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Trying Out Different Workers: Worker Firing, Match Quality, and Growth of Small Firms in Germany

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ABSTRACT

This study examines how firing as a managerial practice can enhance worker-firm match quality, and thereby foster growth of small firms. I view match quality as a component of a worker's productivity contribution to the firm, determined by the fit between the worker and the firm. Utilizing German employer-employee linked data, I propose a firm-level measure of match quality, and examine how firing, match quality, and growth are related. I find that firing is positively associated with enhanced match quality and stronger future growth.

Keywords: Match Quality, Growth, Small Firm, Worker Firing, Managerial Practice

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Overview

As small and young firms are the main vehicles of job creation (Haltiwanger, Jarmin, and Miranda, 2013), understanding the underpinnings of their productivity and growth is critical for nurturing the sources of employment growth in the economy. Managerial practices have drawn attention of economists as an important factor that drive heterogeneity in firm productivity (Syverson, 2011; Bloom, Sadun, Van Reenen, 2016). Managerial practices of small firms are of particular interest, as their effect on enhancing firm performance, is likely to stimulate job creation.

Despite the widespread recognition of the importance of human resource management by business practitioners, there have yet been few studies that systematically explore the implications of human resource management for firm growth. The current study aims to fill in this gap in the literature by exploring the link between firing practices, worker-firm match

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quality, and growth of small firms. Assuming that match quality between the firm and the worker can be a potential factor that can affect the workers' productivity at the firm (Jovanovic, 1979a; Mortensen and Pissarides, 1994), I predict that small firms that use firing more intensively will enhance their match quality, and therefore will experience stronger growth in employment in future periods, as firms with better match quality should be more productive.

I test this prediction on small firms in Germany. The German context is well suited to study the relation between worker firing and growth of small firms, because German firms with 10 or less employees are excluded from regulations on protection against dismissal. I find that firing intensity at the firm is positively associated with improvement in the firm's match quality and stronger future growth. I also find that the positive relation between firing and growth is stronger for firms in industries where match quality is relatively more important (compared to the worker's human capital), and for firms in industries where trying out different workers is less costly.

The findings of this study suggest that small firms, whose workforce is expected to be of lower quality workers (in terms of their human capital) than larger firms, can improve their performance by putting effort in improving the fit with their workforce. It also provides supporting evidence for government policies that stimulates labor reallocation to attain larger job creation and stronger employment growth.

Worker Firing, Match Quality, and Firm Growth

Finding the right worker for the right task is a costly, yet important, aspect of human resource management in maximizing the growth potential of the firm. The right worker would be the worker who can make the maximum amount of productivity contribution to the firm. Labor economists have studied the worker's productivity contribution in terms of her human capital,

which can be determined as a combination of many different dimensions, such as her innate ability, education, and past experience (e.g., Becker, 1962; Topel, 1991; Buchinsky et al., 2010).

However, human capital is not the only source of variation for the worker's productivity at the firm. Another potential factor that can affect the worker's productivity at the firm is the idiosyncratic match quality between the firm and the worker (Jovanovic, 1979a; Mortensen and Pissarides, 1994). That is, even if the worker is highly qualified in terms of her human capital, she might not be the best fit (e.g., in the context of the firm's culture, organizational structure, compensation schemes) for the firm. In an extreme case, "there are no 'good' workers and 'good' employers, but only good matches" (Jovanovic, 1979b). Following these streams of the literature, I assume that a worker's productivity at a firm is determined by the worker's human capital and her idiosyncratic match quality with the firm.

While the worker's human capital can be screened by, and signaled to, the firm before hiring, the match quality between the worker and the firm is largely unknown to both the worker and the firm before the employment relationship is established. In other words, match quality can be learned by hiring the worker and trying her out. Once the firm learns the match quality, the firm can use firing as a managerial practice to improve the match quality with its workforce. That is, fire workers with poor match quality while keep the workers with good match quality.² These firms would attain a workforce that is relatively homogenous in its match quality with its workforce. On the other hand, firms that keep the poor match quality workers (and at the same time keep the good match quality workers) would have a workforce that has a larger dispersion in match quality across their workers. Thus, I predict that a firm that uses firing more intensively, which would reflect the firm's larger effort in improving match quality, is likely to have a

² I show empirical patterns that reflect firing intensity being a firm characteristic rather than an industry characteristic.

workforce with smaller dispersion in the estimated match quality in future periods. I also predict that these firms, with a workforce of better match quality, would attain stronger future growth.

The implication of match quality for firm growth is expected to be more significant for small firms than large firms, because small firms often are not able to have a workforce of high human capital (Brown and Medoff, 1989). That is, when decomposing worker productivity into the human capital component and the match quality component, the match quality component is likely to be relatively more important in terms of human resource management of small firms, as its relative contribution to firm productivity would be larger for small firms.

Empirical Approach and Findings

I test the above prediction on firing, match quality, and growth, using the German employer-employee linked data. The richness of the data allows me to measure dispersion in match quality at the firm using wage decomposition. Assuming that the worker's productivity is well reflected in her wage, I decompose the worker's wage into the human capital component and the match quality component (Abowd, Kramarz, and Margolis, 1999; Card, Heining, Kline, 2013). Then I construct a measure of wage dispersion at the firm by aggregating the individual worker's match quality estimates for each firm.

Using this firm-level measure of match quality dispersion, I examine how the firm's firing intensity is related to changes in future match quality dispersion, and how it is related to future firm employment growth. I test these relations for firing that occurs in the form of layoffs and for firing that occurs in the form of non-layoffs. Layoffs would reflect firing as a response to negative product market shocks, while non-layoff firing would reflect the firm's effort to improve its workforce quality. I test these relations on an estimation sample that is composed of small West German firms with 10 or less employees in the years from 2004 to 2008.

I find that firms that more intensively fire its employees attain greater match quality improvement. Furthermore, I observe that firing that occurred in non-layoffs drives this relation, which suggests that firing as a means of trying out different workers is significantly related to match quality improvement of the firm, while firing as a response to negative product market shocks is not. This match quality improvement is reflected in the firm's future employment growth. I find that firms that fire more intensively attain stronger future growth, and that this relation is also driven by firing that occur in the form of non-layoffs.

I further explore how the relation of firing and growth can be different by industry characteristics that can reflect the cost and benefit of trying out different workers. I find stronger relations between firing intensity and future growth for firms in industries where firms are more likely to have unfilled vacant positions, or for firms in industries where firms are more likely to cover their employee's training costs. I also find that the relations are stronger for firms in industries where the match quality component of wage is relatively more important than the human capital component of wage. These empirical relations suggest that the value of trying out different workers is larger for firms that have lower costs of searching for, or training, a new worker, and for firms at which the importance of match quality for firm performance (and therefore the benefit of trying out different workers) is larger.

Implications

The novel empirical findings on worker firing, match quality, and growth of this study provide evidence that the fit between the workers and the firm may well be an important factor that managers would need to be concerned about, in particular at small firms. More broadly, this paper suggests that different human resource management can lead to different firm performance (Syverson, 2011).

Because small and young firms are drivers of job creation (Haltiwanger, Jarmin, and Miranda, 2013), the findings of this paper also have policy implications. By showing that small firms can experience faster growth by trying out different workers, this paper is related to the literature of how labor regulation affect growth and employment (Lafontaine and Sivadasan, 2009; Caballero et al., 2013), and suggests that policy that encourages labor reallocation can stimulate job creation and economic growth (Davis and Haltiwanger, 2014). This policy implication resonates further in the current economic state that is characterized by declining economic dynamism (Decker, Haltiwanger, Jarmin, and Miranda, 2014).

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