Does a firm apply a consistent pay standard to all of its workforce?

Ana Rute Cardoso*

University of Minho, Economics Department, Gualtar, 4700 Braga, Portugal

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Abstract

The stability of the inter-firm wage structure across occupations is analysed. Employers define clusters of occupations to whom they apply a similar pay standard. These links between occupations are especially strong at the bottom of the qualification and wage ladders. © 2000 Elsevier Science S.A. All rights reserved.

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JEL classification: J31; D21

1. Introduction

The analysis of the inter-industry wage structure and the empirical evidence so far gathered on wages across firms suggest that an employer applies a coherent pay standard to all of its workforce, rewarding either well or poorly the whole spectrum of occupations in the firm, from the janitor to the highly qualified professional. Indeed, there is consensus over the idea that the inter-industry wage structure is remarkably stable across countries, over time and across occupations (see, for example, Krueger and Summers, 1987 and Dickens and Katz, 1987). This stability of the inter-industry wage structure has led to particular expectations about the behaviour of individual firms, stressing the unity in the employer wage policy.

Similarly, studies relying on firm data and concentrating on a restricted number of occupations, in one specific industry (see, in particular, Groshen and Krueger, 1990, or, in a more descriptive approach, Van Giezen, 1982), concluded that there are ‘internal pay alignments’ or a strong firm wage effect which cuts across occupations.

Evidence on this type of employer wage setting behaviour could lend support to efficiency wage
theories, in particular the fairness model, according to which a firm adopts a coherent standard to reward all of its workers, so as to transmit a sense of fairness, which results in better morale and higher productivity.

This note aims at answering the question: How consistent is the firm wage setting behaviour across its labour force? Does each firm reward either well or poorly all of its workforce, thus revealing a very consistent behaviour, or can a segmented labour market be detected within the firm? Consider progressing from a very rough comparison of average wages across firms (as in Slichter, 1950) to an evaluation of company wage policies controlling for worker observable attributes (as in Krueger and Summers, 1987), and finally to a methodology where extensive controls for the worker attributes and for his detailed occupation are included. Does the degree and the pattern of the inter-firm wage differentials thus captured change?

2. The occupations under study

A micro dataset, which matches firms and their workers in the Portuguese economy, is used. Five occupations were selected for analysis: computer systems analyst, telephone switchboard operator, secretary, janitor and chauffeur. These occupations fulfil several conditions: they are narrowly defined occupations, with precise contents; they are very diverse occupations, cutting across a wide range of industries; they provide a mix of blue- and white-collar jobs, as well as predominantly female and male jobs; worker attributes (in particular schooling) and the average wages paid are also in sharp contrast across occupations.

The selection of very specific and contrasting occupations guarantees that the consistency of the employer wage policy, if detected, is not brought about by the fact that the selected occupations are too close, belonging to a narrowly defined group of jobs or industries.

While chauffeur and computer systems analyst stand out as predominantly male professions, telephone switchboard operator, secretary and janitors are jobs held mainly by women. Analysts and secretaries reveal a similarly young and compressed age distribution, as opposed to the other three occupations. Computer systems analyst is by far the occupation requiring the most qualified labour force — over 40% of the workers hold a university diploma, and 44% have completed high school. At the other end of the schooling spectrum, janitors are found, with over 80% of the workforce having completed at most primary school. Tenure is lowest for janitors, chauffeurs and analysts. Whereas for analysts that may be due to the relative youth of the labour force, for janitors and chauffeurs it reveals that job turnover is high. Telephone switchboard operators, in contrast, present the most stable relationship with their employers.

Whatever the point of the wage distribution that is considered, analyst and secretary, in that order, are the occupations yielding wages above the economy benchmark, while telephone switchboard operators earn close to the economy’s standard, chauffeurs come next, and janitors earn clearly below the economy’s standard.

According to the wages received and to the schooling level of the workforce, an unambiguous ranking of the occupations can therefore be established, from the best to the worst: analyst, secretary, telephone operator, chauffeur and janitor.
3. Controlling for worker quality

It has long been established that managers are well aware of their firms’ relative standing in the wage ranking, such that the earnings of ‘common laborers’ are high where the earnings of ‘semi-skilled and skilled workers’ are high. “The explanation undoubtedly is that there are certain common influences, such as wage policies, which tend to affect the entire wage structures of plants and to give them a unity” (Slichter, 1950, p. 84).

The relevant issue is whether a firm chooses a position in the wage scale that it applies consistently to all of the workforce, or whether it chooses different positions, depending on the type of labour (for example, depending on the relative shortage or abundance of that type of labour, the amount of firm-specific human capital embodied in the worker, his general skill level, etc.). The hypothesis under study can best be tested by building a set of rankings of the firms — one based on the average wage in the firm for each category of workers — and checking the degree of consistency of these rankings by using rank correlation measures (Spearman rank correlation coefficient, Table 1). Average wages indeed reveal that there is a certain unity in the pay standard adopted by each firm.

A more adequate procedure would obviously control for worker quality. Krueger and Summers (1987) have done so, to quantify industry wage effects. The authors computed industry-specific wage effects for broad groups of workers:

- young and old (aged 20–35 years and 50–65 years, respectively);
- newly hired and long-tenured (tenure < 1 year, and tenure > 10 years, respectively);
- blue- and white-collar workers.

The correlation of the industry wage effects pointed to the stability of the inter-industry wage structure across groups of workers, a result that led to the claim that:

Certain industries pay all types of workers high wages and others pay all types of workers relatively low wages. The

<p>| Table 1 |
|------------------|------------------|------------------|------------------|------------------|
| Rank correlation of average wages by firm across occupations* |</p>
<table>
<thead>
<tr>
<th>Analyst</th>
<th>Tel. operator</th>
<th>Secretary</th>
<th>Janitor</th>
<th>Chauffeur</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analyst</td>
<td>0.60</td>
<td>0.77</td>
<td>0.67</td>
<td>0.62</td>
</tr>
<tr>
<td></td>
<td>22</td>
<td>41</td>
<td>25</td>
<td>13</td>
</tr>
<tr>
<td>Tel. operator</td>
<td>0.78</td>
<td>0.84</td>
<td>0.63</td>
<td></td>
</tr>
<tr>
<td></td>
<td>47</td>
<td>41</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Secretary</td>
<td>0.68</td>
<td>0.80</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>61</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Janitor</td>
<td></td>
<td></td>
<td>0.86</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>40</td>
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</tbody>
</table>

* All the correlations are significant at the 1% level (except that between analysts and chauffeurs, which is significant at the 5% level). The second line in each cell refers to the number of observations used. Source: Computations based on Portugal MESS (1992).
Table 2
Stability of the inter-firm wage structure across groups of workers

| Age 20–35 | 0.80 | 0.00 |
| Age 50–65 | 0.76 | 0.00 |
| Tenure < 1 | 0.76 | 0.00 |
| Tenure > 10 | 0.78 | 0.00 |
| Blue-collar | 0.78 | 0.00 |
| White-collar | 0.78 | 0.00 |

*The following controls were introduced: schooling, tenure, a dummy for tenure ≤ 1 year, labour market experience, experience squared, a dummy for blue-collar workers (in the first four regressions only), and a dummy for gender interacted with each of the previous variables. Source: Computations based on Portugal MESS (1992).

limited evidence that is available suggests a similar pattern is followed by firms, with some paying high wages within all occupational groups and others paying low wages within all occupational groups (Krueger and Summers, 1987, p. 18).

Direct evaluation of the stability of the inter-firm wage structure across these broadly defined groups of workers, lends support to Krueger and Summer’s expectation (Table 2).

Firms choose a particular position in the wage ranking, to which they stick when rewarding both young and old workers, newly hired and long-tenured ones, white- and blue-collar workers.

4. Controlling for the quality of the worker and for very detailed occupations

A more complete approach would join the advantages of both of the previous approaches, controlling for the worker observable quality and his detailed occupation, to consider a much finer partition of the working population than the previous section.

One wage regression was estimated for each occupation, and the best specification was retained in each case. For each occupation, employer-specific wage effects were therefore computed controlling for:

- computer system analyst: schooling, tenure, experience and its square;
- telephone switchboard operator: schooling, tenure, a dummy for tenure ≤ 1 year, experience and a gender dummy;
- secretary: schooling, tenure, a dummy for tenure ≤ 1 year, experience and its square and a gender dummy;
- janitor: schooling, tenure, experience and its square, a gender dummy interacted with tenure and a gender dummy interacted with experience;
- chauffeur: schooling, tenure, a dummy for tenure ≤ 1 year, experience and its square and a gender dummy (Table 3).

The idea of a coherent pay policy applied by the firm to every employer in the company, directly
Table 3
Stability of the inter-firm wage structure across occupations

<table>
<thead>
<tr>
<th></th>
<th>Analyst</th>
<th>Tel. operator</th>
<th>Secretary</th>
<th>Janitor</th>
<th>Chauffeur</th>
</tr>
</thead>
<tbody>
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<td>Analyst</td>
<td>0.64</td>
<td>0.76</td>
<td>0.53</td>
<td>0.63</td>
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</tr>
<tr>
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<td>41</td>
<td>25</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Secretary</td>
<td>0.85</td>
<td>0.90</td>
<td>0.82</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Janitor</td>
<td>0.70</td>
<td>0.82</td>
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<td>0.88</td>
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</tbody>
</table>

* All the coefficients are significant at the 1% level. The second line in each cell refers to the number of observations used.

Source: Computations based on Portugal MESS (1992).

tested here, remains undisputed, as indicated by the remarkable level of the rank correlation coefficients. Furthermore, a particular pattern can be noticed, once controls for human capital have been introduced and very narrowly defined and diverse occupations are considered. In fact, the consistency of the employer behaviour fades away as one moves to occupations further apart in the spectrum of the wages paid or the spectrum of the aptitudes required, namely the schooling level. A figure helps visualise this idea (Fig. 1).

The links between the employer pay policy are strongest for contiguous occupations and for the bottom of the qualification/wage ladder. This result fits well with the morale type of efficiency wage models, according to which the behaviour of the worker, and in particular his/her effort, depend on the norms of the group where he belongs, and will drop in case his wage level is perceived to be unfair.

Analysts' wages, on the other hand, seem to be detached from the pay standard of the company for the rest of the occupations, which could be due to the existence of individual or performance-related pay schemes.

![Diagram](image)

Note: Wider lines refer to stronger correlations between the employer-specific wage effects for both occupations. Source: Computations based on Portugal, MESS (1992).

Fig. 1. Pattern of consistency of the employer wage-setting behaviour.
5. Conclusion

A detailed analysis which considers the distribution of employer-specific wage effects for narrowly defined and very contrasting occupations reveals particular nuances in employers’ wage setting practices that are not detectable otherwise. Beyond stressing the stability of the employer pay standard across its labour force, the existence of clusters of occupations can be highlighted. In particular, the wages for different occupations sharing the bottom of the qualification ladder are consistently defined by the firm, whereas the wages of highly skilled staff tend not to follow the firm’s general rewarding standard.

Acknowledgements

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References