# Personnel Policy and Profit

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There is a growing awareness of large differences in worker turnover and pay between firms. However, there is little knowledge about the effects of this on firm performance. This paper describes how personnel policies with respect to pay, tenure and worker flows are related to economic performance of the firm.

For many years, the view has been that wages and quit rates are jointly determined by the firm. According to this view, the firm takes as given the relationship between wages and quits revealed by workers, and sets the level of wages/quits to maximize profits (Parsons, 1977). To our knowledge, there are no empirical studies that attempt to estimate the total effects of turnover on profit. One of the reasons is that such a task would be highly data demanding. Thus, it is not sufficient to use data for firm performance and turnover, because firms use wages and wage policies as a management tool to influence turnover. Wages have their own impact on firm performance. With a new dataset encompassing the population of medium-to-large sized Danish firms, we measure the impact of different turnover and wage policies on performance.

Turnover is dealt with in different strands of the management and economics literature. The literature on resource-based firms considers all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc which are controlled by the firm. The Human Capital view of turnover is closely related to the idea of firm-specific human capital. One way of retaining the worker is to pay a wage that increases with number of years in the firm.

An alternative perspective is the value to a firm of having a flow of new workers entering in terms of the new ideas, knowledge and resources brought with them. The firm will also be more reluctant to lay-off workers if they possess larger amounts of firm-specific capital or if their wage, due to wage compression, is lower than the value of their marginal product. Search theory gives similar predictions.

The data used in this study originates from the Statistics Denmark IDA (The Integrated Database for Labour Market Research) Register and the Business Statistics Register. IDA contains information on labour market conditions for persons and workplaces in Denmark over the years 1980-1995. The IDA data originates from various administrative registers. The important feature of IDA is that it is possible to associate workplaces with the identity of all employees at a specific day in November (see Leth-Sørensen, 1998). For this paper we have matched IDA workplace information with larger firms (business units) for which we have accounting information during the period 1992-95.

We can follow each worker throughout her/his employment at the sampled firm. A hire in time t to t+1 is defined as a situation where the person is employed in the firm in time t+1 but was not employed there in time t. The sample of interest consists of all firms in the Danish private sector with more than 20 employees at any time during 1992-95, the period for which we have economic information on the firms. These firms are followed throughout the period and matched with all private sector employees. Characteristics of the employees are aggregated to the firm level, which is the primary unit of analysis. There are altogether 28,265 observations on 7,118 different firms, which yields close to 4 annual observations per firm over the period.

The procedure we follow allows us to control for firm heterogeneity by transforming a longitudinal matched firm-worker dataset. We address the potential simultaneity of personnel policy and firm performance by way of instrumental variables characterising the personnel structure of all other firms operating in the same local labour markets. Subject to our identifying assumption that location is exogenous to firm personnel policy decisions at the margin, we are able to make precise measurements of the relations between tenure, pay, worker flows and profit.

We find that personnel policy, defined as wage level and growth and worker turnover, has a strong relation to firm economic performance. At the margin, more hiring is associated with lower profit, and more separations are associated with higher profit. For the average firm, one new job, created by three hires and two separations, is associated with DKK 20,000 (€ 2680) lower profit. Higher wage levels and lower wage growth are both associated with higher profit. A workforce that has less tenure, all else equal, is more profitable.

This is what we have found in Denmark for four years in the early 1990's. Our sample period is too short to take account of dynamics, and indeed the longitudinal nature of the dataset is only exploited to control for unobserved firm heterogeneity. Furthermore, we only observe part of a business cycle, and so are unable to make inferences about cyclical or secular behaviour.

With these caveats in mind, and subject to our identifying assumptions, our results are consistent with survey-based information on the costs of hiring. The new empirical result is that separations may not be as detrimental to profit as hitherto believed. High tenure per se may not be as beneficial to profit as suggested in many texts in labour economics and management.

The management implications of this paper are that personnel policy issues (wage level and turnover) matter for the performance of firms. However, it is not as straightforward as could have been expected. It appears that a higher wage level – all else equal – means higher profit. This may be taken as evidence that the efficiency wage hypothesis works. The results also show that the overall concern about loosing core competencies through a high level of worker turnover is not universally true. The explanation may be that firms are able to be selective about who are leaving the firm and who stays. Finally, our results show that the short run costs of hiring are in general dominating the benefits of hiring new employees. In all, this indicates that it pays for firms to follow labour saving strategies.

Within-Workplace on Within-Firm-Year. Two Stage Least Squares Model Estimates *(Standard Errors)*

| | Profit | |
|---|---|---|
| intercept | -13.5200 | *2.2730* |
| hires | -1717.758 | *156.9376* |
| separations | 468.1727 | *180.0215* |
| log(wage) | 578.4598 | *130.7658* |
| dlog(wage) | -1318.598 | *620.2374* |
| tenure | -1385.669 | *111.0001* |
| size | -384.9835 | *31.292* |
| male | 73.6526 | *67.4411* |
| education | 317.4732 | *94.1630* |