to newly hired employees by investigating a large data set on compensation in the German banking and financial services sector provided by the management consultancy Towers Watson. The survey covers between 95,000 and 120,000 employees each year from 2004 to 2008 and includes the largest banks in Germany.

We find that, on average, newly hired employees indeed earn significantly higher wages than incumbents of the same age for the identical function. Comparing jobs on different hierarchical levels, we find *negative* wage premia at lower levels but *positive* and very substantial premia at higher levels. However, more importantly, to provide a more direct test of the theory, namely, that the (un)importance of firm-specific human capital is a key determinant of the size of wage premia for new recruits, we implement a two-step procedure: Our data set has the useful feature that the majority of the employees receive an annual bonus payment each year. We use this information to construct a measure of the importance of firm-specific human capital for employee performance by investigating the impact of firm tenure on the size of individual bonuses. We estimate this specificity measure separately for different areas (unique combinations of specific function, hierarchical level, and type of job). In the second step, we study the association between this specificity measure and the size of the wage premia for newly hired employees. We find that wage premia are substantial for employees in areas in which specific human capital is not very important and for those at the median in terms of specificity. However, the "wage premia" vanish and become negative in areas in which specific human capital is very important.

There are different explanations for wage differences between incumbents and externally hired workers in the previous literature. Our formal model is most closely related to Ransom (1993), who does not explicitly study wage premia for new recruits but develops a theoretical explanation for his empirical observation that wages are decreasing in tenure in academic labor markets. He indicates that employers can exploit the moving costs of incumbent employees and therefore pay less to employees with higher tenure. We formally demonstrate that positive wage premia for new recruits exist only when specific human capital is not too important and can coexist with increasing returns to tenure.

Our paper is also related to the broader debate on the association between tenure/seniority and wages. Empirical studies such as Altonji and Shakotko (1987), Abraham and Farber (1987), Topel (1991), or Buchinsky et al. (2010) generally find a positive association of tenure and wages that to some extent is driven by a causal effect of tenure on wages. As argued the main causal link between firm tenure and wages is the formation of specific human capital and the use of deferred compensation as an incentive device (Lazear (1979)). But the association can also be due to "non-causal" drivers such as gradual learning about match quality (Jovanovic (1979)). Our observation that new recruits often earn more than incumbent employees of longer tenure seems at odds with these findings. But in our formal model wage profiles may be decreasing or U-shaped in firm tenure (controlling for experience). Thus wage premia for new recruits can coexist with positive tenure profiles in later years when firm-specific human capital is sufficiently important. In our data set, however, we find a negative association between tenure and wages also in later years which may be due to a lower importance of firm-specific human capital in banking and the nearly universal use of bonus payments as an incentive device such that it seems unnecessary to use deferred wages to induce incentives.

There are a number of other studies on wages for new recruits. Lazear (1995) analyzes a formal model where a firm can earn rents from hiring a "risky" worker from the outside labor market, i.e. one for whom there is a higher uncertainty about talent, as it can fire a low-ability worker and retain those of high ability. When this rent is shared between a worker and the firm, the external hire receives a wage premium. Harris and Helfat (1997) have argued that the premia for external CEO successors are due to a different skill set from the internal candidates and pay premia may compensate for the loss of future returns to firm- and/or industry-specific skills. While Harris and Helfat (1997) indeed find that externally hired CEOs earn higher wages, they do not investigate the specific channel. We show empirically that wage premia are larger when firm-specific skills do not matter greatly for the later performance and thus are apparently not used to compensate for future losses. Bidwell (2011) studies the wages and performance of new hires in an investment banking branch of a large financial services company. He argues that new hires earn higher wages as they face a high uncertainty about their productivity in the new job and will demand a premium to be compensated for the switching risk. Also, firms hire external workers with stronger observable indicators of ability than internal candidates. His finding of average wage premia of up to 18% is very similar to wage premia for the higher-level jobs in our data set. Using a matched employer–employee data set of Dutch firms, Hassink and Russo (2008) find no wage differences between incumbent workers and employees hired from other firms on average; however, they do not distinguish between hierarchical levels or job characteristics.[2]

Earnings differentials between employees have also been investigated in the theoretical and empirical literature on job mobility and job search (see, for instance, Topel and Ward (1992), Mortensen and Pissarides (1999), Rogerson et al. (2005), Eckstein and van den Berg (2007); Yashiv (2007) for a recent overview). Postel-Vinay and Robin (2002), for instance, also show that earnings differentials can arise across identical workers employed at identical firms. In their paper, this is due to sequential sampling of alternative random job offers.[3] In our model, differentials occur due to a combination of differences in the match-specific utility driving employee turnover and differences in the importance of firm-specific human capital for the job under consideration.

[2] Note that this is not inconsistent with our results, as they only consider average wage premia and observe a smaller share of higher-level jobs. In our data, the wage premia are negative for lower hierarchical levels but positive for higher levels.

[3] See also Greenwald (1986), Lazear (1986), Golan (2005), and Barron et al. (2006) for models investigating the importance of adverse selection in the process of offers and counteroffers.