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## Theories of Pay and Unemployment: Survey Evidence from Swedish Manufacturing Firms

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No. 380, 1993

**THEORIES OF PAY AND  
UNEMPLOYMENT: SURVEY EVIDENCE  
FROM SWEDISH MANUFACTURING  
FIRMS**

by

Jonas Agell and Per Lundborg

April 1993

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April 1993

*Theories of Pay and Unemployment:  
Survey Evidence from Swedish Manufacturing Firms\**

by

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\* We are very grateful to the Swedish Association of Industries for generously giving us access to their register of Swedish manufacturing firms. Needless to say, we also owe a great debt to all firms that participated in our survey. We are grateful to Magnus Dahlquist, Jan Michelsson and Jörgen Nilsson for excellent research assistance. A number of persons gave us useful comments on the design of our questionnaire; our special thanks go to Susanne Ackum Agell, Anders Björklund, Pontus Braunerhjelm, Per-Anders Edin, Gunnar Eliasson, Nils Elvander, Nils Gottfries, Carl le Grand, Bertil Holmlund, Christian Nilsson, Eugenia Kazamaki Ottersten, Ola Virin, and Johnny Zetterberg.

## I. Introduction

Few problems have stimulated economic research like those of wage rigidity and involuntary unemployment. Today, one can hardly claim that we lack theoretically consistent explanations for why the labor market evidently does not clear. While the profession has been successful in presenting possible explanations to these phenomena, it has been less successful in presenting evidence that support or reject individual theories. This is hardly surprising, as many of the recently most fashionable theories involve nonobservable variables like effort, asymmetries in information, etc, which makes it difficult – or even impossible – to implement traditional quantitative methods.

In light of such difficulties a growing literature has turned to interview surveys among price– and wage setters for evidence that may help in discriminating between the competing theories; see e.g. Blanchflower and Oswald (1988), Blinder and Choi (1990), Blinder (1991), Kahneman, Knetsch and Thaler (1986) and Kaufman (1984). According to the received view on the proper methodology of economics, such unorthodox evidence carries little weight. Economic research is often considered to be too serious a business to be based on the informed views of firms and households.

However, and as emphasized by Blinder (1991), economics can not well afford to follow such advice: 'The imperfect knowledge we can pick up from interviews and questionnaires should. . .not be compared to some epistemological ideal, but to the imperfect knowledge that nonexperimental scientists can deduce theoretically or glean from econometric studies. By this more reasonable standard of evidence, data culled from interviews certainly look admissible' (p. 91).

While the results of any single interview study should be treated with suspicion, even a skeptic ought to pay some attention to the results if several surveys point in the same direction. Keeping this in mind we have recently completed an interview survey

among personnel managers and senior wage negotiators in a sample of Swedish manufacturing companies. The purpose of this paper is to document our survey, summarize the main findings, and compare our results to those obtained by other researchers in the area. Our focus is quite similar to that of Kaufman (1984) and Blinder and Choi (1990), namely to pin-point the nature and sources of wage rigidity at the firm level. Apart from trying to organize some stylized facts on wage setting in practice, we also try – like Kaufman and Blinder and Choi – to discriminate between alternative theories of sticky wages.

We based our sample on a data register compiled by the Swedish Association of Industries. The register contains about 300 firms, representing the universe of Swedish manufacturing industry. Of the 300 firms that obtained the questionnaire, 179, or 60 percent, answered. (For a comparison, Blinder and Choi, while approximating the industrial composition of New Jersey, approached 37 firms of which 19 agreed to answer. The study of Kaufman is based on interviews with 26 firms situated in Greater London, West Midlands and Wales.) The Swedish Association of Industries has compiled a wealth of background statistics on the firms included in our sample, that may be used for deepened analysis. We have also added data on the unemployment rate in municipalities where the individual firms are located.

Since the early 1980s Swedish wage bargaining has undergone profound changes. The nation-wide bargaining system, involving the confederations of employers and unions, dissolved and bargaining took place only at the level of the firm and of the industry. At the same time, the unions' long-standing 'solidarity wage policy' became more difficult to uphold. Nevertheless, Swedish labor market institutions still differ substantially from those of Britain and the U.S.A, and our a priori guess was that this was to be reflected in our survey. However, while our results suggest that country specific mechanisms relating to unions and labor market legislation have some effect, they also indicate that other, and more general, mechanisms are at least as important.

Like Blinder and Choi, we find strong support for theories based on relative wages and on the motivational role of wages. Even in the highly unionized Swedish economy, efficiency wage considerations seem to apply and, like Blinder and Choi, we find that notions of fairness play an important role. Unlike them, however, we also conclude that models based on adverse selection are not far off the mark. The influence of quality signals also extends beyond underbidders to long-term unemployment and labor market programs – most firms consider job seekers in either of these states as potentially less productive. We receive rather mixed support for the shirking model; while most firms acknowledge that they monitor employees, the penalties against repeated shirking are not those that the shirking model predicts. In line with the labor turnover model, we also find that the risk of quits is negatively correlated with the average wage levels of firms.

Our results suggest that inside forces are important determinants of pay. Firm specific factors like profitability and 'ability to pay' seem to affect wage settlements. This finding points towards a number of rent sharing models but is at odds with the competitive one. The evidence was rather mixed when we confronted respondents with the full chain of argument in the basic insider–outsider story. While the average firm remains skeptical, firms with a large share of white collar workers have a more positive attitude towards the model. To the extent that the cost of replacing a white collar worker is higher than that for a blue collar worker, this is what one should expect.

An important part of our survey concerns underbidding. Unemployment may persist for either of two reasons. Unemployed workers may refrain from underbidding, and firms may be reluctant to hire underbidders. Our evidence suggests that the more interesting issue concerns the behavior of firms; underbidding is not all that uncommon, but firms regularly reject the offer. The most often cited reasons are that hiring an underbidder would violate the internal wage structure, and that underbidders are low quality workers. Such responses point to a number of theories, including

efficiency wage models based on fair wages and adverse selection.

A final observation is that any theory of wage stickiness must account for the fact that workers are heterogeneous. The answers provided often depend crucially on the type of worker involved. Employees' perceived norms of fairness, firms' potential for effort monitoring, and the frequency of underbidding all depend on the type of workers involved.

In the next section, we describe our sample and survey design in some detail. Section III overviews our evidence, while the concluding section takes on the more challenging task of tentatively evaluating the relevance of alternative theories of pay and unemployment. We provide an English translation of our questionnaire in the Appendix.

## **II. Sample and survey design**

The 300 firms included in the register of the Swedish Association of Industries employ approximately 40 percent of all employees in the manufacturing sector. The register is designed to provide a balanced coverage of the manufacturing industry at the two-digit ISIC level. Of the firms included in the register, 27 percent have more than 1000 employees, 32 percent are in the 500–1000 interval, and the remaining 41 percent have less than 500 employees.

We sent out our questionnaire in November 1991, together with an accompanying letter, in which we explained our purpose and asked for the cooperation from either the personnel manager or a senior wage negotiator. We also urged respondents to call in additional expertise if necessary (personnel managers in large firms may not be involved in wage bargaining with blue collar workers). By January 1992 we had received 120 answers. In February 1992 we sent out a reminder, that by early April had resulted in an additional 59 replies. In total we thus obtained a final

sample of 179 firms, implying a response rate of 60 percent.

As a simple check of sample representativeness, we asked firms to compare their overall wage level with that applying in other firms in the same industry. The resulting perceived wage distribution is given in Figure 1. Clearly, there is a tendency towards a high-wage bias – the average firm considers its wage level as somewhat higher than that applying in other firms.

Fig. 1 How does the wage level in your company compare with the one in other companies in the same industry? (Q2a)

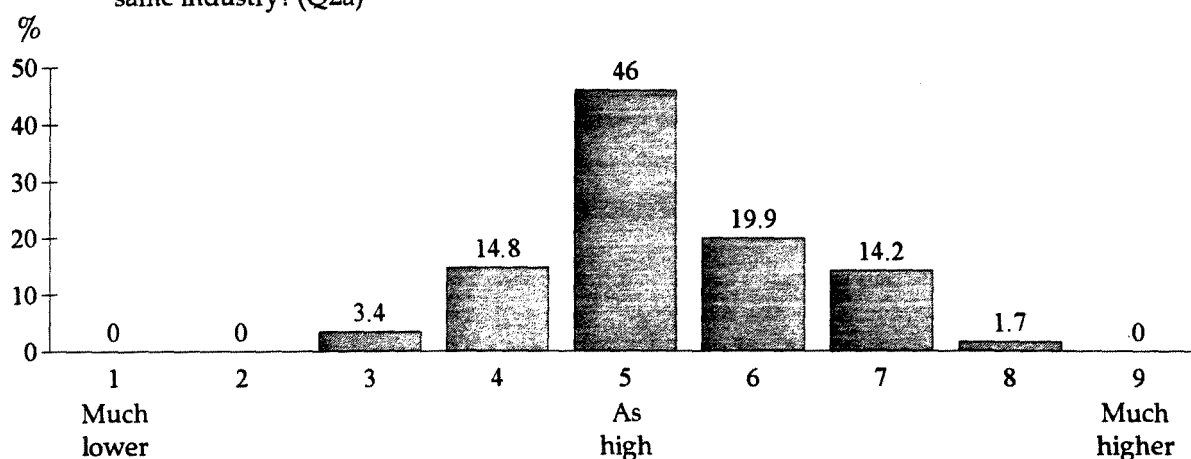


Table 1 provides the industrial breakdown of our sample. The heavy dominance of machinery and equipment is not surprising, given its traditional role in Swedish manufacturing. Table 2 gives the sample distribution by employment. Firms range in size from 38 to 15 800 employees. As in the study of Blinder and Choi, our sample includes a few very large firms; while the median number of employees is 574, the mean is 1 154. Although the original register provides an extensive coverage of large and medium sized firms (note the cluster of firms in the 200–500 interval), it is not representative when it comes to small firms. In our final sample, only 7 firms have less than 100 employees. Table 3 provides a breakdown of the employment statistics. The



share of white collar workers of total employment ranges from .06 to .96 (the head office of a firm in the frozen food business about to reorganize its operation). Our average firm has 436 white collar workers and 718 blue collar workers.

Many firms provided additional fine prints concerning employment structure, unionization and pay system. For a majority of firms, we have a complete personnel classification among four skill categories: (i) senior white collar workers (managers, technicians, etc), (ii) other white collar workers (clerks, salesmen, lower management, etc), (iii) skilled blue collar workers (workers having jobs with special skill requirements), and (iv) unskilled blue collar workers (janitors, store men, etc). The overall unionization rate is 92 percent (97 percent for blue-collar workers, and 83 percent for white-collar workers). This is in sharp contrast to the sample used by Blinder and Choi, where the mean unionization rate is 33 percent.

Table 1. Industry composition of the sample.

Industry	Frequency	Percent
Food, beverages, tobacco	18	10.1
Textiles, wearing apparel, leather	3	1.7
Wood, wood products	14	7.8
Paper, paper products, printing	20	11.2
Chemicals	25	14.0
Stone, clay, glass	12	6.7
Basic metal	14	7.8
Fabricated metal, machinery, equipment	73	40.7
Total	179	100.0

Table 2. Size distribution by number of employees.

No of Employees	Frequency	Percent
Less than 200	22	12.3
200 – 500	54	30.2
501 – 1 000	54	30.2
1 001 – 2 000	26	14.5
2 001 – 6 000	18	10.0
More than 6 000	5	2.8
Total	179	100.0

Table 3. Share of white collar workers in firms. In percent.

Share of White Collar Workers	Frequency	Percent
< 10 %	1	0.6
10 ≤ . < 20 %	24	13.4
20 ≤ . < 30 %	58	32.4
30 ≤ . < 40 %	30	16.7
40 ≤ . < 50 %	32	17.9
50 ≤ . < 60 %	15	8.4
≥ 60 %	19	10.6
Total	179	100.0

In designing the survey we were fortunate to benefit from the advice of a great number of colleagues, who commented on early versions of the questionnaire. While many of our questions are similar to those of Kaufman and Blinder and Choi, others are more specialized, and some also focus on Swedish institutional characteristics. In any mail questionnaire survey, readability and clarity are instrumental.<sup>1</sup> To check this and eliminate unnecessary academic jargon, we implemented a small pilot study in October 1991 involving five firms (taken from the register, but excluded from the final sample). We also asked respondents to identify unintelligible questions. As only one of them complained that we were '...academic theorists, knowing nothing about the real world', we believe that we were reasonably successful.

The format of the questionnaire is clear from the Appendix. Basically our questions take two different forms. A first type of questions concerns factual issues. How many employees does your firm have? In the last year, have unemployed workers knocked on the factory gate offering to work for less than the going wage? How accurately can you monitor the effort of a work group? A second type of questions concerns the considered views of the respondent. By presenting respondents with hypothetical examples designed to illuminate different models we try to pinpoint the relevance of arguments put forth in the theoretical literature.

Sometimes the nature of the question is such that the only required answer is a

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<sup>1</sup> What are the pros and cons of a mail questionnaire survey (like ours), compared to studies based on personal interviews (like those of Kaufman, and Blinder and Choi)? Mail questionnaire surveys are inexpensive (postage is the major cost item), providing ample room for a quite decent size of the sample. By necessity, personal interviews drastically reduce sample size. Furthermore, the anonymity of a mail survey is a safeguard against interviewer bias. However, the other side of the coin is that personal interviews provide a potentially much greater source of information – the interviewer may simply ask the respondent to digress on any interesting issue that turns up during the course of the interview. That in-depth interviews with a few key respondents may be highly fruitful is nicely illustrated by previous work on local wage formation in Sweden by Nilsson (1987) and Elvander (1991) (their focus is very different from our one).

simple yes or no. In other instances a more balanced response is called for; quite often we wanted respondents to indicate the likelihood or frequency of various events on an integer scale from 1 to 9, with 1 indicating that the event is most unlikely, and 9 that it is very likely.<sup>2</sup> Finally, we also have some questions of a more open-ended nature, where the respondent is asked to provide a short answer in their own words. To quantify the answers belonging to this category, we coded the responses according to a few keywords

How reliable is our data? In several cases, i.e. the questions concerning factual issues, there is no reason to assume incorrect answers, and the data can certainly be used for quantitative analyses. Answers based on individuals' judgments should be handled with more care. But again, it is often the firm's perception of the problem that matters, and this is what we capture. Assume, for instance, that firms perceive shirking to be a non-problem. Even if they are all wrong, the perception that the shirking problem does not exist renders the shirking model irrelevant. Whether they are true or false, the popular models of economic agents are important (see e.g. Shiller (1989), for an extensive treatment of the role of popular models in asset markets). A more basic problem is due to the fact that many of our questions deal with rather delicate labor-management relations. As a consequence, respondents may have an incentive to dress-up their answers; even if a personnel manager perceives shirking to be a problem, it might be hard to admit it. To minimize the risk of such strategic considerations, we were careful to promise all respondents that their replies would be given a confidential treatment, and that the purpose of our survey was 'strictly scientific'.

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<sup>2</sup> By doing so we believe that we obtain much more information than if simple Yes/No answers were required, as in the Blinder and Choi study. For example, when asking about shirking model, it seems more meaningful to ask about the frequency of shirking in a firm, (a question which allows for a balanced response) than to ask if shirking sometimes occur (a question which requires a yes/no response).

Before proceeding to the evidence, a word about the business cycle is in order. Only a few years ago many respondents would have dismissed our questions as unintelligible or at best irrelevant. In a situation when a lack of manpower is the key headache of personnel officers, much patience is certainly required to spend an hour thinking about the structure and causes of unemployment. The Swedish krona was devaluated with 10 percent in 1981, and by an additional 16 percent in 1982. Eight years of brisk GDP growth followed, reducing unemployment to an unprecedented low of 1.4 percent in 1989. The problems of an overheated economy came to dominate the public debate, while the unemployment issue more or less vanished from the agenda.

By the time we conducted our survey all that had changed. By the end of 1990 the Swedish economy headed for its deepest recession since the 1930s. Decreased international competitiveness and slackened domestic demand struck hard on all sectors of the economy. The traditional policy responses were considered – and rejected. Expansion of public sector employment ran counter to the government's long-term goal of trimming the large public sector, and further devaluations would undermine the credibility of the government's anti inflationary stance. As a consequence the burden of adjustment was shifted to the labor market and the wage bargaining institutions.

By early 1992, when we conducted our survey, the overall unemployment rate had risen to 4.1 percent. The fall in industrial production and industrial employment was more dramatic. Compared to the previous peak, industrial output was down by about 14 percent and industrial employment by about 17 percent. The sharp business downturn is clearly evident in our material. Among 179 responding firms, no less than 68 percent reported that they had had redundancies over the last year.

### III. An overview of the evidence

#### A. Underbidding

Unemployment problems would not arise if laid off workers would underbid those employed and if firms would hire the underbidders. A first set of questions focused on underbidding. Do unemployed workers ever offer to work for less than the going wage rate, and, if so, will the firm employ them? In a highly unionized economy as the Swedish one, it is easy to think of reasons why underbidding should be more or less nonexistent. With an overwhelming majority of blue collar workers covered by collective bargaining agreements (protected by Swedish private law) extending also to nonunion workers, many firms that attempt to hire underbidders will end up in the labor court. Knowing this, unemployed blue collar workers may not find underbidding worthwhile. A related argument is that unions and legislation simply codify existing social norms. If established community norms of fairness rules out underbidding, they will serve as an effective constraint on the unemployed (see e.g. Solow (1990)).

Our first question on underbidding (question 2.b in the Appendix) was the following:

Does your company presently have external job applicants (applying either directly or via job agencies) that offer to work for less than the going wage for employees with the same qualifications and experience? (The question should be answered also if your company presently has no vacancies and if local union or collective bargaining contracts prevent these people from being hired.)

Much to our surprise, underbidding does not appear to be all that uncommon. Underbidding also seems to be more of a white-collar phenomenon: Nine percent of the respondents (16 firms) reported underbidding blue-collar workers, and 13 percent (23 firms) did the same for white collar workers. We also asked firms about the occurrence of underbidding in the past (question 2.c), and found a quite similar pattern. While

underbidding is not a very frequent phenomenon, almost 43 percent of the firms had encountered blue collar workers offering to work for less than the going wage, and 53 percent had encountered white collar workers seeking job in the same way. As very low unemployment rates used to characterize Sweden (before the present crisis, unemployment never exceeded 3.5 percent during the post World War II period), we find these figures unexpectedly high.

While underbidding is a necessary prerequisite for flexible wages in the downward direction, it is clearly not a sufficient one. Firms must also be willing to hire them, an occurrence which seems less likely (question 2.d). Among the firms that had at least sometimes in the past been approached by underbidding blue collar workers, 93 percent had always or nearly always rejected the offer (those answering with 1, 2 or 3 on our integer scale). Among the firms that had been approached by underbidding white collar workers, 84 percent had always or nearly always rejected the offer. Unlike Solow, who concludes that the absence of wage under cutting is a key fact of life that should be accounted for in models of unemployment (Solow (1990), p. 38), we are left with the conclusion that the more interesting question concerns the behavior of firms: While unemployed workers do knock on the factory gate to a surprising extent, considering the high rejection rates, firms keep it locked.

We asked all firms that always rejected underbidders why this was so (question 2.e). The most often cited reasons were – see Table 4 – that hiring underbidders would violate the firm's wage policy and create internal inequities (38 percent of the firms gave this answer), and that underbidders were considered to have inferior skills (34 percent). These findings do point towards several arguments proposed in the literature (we will return to these issues later on). The idea that firms care about their internal wage structure is central to both management literature and fair wage theorizing, and is well in line with the predictions of the insider–outsider model. The idea that a willingness to work for less than the going wage signals low productivity is central to

efficiency wage models of the adverse selection variety.

Table 4. Attitude towards underbidders: Percentage of firms citing the factor as a reason for never hiring job seekers willing to work for less than the going wage.

Cited Reason	Frequency	Percent
· No vacancies, lack of meaningful work assignments	5	10.6
· Not possible because of negotiated wage contract	5	10.6
· Job seekers are considered to have inferior skills	16	34.0
· Hiring an underbidder violates firm wage policy, creates internal inequities	18	38.3
· Other reasons	3	6.5
Total	47	100.0

Note: Question 2.e in the Appendix was put to all firms that claimed that they a) had encountered underbidders, and, b) never hired them.

We obtained less support for the plausible view that legislation and collective bargaining agreements is an important check on the hiring of underbidders; only 11 percent of the firms referred to the going wage contract as an important factor. In the case of white collar workers, this should come as no surprise. As there is no set salary structure (apart from that prescribed by habits and conventions), firms have considerable discretion in setting entry salaries for new employees. There are also ways to circumvent the collective bargaining agreement (which applies to all blue collar workers), for example to reclassify a job applicant into a lower job – and hence wage – category. However, firms' willingness to try such measures is likely to depend on the strength of the local union. As our correlation analysis makes clear, the more unionized



the firm is the smaller is the likelihood that an underbidder will be hired. (Underbidders, however, do not seem to discriminate between more or less unionized firms; there is no correlation between unionization and the frequency of underbidding.)

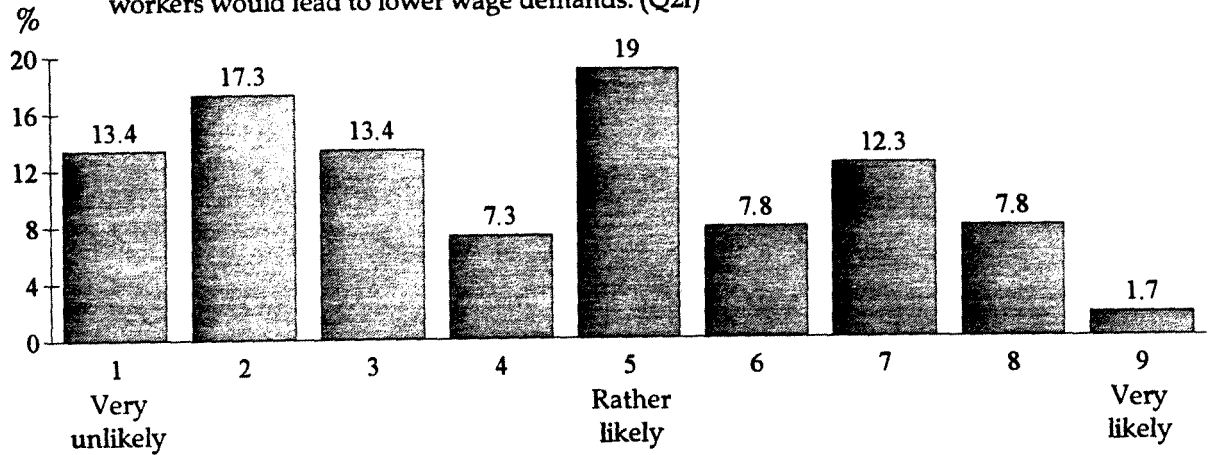
#### B. Job security legislation and insider–outsider effects

According to many observers, labor market legislation and the structure of Swedish wage bargaining institutions are to blame for many perceived problems in the labor market. Our next set of questions focused on these issues. The Swedish Employment Security Act (LAS) provides employees with far reaching protection against unfair dismissal (as well as advance notice when laid off and redundancy payment). In principle, the only legal grounds for dismissal are redundancies and severe personal neglectance. Can such legal restrictions have anything to do with nominal wage stickiness? We confronted firms with the following statement (question 2.f):

If the laws were changed so that your company was given a greater opportunity to fire employees, the threat of being replaced by unemployed and cheaper workers would lead to lower wage demands.

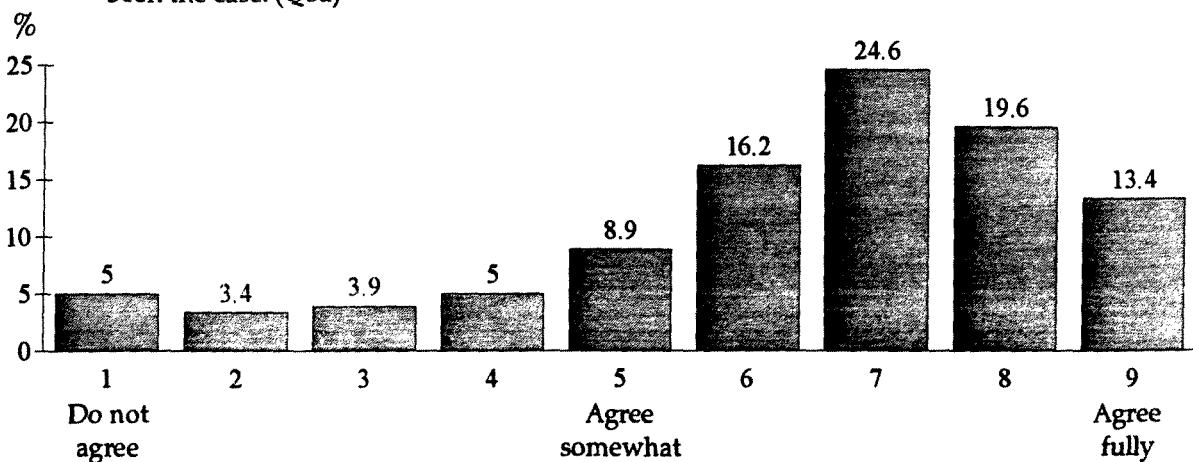
Judging from Figure 2 the evidence is rather mixed. Although about 13 percent of the firms considered the statement as very unlikely, and an additional 38 percent held it as rather unlikely (i.e. respondents answering with 2, 3 or 4 on our integer scale), a minority did agree. On balance, however, there seems little reason to believe that LAS is a very important determinant of nominal wage rigidity. For a majority of firms, LAS may simply serve to formalize established norms of proper conduct – replacing incumbent workers with unemployed underbidders was probably a bad idea even before the introduction of LAS.

Fig. 2 Swedish labor market laws prevent firms from firing employees in order to replace them with external applicants willing to work for lower wages. Indicate the plausibility of the following statement: If the labor market laws were changed so that your company was given more discretion in firing employees, the threat of being replaced by unemployed and cheaper workers would lead to lower wage demands. (Q2f)



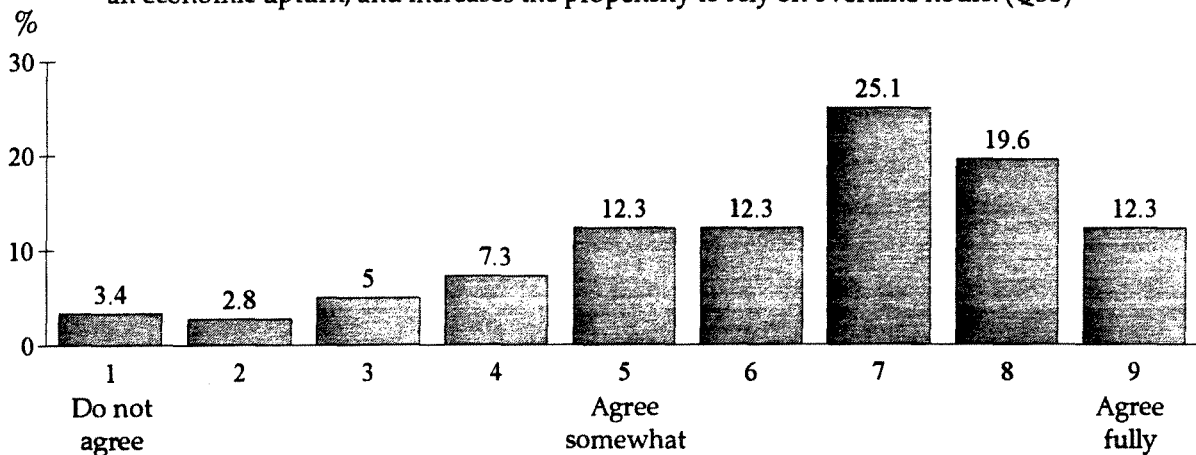
Most firms appear to associate LAS with higher recruiting costs – a substantial majority agreed that LAS made them more careful in screening job seekers (Figure 3). High recruiting costs may also affect the cyclical movement of employment; cf. Bentolila and Bertola (1990) and Bertola (1992). In an economy with high recruiting

Fig. 3 Indicate the accuracy to your company of the following statement.  
- LAS makes the firm more prone to scrutinize job applicants' abilities than would else have been the case. (Q3a)



costs, firms are more likely to adjust to a business upturn by overtime work rather than by new hirings, which in turn implies a lower volatility of employment over the business cycle. When we asked about this, we obtained a quite unequivocal response in the affirmative (Figure 4). These responses are well in line with previous econometric studies on the effects of LAS (cf. Holmlund (1980), (1981)).

Fig. 4 Indicate the accuracy to your company of the following statement.  
- The commitments associated with LAS lowers the firm's propensity to hire more people in an economic upturn, and increases the propensity to rely on overtime hours. (Q3b)

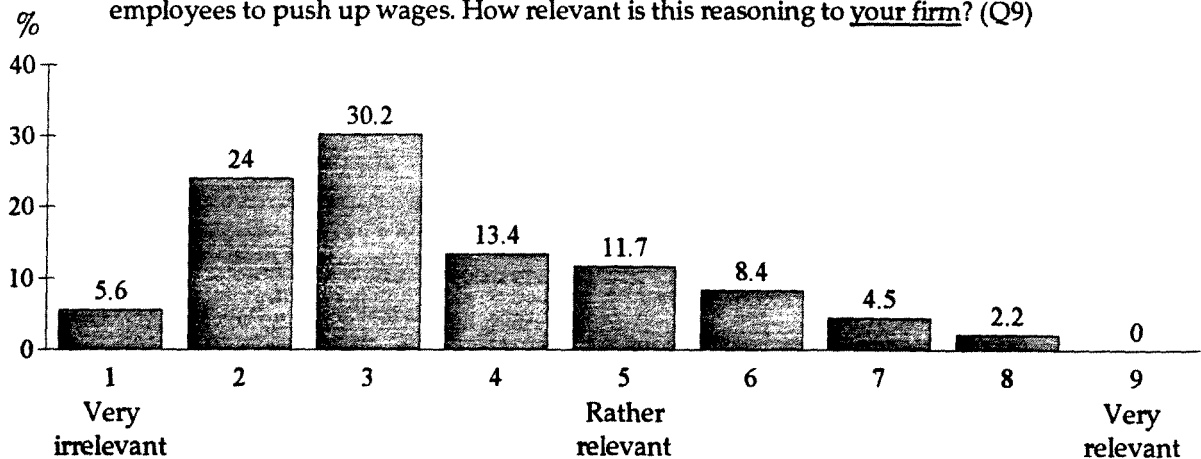


Costly labor turnover does not in itself constitute evidence in favor of any particular model of wage stickiness. However, such costs do belong to the premises for both the insider–outsider model and the labor turnover version of the efficiency wage model, theories that set out to explain real wage rigidity. Thus, while the Swedish employment security law may have little to do with nominal wage stickiness, it may have something to do with real wage stickiness. To examine this we introduced managers to the labor turnover version of the insider–outsider model with the following question:

One theory to explain why wages may end up above the level that gives full employment is based on the idea that hirings and firings are costly to firms. These costs (associated with employment interviews, advertisements, retraining, redundancy payment, etc) make firms prone to reduce labor turnover and keep workers already employed. This situation can be used by employees to push up wages. How relevant is this reasoning to your firm?

Firms were not particularly enthusiastic about this mechanism (Figure 5). While costs of labor turnover do seem to be of importance, few firms seem to think of the insider–outsider story as an appropriate way of modeling their economic effects. We found, though, a strong positive correlation between the attitude to the insider–outsider mechanism and the share of white collar workers. Firms with a large share of white collar workers have on average a much more positive attitude to the mechanism (the average response for the 15 firms with the smallest share of white collar workers was 2.9, for the 15 firms with the largest share of white collar workers it was 4.9). To the extent that it is more costly to employ and train white collar workers than blue collar workers, this is what one would expect.

Fig. 5 One theory to explain why wages may end up above the level that gives full employment is based on the idea that hirings and firings are costly to firms. These costs (associated with employment interviews, advertisements, retraining, redundancy payment, etc) make firms prone to reduce labor turnover and keep workers already employed. This situation may be used by employees to push up wages. How relevant is this reasoning to your firm? (Q9)



### C. Central versus local wage bargaining

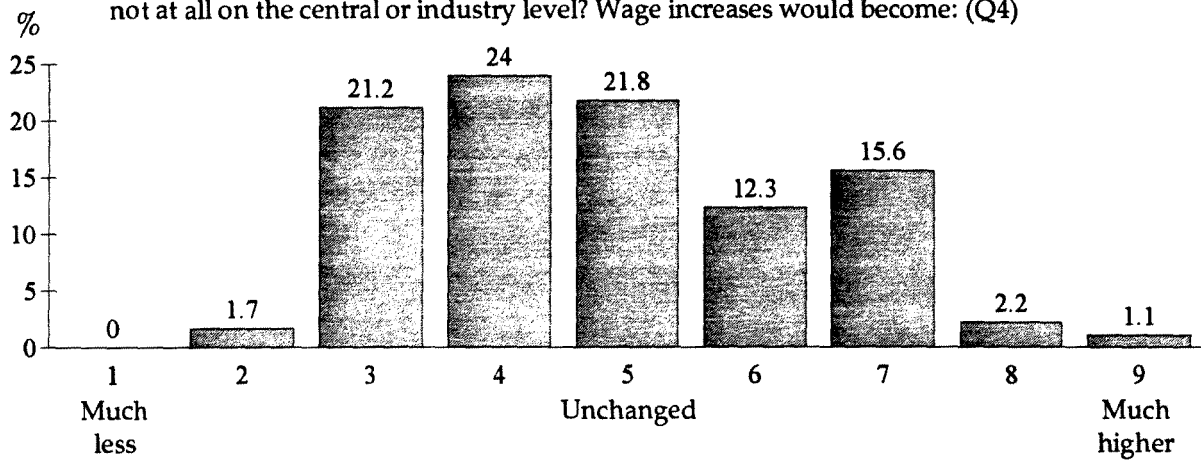
An important issue in the policy debate concerns the structure of wage bargaining institutions. According to many foreign observers, the centralized Swedish bargaining system is conducive to low unemployment, since central unions supposedly internalize any negative macroeconomic externalities from excessive wage claims (see e.g. Layard, Nickell and Jackman (1991)). According to many Swedish observers, the same system is likely to produce wage inflation and probably also unemployment, since it involves at least two layers of wage increases; first centralized industry level bargaining sets the floor for national wage increases, and then local level bargaining between individual firms and local unions means additional pay increases (see e.g. Lindbeck (1993)). This latter line of reasoning lies at the heart of recent proposals from the Swedish Employers' Federation (SAF) to limit wage bargaining to the local level. We confronted firms with the following question (question 4):

An important issue in the discussion on wage formation is how the Swedish bargaining system affects wage costs. How do you think that wage increases in your company should be affected if the bargaining system was changed so that negotiations only took place at the local level (i.e. directly between the firm and the local union with its own right to call a strike) and not at all on the central or industry level?

There was no clear consensus on the benefits from a move from the current system with both central and local bargaining to a system with only local bargaining. It is indeed hard to escape the conclusion that firms are much less convinced about the advantages of decentralized bargaining than their own central federation (Figure 6). Of 179 firms, 84 thought that wage increases would go down, 39 believed that they would be unchanged, and 56 answered that they would be higher. There was also a marked difference between small and large establishments; small and medium sized firms were more likely to associate decentralized bargaining with higher wages. The correlation

coefficient between firm size and the answer to question 4 in the Appendix is  $-0.23$ . (The average number of employees of the firms that thought that wage increases would go down is 1660, for those that believed that wage increases would go up it is 764.)

Fig. 6 An important issue in the discussions on wage formation is how the Swedish bargaining system affects wage costs. How do you think that wage increases in your company should be affected if the bargaining system was changed so that negotiations only took place at the local level (i.e., directly between the firm and the local union with its own right to call a strike) and not at all on the central or industry level? Wage increases would become: (Q4)



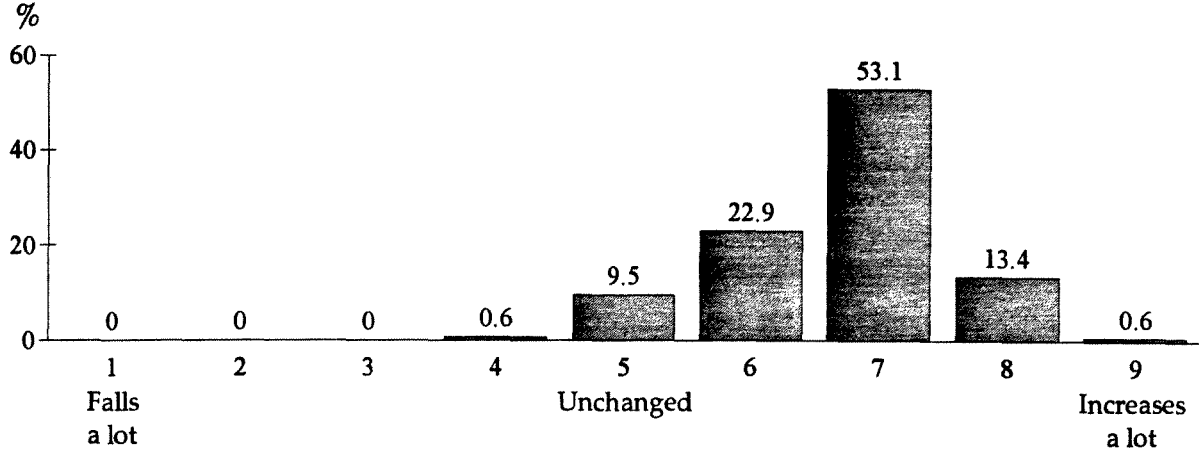
#### D. Effort, monitoring and shirking

Although the Swedish economy is highly unionized, previous econometric studies indicate that efficiency wage considerations still apply (see Holmlund (1992), Arai, (1990), and Ackum Agell, (1993)). This is of course what we may expect: Even if firms can not unilaterally set an optimal efficiency wage satisfying some version of the Solow-condition, the wage agreed upon by firm and union may still influence firms' ability to motivate, recruit and retain workers. A number of questions were designed to shed further light on these influences.

An implication common to most efficiency wage stories is that outside opportunities affect effort on the job. Most firms accepted this contention. An overwhelming majority of firms thought that an increase in the local unemployment

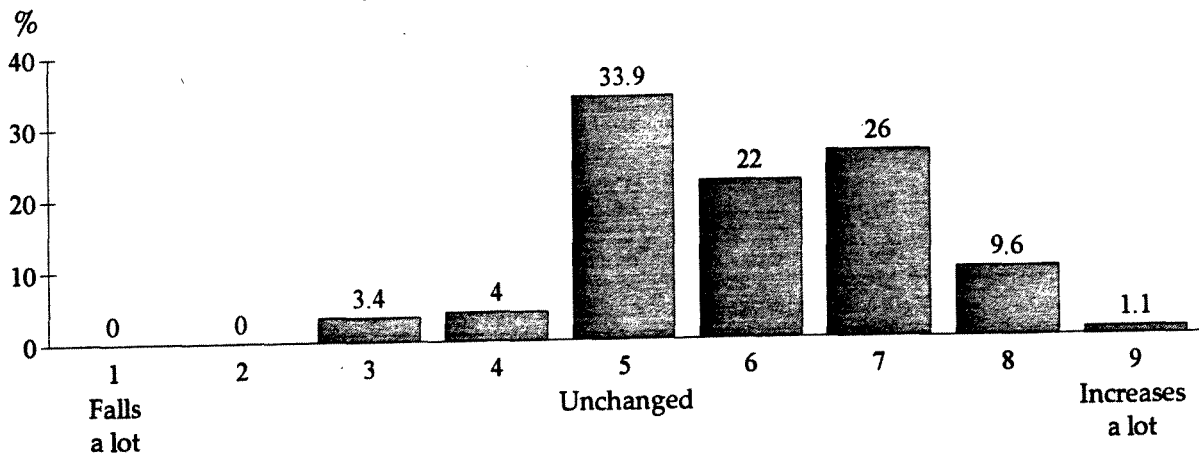
rate would stimulate work effort (Figure 7). A substantial majority also believed that

Fig. 7 How do you think that the work effort of your employees is affected if local unemployment was to rise? (Q7c)



the same thing would happen if unemployment benefits were to be lowered (Figure 8). These responses are compatible with both a fair wage and a shirking interpretation of the efficiency wage relationship. According to the fair wage/gift exchange model, higher unemployment or lower benefits stimulate effort since workers become more

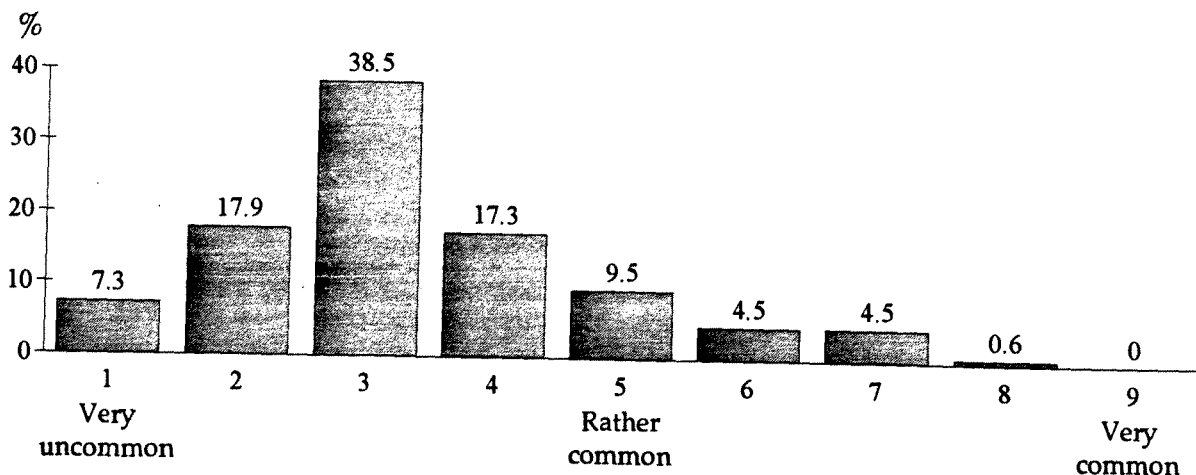
Fig. 8 How do you think that the work effort of your employees is affected if unemployment benefits were to fall? (Q7d)



'grateful' to be employed. According to the shirking model, higher unemployment or lower unemployment benefits increase effort, as they raise the economic penalty of being caught as a shirker.

The shirking model rests on three premises. First, workers dislike effort on the job. Second, it is costly to monitor effort. Third, there must be some economic penalty for workers that are detected as shirkers. When we confronted firms with these issues we obtained a rather mixed picture. While most firms acknowledged that employees sometimes shirk on the job, shirking does not seem to be a very common phenomenon (Figure 9). (There is a clear skill-related pattern. Firms with a high share of white-collar workers are on average less likely to identify shirking as a problem. The correlation coefficient between white-collar share and the answer to question 7.a was  $-0.21$ .) One reason for this, well in line with the shirking model (remember that the equilibrium of the Shapiro-Stiglitz model is a no-shirking one), may be that firms do

Fig. 9 How common is it for your employees to provide less effort than expected (to shirk)? (Q7a)



seem to go to some length to monitor the work effort of their employees. When asked, "To what extent does your firm monitor the average work effort of a group of employees?", most firms answered with 5 or above (question 6.a). We may also note



that the extent of monitoring seems to depend on the type of workers involved; blue-collar workers are on average more intensely monitored.

Matters became more puzzling when we turned to the penalties invoked on employees caught shirking. When we asked, "Which is the most common measure taken against employees who **repeatedly** are caught shirking?", we found that a simple verbal rebuke (which presumably imposes a psychic – but not monetary – cost) is the by far most common penalty (Figure 10.a–d). Penalties with an explicit economic content were very rare; close to 70 percent of the firms would never fire a detected shirker, and an additional 20 percent answered that they would almost never dismiss a shirker. Another 63 percent ruled out wage cuts, and only 14 percent answered by a figure greater than 2.<sup>3</sup> Such responses are not easy to reconcile with the shirking model. If a majority of workers really derive utility from shirking, we would expect these lax penalties to come hand in hand with incentive problems on a massive scale, no matter the extent of monitoring.

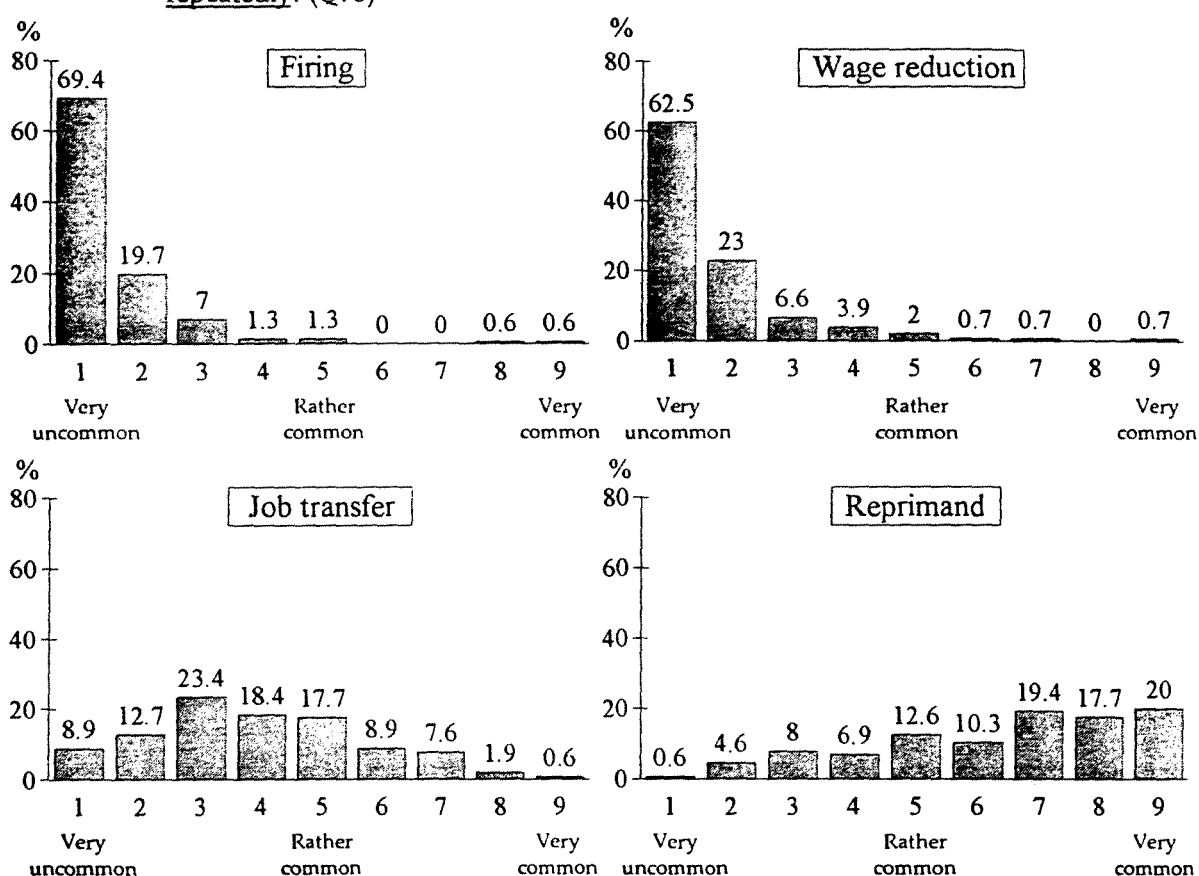
#### E. Relative wages

An old keynesian theme is that workers' are concerned about relative wages, and that this may create involuntary unemployment. This theme reemerges in many modern theories of unemployment. As pointed out by Summers (1988), most efficiency wage arguments ultimately boil down to the idea that relative wages (within or across establishments) affect labor productivity.

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<sup>3</sup> The absence of harsher penalties is not surprising. The Swedish law on unfair dismissal means that firms may find it difficult to fire employees even in cases involving severe personal misconduct. Previous rulings of the labour court also indicate that the court is likely to grant smaller establishments greater discretion than larger ones (it is more dangerous to shirk in a small firm). We tested for this but found no correlation between firm size and the frequency of either form of penalty.

Fig. 10 a-d Which is the most common measure taken against employees who are caught shirking repeatedly? (Q7b)



Previous survey studies, like Kahneman et.al. (1986) and Blinder and Choi (1990), find strong support for the importance of relative wages and fair wage considerations. Indeed, Blinder and Choi conclude that wage fairness plays a major motivational role in labor markets, in line with ideas put forward by Okun (1981) and Akerlof (1982). In previous survey studies, questions of money illusion, the costs to the firm of a bad reputation etc. are in focus. Our focus here is a little bit different as we concentrate on the extent of intra personal comparisons, who the individual compares her wage with, etc.

There was much consensus that employees care about relative wage levels, either directly or through their union representatives (Figures 11.a-d and 12.a-d). However, the standard of comparison seems to differ between different types of

Fig. 11 a-d How common is it that your employees (directly or via union representatives) compare their wage with the wage of other employees within your company in wage negotiations? (Q8a)

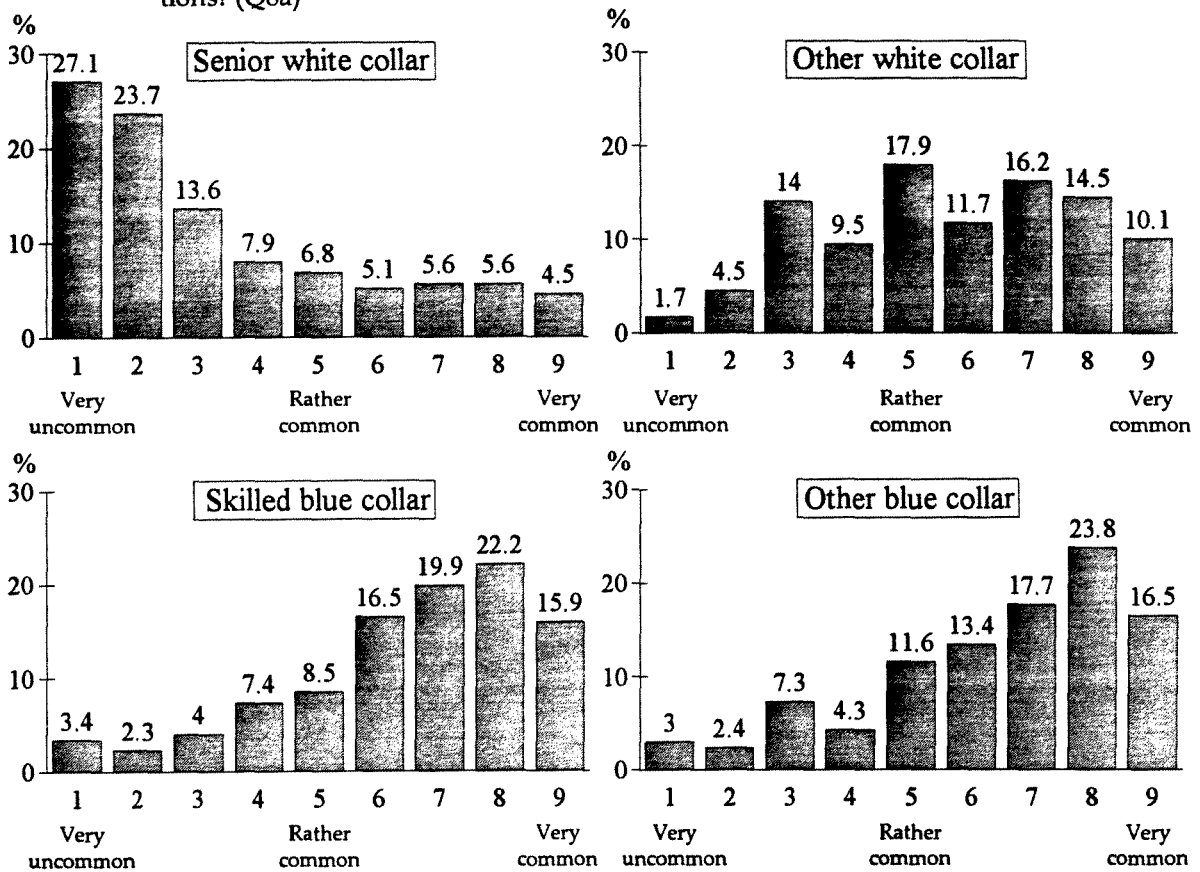
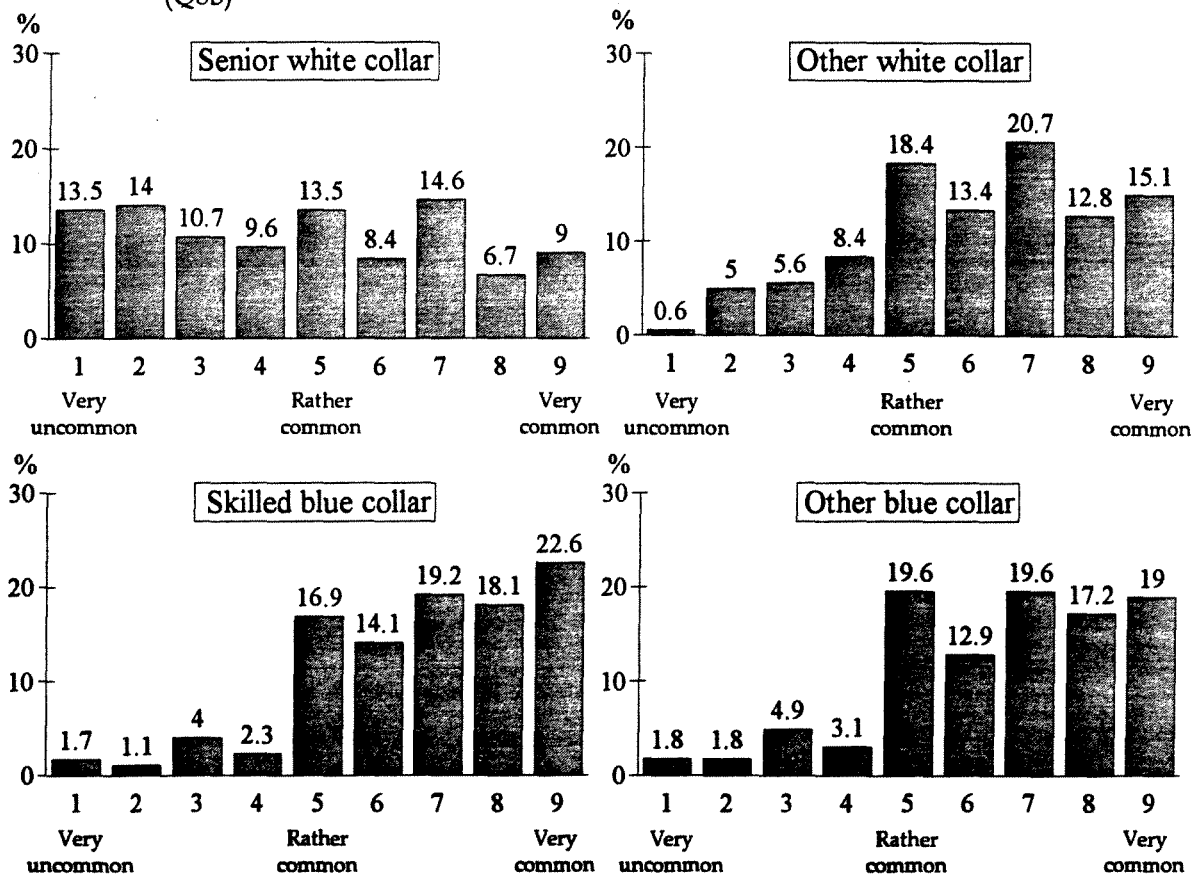


Fig. 12 a-d How common is it that your employees (directly or via union representatives) compare their wage with the wage of other employees in other companies in wage negotiations? (Q8b)



employees. Blue collar workers apparently compare wages both within the own firm and across firms; intra- and inter-firm wage relativities are equally important. White collar workers in general, and management in particular, put a relatively greater emphasis on the inter-firm wage structure. This may be partly explained by the fact that many white collars, particularly those in higher positions, have only a few other persons in the same establishment to compare with.

Employees' standard of comparison seem to extend well beyond other groups of employees. Most firms acknowledged that local unions pushed for higher wages in times of high company profits (question 8.c). We also asked whether high dividends lead to higher wage claims (question 8.d), but this does not seem to be the case – while local unions care about profitability, they appear to see through the corporate veil.<sup>4</sup>

What are we to make out of these findings? The observation that relative wages figure prominently in local wage bargains is not by itself a very strong indication of any particular model of the labor market. Indeed, even if the simple competitive model was the correct one, we could not rule out responses in line with those described above. In the absence of a walrasian auctioneer, the way to infer the going (competitive) wage rate is presumably to look at wages payable in neighboring firms before quitting a firm that pays non-competitive wages. However, if this competitive explanation for the importance of relative wages was true, we would expect relative wage comparisons to be more important in low-wage firms than in high-wage firms. This does not fit the facts – relative wage comparisons seem equally important in all firms (there are no significant correlations between the overall wage level of the firm and the answers to questions 8.a and 8.b).

Why should profits affect wage claims? In a competitive labor market, we

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<sup>4</sup>This result is of some interest from a policy point of view. On a few occasions during the 1980s, the Swedish government tried to stem the demand for higher wages by a legislated ban on dividend increases. For such a policy to work, however, workers must not be able to see through the corporate veil.

would not expect a microeconomic link between profitability and wage formation. There are, however, at least two alternative (non-walrasian) ways to motivate such a relation (see e.g. Carruth and Oswald (1989)). The first one is based on the idea that employees have interdependent preferences, and care, for reasons of equity or fairness, about the remuneration of capital owners. The second hinges on the idea that firm and union bargain over rents, and that relative bargaining strength determines the extent of rent sharing.

What happens if the firm tries to uphold an 'unfair' wage structure? We asked firms to assess the likely costs in terms of quits or lowered effort (question 8.e). For senior white collar workers, the risk of quits seems to dominate the risk of reduced effort. The same pattern, though less marked, applies for other white collars. For blue collar workers, the costs of unfairness in wage setting may be both in terms of quits and in terms of lower effort. A comparison across skill groups indicates that white collar workers are somewhat more inclined to quit than blue collar workers. From these responses, it is hard to escape the conclusion that firms attach some importance to fairness aspects. Relative wages are important to employees, and the costs of an unfair wage structure may be high. Another observation, in line with the labor turnover version of the efficiency wage model, is that the risk of quits is negatively correlated with firms' overall wage levels.<sup>5</sup>

#### F. Nominal wage stickiness

As suggested by the findings of Blinder and Choi, concerns over relative wages (expressed either directly or through union pay policy) may have much to do with

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<sup>5</sup> This correlation is in agreement with the findings of Edin and Zetterberg (1989). Using Swedish data and controlling for compensating wage differentials, they conclude that industry wage premiums reduce labor turnover.

nominal wage stickiness. To illuminate this issue we asked firms a question very similar to theirs (Blinder and Choi, page 1006):

One reason for the fact that nominal wages seldom falls may be that wage relativities might be altered. Employees want to keep a certain wage hierarchy for different jobs, and reject wage cuts since traditional wage differences may be altered. How likely is this explanation for the fact that wage cuts seldom occur?

Although suggestive, our evidence is still not as clear cut as that of Blinder and Choi. Sixteen of their 19 managers responded that relative wages are important deterrents to nominal wage cuts. On our integer scale the most common answer is fairly probable (42 firms answered with 5). Seventy one firms appear distinctly keynesian (those answering with 6 or above), while 63 firms are more skeptic (those answering with 4 or below).

When we rephrased the question a bit, choosing a lower and more concrete level of abstraction, a more distinctly keynesian picture emerge. Would an identical percentage wage cut for all employees in the own firm be acceptable to save jobs in a crisis? Specifically, we asked how large a share of the overall number of jobs in the firm that must be at stake for a proportionate wage cut to be accepted by all employees (question 8.g). More than 80 percent of the firms responded that at least 50 percent of the jobs must be threatened if an across the board wage cut is to be accepted (Table 5). To most firms, it does not seem possible to suggest proportionate wage cuts unless a major share of the jobs in the firm is at stake. Nine percent of the firms answered that not even a closing down of the firm would make their employees agree to a uniform wage reduction.

Table 5. 'Assume that your firm proposes an identical proportional wage cut for all employees so that the wage hierarchy is maintained. What share of the jobs must be threatened for the cut to be accepted?'

Share of jobs that must be at stake	Frequency	Percent:
Less than 10 %	2	1.2
$10 \leq . < 50$ %	31	17.8
$50 \leq . < 100$ %	90	51.7
100 % (closing down)	36	20.7
Not even a threat of closing down is enough	15	8.6
Total	174	100.0

Our simple correlation analysis shows that wage cut resistance is negatively related to the share of white collar workers, and positively related to the unionization rate. As these latter variables are highly correlated, we ran a simple regression in search of causal dependence.<sup>6</sup> The results suggest that unionization does not matter, but that the share of white collar workers has some explanatory power.

#### G. Inside versus outside determinants of pay

To check some of our previous reasoning we simply asked firms to cite the most important factors that normally determine firms' pay settlements (question 8.h). Ability to pay (profits and productivity improvements) was recorded as the single

<sup>6</sup> We regressed the reply given to question 8.g on unionization rate, share of white collar workers, a set of industry dummy variables and the overall wage rate of the firm. The union variable is not significant, while the wage variable and the share of white collar workers are significant on the five and ten percent levels, respectively.

most important factor (Table 6). Various indicators of relative wages came in second place. Most firms did not specify which relative wages they had in mind, but for those that did we may conclude that wages in other firms in the region is a more important factor than wages in other firms in the same industry. Fifteen percent of the firms answered that wages in the region mattered, 11 percent that wages in the industry mattered and 38 percent did not specify how the relative wages mattered. On third place was the influence of the centrally negotiated wage agreement, while the "labor market situation" showed up fourth.

Table 6. 'What are the most important factors that normally affect the wage level of your firm?'

Cited factor	Frequency	Percent
Ability to pay	115	66
Centrally negotiated wage agreement	66	38
Concern policy	13	7
Labor market situation	36	21
Relative wages	102	59
Miscellaneous	15	9

This mixture of external and internal influences on pay determination is quite typical of other studies in the area (see e.g. Blanchflower and Oswald (1988) and the evidence cited by Layard, Nickell and Jackman (1991), Chapter 4). Thus, the finding that ability to pay ranks so high should come as no surprise (it is of course also perfectly in line with our finding that employees often refer to profits in local wage negotiations). It does, however, cast strong doubt on the competitive model of the labor market; according to the simple demand and supply model, internal factors like



ability to pay should have no influence on wages.

In a recent econometric study, Holmlund and Zetterberg (1991) reach a conclusion opposite to ours, namely that inside forces in Swedish wage determination are weak. One possible explanation for these contradictory findings, apart from the different methodological approaches, is that Holmlund and Zetterberg rely on an estimation period, 1965–1985, dominated by highly centralized (nationwide) pay setting. As the central bargain for the larger part of their period followed the doctrine of solidarity wage policy, which implied that all wage differentials due to differences in profitability across firms should be eliminated, inside forces like ability to pay should play a lesser role. However, as the nationwide bargaining system dissolved in 1983, the scope for solidarity wage policy was undermined. Our survey evidence may then simply reflect the move to a new bargaining system, more conducive to rent sharing.

#### H. Adverse selection and stigmatization

Asymmetric information is a catch-word in much modern theorizing. That firms may pay wages above market clearing levels due to unobservable productive characteristics among workers is central to the adverse selection model. We have already found that underbidders often are considered to have inferior skills – a finding which seems to hold promise for the model. To further explore this possibility, we confronted firms with a number of hypothetical examples, designed to shed light on signaling mechanisms in the labor market. Like Blinder and Choi we asked:

Assume that two persons are competing for the same job. From interviews, experiences, education, etc., both seem equally qualified. One of the two accepts the wage offered by the firm, while the other demands a higher wage. Does the firm consider the latter, who demands a higher wage, to be potentially more productive?

Ten percent of the firms answered that they would never consider a high wage claim as a signal of high productivity. Among the remaining 90 percent, none agreed that they always or almost always would consider a high wage claim to be such a signal. Still, the most common response was 'sometimes' (number 5 on our scale). We look upon this evidence as at least broadly consistent with the adverse selection model, and at odds with the findings of Blinder and Choi, who view their own results as "...damaging evidence against the adverse-selection model..." (p. 1007). A closer look at their survey suggests why different conclusions are reached. Blinder and Choi demanded a simple yes or no to this question, and faced with these options, none of their 19 firms answered in the affirmative. It is quite plausible, that had they allowed for a more balanced answer a different pattern could have emerged.<sup>7</sup>

Unobservable productivity differences is a premise for the adverse selection model and to shed more light on the model, we confronted firms with two additional examples. In the first example, two workers are assumed to differ only by the fact that one of them has been unemployed for some time. In the second example they differ only in that one of them has been in a labor market program for some time. In neither case do the two workers differ in measurable productivity. In either case we obtained quite similar answers. Many firms sometimes seem to view unemployment and participation in labor market programs as signals of low productivity (Figures 13 and 14).

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<sup>7</sup> Given the *ceteris paribus* nature of the question, a "yes" or "no" may seem to be the natural options, rather than an integer scale from 1 through 9. However, with detailed answers we may capture the possibility that firms sometimes change policy. For instance, the likelihood that an unemployed person is a lemon may be higher in times of low unemployment than when unemployment is high.

Fig. 13 Assume that two persons are competing for the same job and that both accept the wage offered by the firm. From interviews, experiences, education, etc., both seem equally qualified. However, one of the two is unemployed and has been so for some time. Does the firm consider him to be potentially less productive? (Q10b)

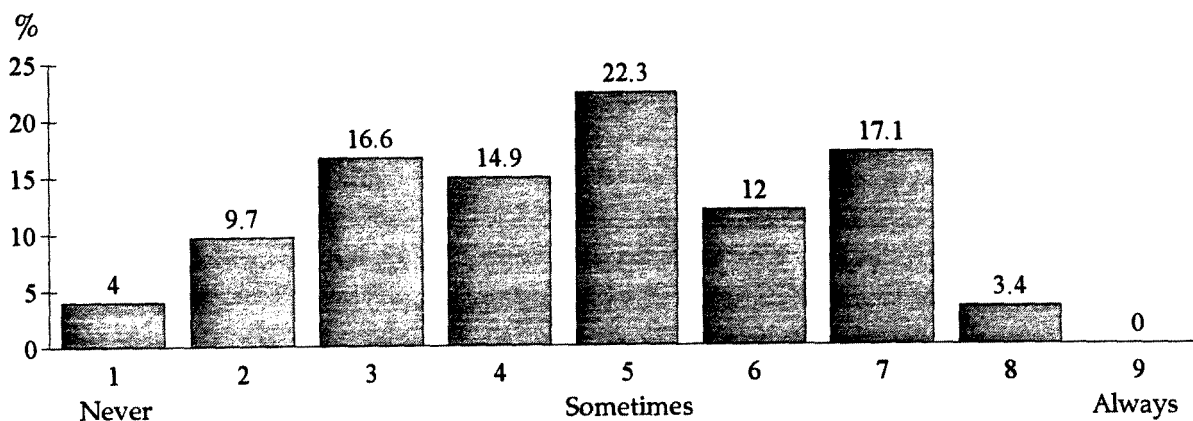
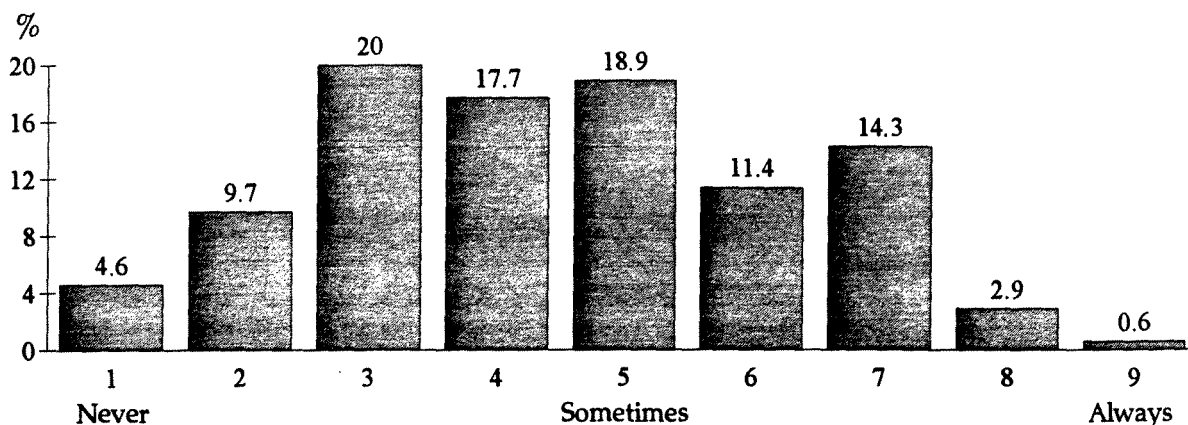


Fig. 14 Assume that two persons are competing for the same job and that both accept the wage offered by the firm. From interviews, experiences, education, etc., both seem equally qualified. However, one of the two has been enrolled in a labor market program for some time. Does the firm consider him to be potentially less productive? (Q10c)



#### IV. Conclusions

It is of course difficult, if not impossible, to prove or disprove individual theories based on interview surveys. As is always the case, questions involving judgmental issues invite a certain degree of arbitrariness. Furthermore, also when respondents agree on the importance (or irrelevance) of a certain argument, it is sometimes difficult to discriminate between theories — quite often we find support for an economic mechanism or relation which is crucial to several labor market theories. Still, a relatively consistent picture seems to emerge.

The theories that we want to illuminate are the competitive model, models based on rent-sharing, and efficiency wage models (shirking, turnover, adverse selection and fair wages). We also want to shed light on arguments emphasizing the role of institutions (like the bargaining system and labor market laws). To what extent are these models consistent with our facts?

Swedish wage setting institutions underwent major changes during the 1980s. The abandoning of the solidarity wage principle and a less centralized bargaining framework can a priori be expected to provide more scope for firm specific factors. This is reflected in our survey, since different measures of ability to pay seem to play an important role. The diminished role for solidarity wage bargaining does not per se imply that equity aspects are not present. Our survey indicates that workers still care a great deal about relative wages (both within and across firms), and that they try to protect their position in the wage hierarchy.

That relative wages matter is at least broadly consistent with a **competitive** labor market; to the extent that the equilibrating process comes about via a transfer of labor from low wage to high wage sectors, relative wages should matter. On the other hand, while profits and productivity (ability to pay) should have no impact on wage formation in this model, our results indicate that ability to pay is important. Also the fact that unemployment and unemployment benefits affect effort cannot easily be

reconciled with a simple demand and supply view of the labor market. Hence, we conclude that the competitive model is off the mark.

By contrast, these findings are compatible with many efficiency wage stories, including the **shirking** model. However, the kind of penalties that firms impose on shirkers is circumstantial evidence against this model. We obtained stronger support for the **adverse selection** model. Firms often seem to perceive underbidders, the unemployed and those in labor market programs to be of lower quality. This implies that a premise for the adverse selection model, i.e. the presence of signals of low productivity, seems to be fulfilled. We even found that demanding a higher wage may, by some managers, be interpreted as a signal of high productivity.

Also the **labor turnover** model is given indirect support in the sense that some basic premises seem to be fulfilled. Swedish labor market legislation seems to have raised turnover costs. Furthermore, the risk of quits is negatively correlated with the average wage level of the firm. Even though we have not investigated whether firms consciously have raised wages to reduce the risk of costly quits, there appears to exist a case for doing so. The **fair wage** model of Akerlof and others is supported by the fact that relative wages matter a lot and that unemployment is perceived to have a strong impact on effort. Also that profits matter to wages is consistent with certain versions of the fair wage model (Agell and Lundborg (1992)).

Many of our findings point towards models based on bargaining and rent-sharing. However, when we asked about one prominent member of this class of models, the **insider-outsider** model, we got a less positive response. While costs of hirings and firings seem substantial (this is recognized in the answers to our questions concerning job security legislation), firms showed no enthusiasm when we confronted them with a direct statement of the basic mechanism of this model. There are however other versions of the insider-outsider model, stressing harassment activities of incumbent workers, on which our evidence have no bearing.

**Institutional arrangements** like LAS do not seem to matter a great deal to nominal wage rigidity. Like Blinder and Choi, we found that nominal wage rigidity may have much more to do with relative wage comparisons, an observation which points back to traditional keynesian thinking. LAS appears more important in raising turnover costs; i.e. costs that may contribute to real wage rigidity.

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## QUESTIONNAIRE

1.a Has your company during the last year experienced a lack of qualified workers?

Yes

No

b. Has your company during the last year laid off and/or notified employees about future lay offs?

Yes

No

2.a How does the wage level in your company compare with the one in other companies in the same industry?

Much lower					As high				Much higher
1	2	3	4	5	6	7	8	9	

b. Does your company presently have external job applicants who offer to work for wages lower than for those already employed with the same qualifications and experiences? (The question should be answered also if your company presently have no vacancies and if collective bargaining agreements or local unions can prevent these people from being hired.)

Blue Collar Workers

Yes

No

White Collar Workers

Yes

No

c. Has your company previously had external applicants who offer to work for wages lower than for those already employed with the same qualifications and experiences?

	Never				Sometimes				Very often
Blue Collar Workers	1	2	3	4	5	6	7	8	9
White Collar Workers	1	2	3	4	5	6	7	8	9

d. If so, have these people been employed at this lower wage?

	Never				Sometimes				Very often
Blue Collar Workers	1	2	3	4	5	6	7	8	9
White Collar Workers	1	2	3	4	5	6	7	8	9

e. Please list the reasons for why these external applicants have not been hired.

f. Swedish labor market laws prevent firms from firing employees in order to replace them with external applicants willing to work for lower wages. Indicate the plausibility of the following statement: If the labor market laws were changed so that your company was given more discretion in firing employees, the threat of being replaced by unemployed and cheaper workers would lead to lower wage demands.

Very unlikely				Rather likely				Very likely
1	2	3	4	5	6	7	8	9

3. The Employment Security Act (LAS, "lagen om anställningsskydd") states that firings must be well founded. For instance, a company is not allowed to fire an employee who turns out to be less productive than was expected at the time she was hired.

Indicate the accuracy to your company of the following statements.

a. LAS makes the firm more prone to scrutinize job applicants' abilities than would else have been the case.

Do not agree				Agree somewhat				Agree fully
1	2	3	4	5	6	7	8	9

b. The commitments associated with LAS lowers the firm's propensity to hire more people in an economic upturn, and increases the propensity to rely on overtime hours.

Do not agree				Agree somewhat				Agree fully
1	2	3	4	5	6	7	8	9

c. LAS makes the firm more prone to offer flexible short-term employment contracts (e.g., employment contracts involving a fixed time of trial).

Do not agree				Agree somewhat				Agree fully
1	2	3	4	5	6	7	8	9

4. An important issue in the discussions on wage formation is how the Swedish bargaining system affects wage costs. How do you think that wage increases in your company should be affected if the bargaining system was changed so that negotiations only took place at the local level (i.e., directly between the firm and the local union with its own right to call a strike) and not at all on the central or industry level? Wage increases would become:

Much less				Un- changed				Much higher
1	2	3	4	5	6	7	8	9

5. Please fill out the following background information.

"Senior white collar workers" include: senior managers, specialists, researchers, etc.; "Other white collar workers": salesmen, office workers, shop floor managers, etc; "Skilled blue collar workers": welders, assembly line workers, plumbers and other workers with jobs requiring special training; and "Other blue collar workers": cleaners, janitors, inventory workers, etc.

	No employed	No union members	No with individual wages
1. Sen. wh. col.			
2. Oth. wh. col.			
3. Ski. bl. col.			
4. Oth. bl. col.			

	No with profit bonus	No with piece rates
1. Sen. wh. col.		
2. Oth. wh. col.		
3. Ski. bl. col.		
4. Oth. bl. col.		

6.a To what extent does your company monitor different work groups' (e.g. teams') average work effort?

	No extent				Some extent				Large extent
1. Sen. wh. col.	1	2	3	4	5	6	7	8	9
2. Oth. wh. col.	1	2	3	4	5	6	7	8	9
3. Ski. bl. col.	1	2	3	4	5	6	7	8	9
4. Oth. bl. col.	1	2	3	4	5	6	7	8	9

b. To what extent does your firm monitor an individual employee's work effort?

	No extent				Some extent				Large extent
1. Sen. wh. col.	1	2	3	4	5	6	7	8	9
2. Oth. wh. col.	1	2	3	4	5	6	7	8	9
3. Ski. bl. col.	1	2	3	4	5	6	7	8	9
4. Oth. bl. col.	1	2	3	4	5	6	7	8	9

c. Would your company like to have more control over the work effort of employees'?

Yes                      No

If so, what prevents your company from increasing monitoring today?

7.a How common is it for your employees to provide less effort than expected (to shirk).

Very uncommon				Rather common				Very common
1	2	3	4	5	6	7	8	9

b. Which is the most common measure taken against employees who are caught shirking repeatedly?

	Very uncommon				Rather common				Very common
	1	2	3	4	5	6	7	8	9
Firing	1	2	3	4	5	6	7	8	9
Wage reduction	1	2	3	4	5	6	7	8	9
Job transfer	1	2	3	4	5	6	7	8	9
Reprimand	1	2	3	4	5	6	7	8	9
Other measure	1	2	3	4	5	6	7	8	9

(namely \_\_\_\_\_)

c. How do you think that the work effort of your employees is affected if local unemployment was to rise?

Falls a lot				Un-changed				Increases a lot
1	2	3	4	5	6	7	8	9

d. How do you think that the work effort of your employees is affected if unemployment benefits were to fall?

Falls a lot				Un-changed				Increases a lot
1	2	3	4	5	6	7	8	9

e. How do you think that the work effort of your employees is affected if sickness pay was to fall?

Falls a lot				Un-changed				Increases a lot
1	2	3	4	5	6	7	8	9

8.a How common is it that your employees (directly or via union representatives) compare their wage with the wage of other employees within your company in wage negotiations?

	Very uncommon				Rather common				Very common
	1	2	3	4	5	6	7	8	9
Sen. wh. col.	1	2	3	4	5	6	7	8	9
Oth. wh. col.	1	2	3	4	5	6	7	8	9
Ski. bl. col.	1	2	3	4	5	6	7	8	9
Oth. bl. col.	1	2	3	4	5	6	7	8	9

b. How common is it that your employees (directly or via union representatives) compare their wage with the wage of other employees in other companies in wage negotiations?

	Very uncommon				Rather common				Very common
	1	2	3	4	5	6	7	8	9
Sen. wh. col.	1	2	3	4	5	6	7	8	9
Oth. wh. col.	1	2	3	4	5	6	7	8	9
Ski. bl. col.	1	2	3	4	5	6	7	8	9
Oth. bl. col.	1	2	3	4	5	6	7	8	9

c. Does the local trade union push for higher wages when dividends are high?

Never				Sometimes				Always
1	2	3	4	5	6	7	8	9

d. Does the local trade union push for higher wages when company profits are high?

Never				Sometimes				Always
1	2	3	4	5	6	7	8	9

e. If an employee considers her wage to be unfair, she may lower work effort or leave the firm. How likely are these reactions in your company?

i. Work effort falls

	Very unlikely				Rather likely				Very likely
	1	2	3	4	5	6	7	8	9
1. Sen. wh. col.	1	2	3	4	5	6	7	8	9
2. Oth. wh. col.	1	2	3	4	5	6	7	8	9
3. Ski. bl. col.	1	2	3	4	5	6	7	8	9
4. Oth. bl. col.	1	2	3	4	5	6	7	8	9

ii. Employee leaves the firm

	Very unlikely				Rather likely				Very likely
	1	2	3	4	5	6	7	8	9
1. Sen. wh. col.	1	2	3	4	5	6	7	8	9
2. Oth. wh. col.	1	2	3	4	5	6	7	8	9
3. Ski. bl. col.	1	2	3	4	5	6	7	8	9
4. Oth. bl. col.	1	2	3	4	5	6	7	8	9

f. One reason for the fact that nominal wages seldom falls may be that wage relativities might be altered. The employees want to keep a certain wage hierarchy for different jobs and reject a wage cut since traditional wage differences may be altered. How likely is this explanation for the fact that wage cuts seldom occur?

Very unlikely				Rather likely				Very likely
1	2	3	4	5	6	7	8	9

g. Assume that the company suggests identical percentage wage cuts for all employees in the firm so that the wage hierarchy is retained. What share of the jobs must be threatened for the cut to be accepted? Circle the right answer.

1-10%	More than 10 %	More than 50 %
100 % (closing down)	Not even a threat of closing down is sufficient	

h. In the absence of Rehnberg-agreements etc., what are the most important factors that normally affect the wage level of your firm?

9. One theory to explain why wages may end up above the level that gives full employment is based on the idea that hirings and firings are costly to firms. These costs (associated with employment interviews, advertisements, retraining, redundancy payment, etc) make firms prone to reduce labor turnover and keep workers already employed. This situation may be used by employees to push up wages. How relevant is this reasoning to your company?

Very irrelevant					Rather relevant				Very relevant
1	2	3	4	5	6	7	8	9	

10.a Assume that two persons are competing for the same job. From interviews, experiences, education, etc., both seem equally qualified. One of the two accepts the wage offered by the firm, while the other demands a higher wage. Does the firm consider the latter, who demands a higher wage, to be potentially more productive?

Never					Sometimes			Always
1	2	3	4	5	6	7	8	9

10.b Assume that two persons are competing for the same job and that both accept the wage offered by the firm. From interviews, experiences, education, etc., both seem equally qualified. However, one of the two is unemployed and has been so for some time. Does the firm consider him to be potentially less productive?

Never					Sometimes			Always
1	2	3	4	5	6	7	8	9

10.c Assume that two persons are competing for the same job and that both accept the wage offered by the firm. From interviews, experiences, education, etc., both seem equally qualified. However, one of the two has been enrolled in a labor market program for some time. Does the firm consider him to be potentially less productive?

Never					Sometimes			Always
1	2	3	4	5	6	7	8	9

Comments to the questionnaire. (Are the questions hard to interpret? If so, which ones? etc.):