



“Summary of article by George A. Akerlof and Janet L. Yellen: The Fair Wage-Effort Hypothesis and Unemployment” in Frontier Issues in Economic Thought, Volume 4: The Changing Nature of Work. Island Press: Washington DC, 1998. pp.47-50

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In conventional economic theory, the supply of labor is determined by the balance between the attractiveness of wages and the unpleasantness of work. Each worker responds only to his/her own wages and work situation, and is indifferent to the circumstances of others. This article proposes a hypothesis, widely accepted by psychologists and sociologists, that people are motivated by perceptions of fairness; “when people do not get what they deserve, they try to get even.” (256). In the labor market, if wages are reduced below the level that workers consider fair, they will reduce their effort on the job proportionally. The “fair wage-effort hypothesis” may explain the negative correlation between skill and unemployment; in addition, it can explain wage differentials and labor market segmentation.

MOTIVATION FOR THE HYPOTHESIS

Several types of evidence support the fair wage-effort hypothesis. Equity theory in psychology and social exchange theory in sociology both suggest that in a voluntary social exchange, each party perceives the value of “inputs” and “outcomes” to be equal. If there is an accepted fair wage for a standard level of work effort, then payment above the fair wage should elicit greater effort, and payment below the fair wage should lead to correspondingly less effort. Psychological experiments have more often examined the results of overpayment; this does not always lead to increased effort, since it is easier to revise upward one’s opinion of a fair wage than to work harder. The few experiments that have studied underpayment have confirmed that it leads to a higher proportion of substandard work, and to higher rates of quitting the job (or experiment).

Relative deprivation theory suggests that perceptions of fairness are based on comparisons with others; psychological theory, however, does not tell us which others are most relevant. Those most similar to ourselves are surely important, but visible others -- dissimilar workers in the same firm, for example -- are also significant.

Sociologists have documented the conscious restriction of effort in the workplace, in retaliation for unfair wages or working conditions. Workers can often cause machinery to fail, or to need excessive levels of maintenance, by minor modification of work procedures; two-tier wage structures are sometimes inefficient, since the resentment of the lower-wage workers can lead to withdrawal of effort or refusal to cooperate with higher-wage workers.

Personnel management texts regard the need for equitable pay schedules as obvious. The common policy of secrecy about wages and salaries is evidence of the interest that workers feel in the payment received by others. Workers generally believe that pay should reflect performance -- but virtually everyone believes that their own performance is well above average. Thus a pay schedule that is perceived as fair will be more compressed than one based strictly on management's evaluation of performance.

Considerations of fairness can also help explain the persistent pattern of wage differentials between industries, which cannot be entirely accounted for by differences in productivity or compensation for the differential nature of work. If high wages must be paid to one group of workers in an industry, perhaps to attract a scarce skill, then other workers in the industry will have a higher standard of fair payment. That is, the other workers will expect, and will often get, more than they would for the same work in another industry.

A RUDIMENTARY MODEL

Suppose that a normal effort is supplied by workers if actual wages are at or above the (fixed, exogenous) fair wage, but if wages are reduced below the fair level, then effort is reduced in the same proportion: for half the fair wage, an employer gets half the normal level of effort. Suppose also that there is a perfectly competitive economy, with many identical firms whose output is proportional to their labor input, and to the level of effort. How much labor will firms choose to employ?

The marginal cost of a unit of labor effort is simply equal to the wage, so long as the wage is above the fair wage level. At lower wages, however, the cost of a unit of labor effort is always the fair wage (since, e.g., half the fair wage gets half a unit of effort). Thus if the marginal product of labor is below the fair wage, it is not profitable to hire anyone or produce anything. If the marginal product of labor is above the fair wage, competition among employers will bid wages up to the marginal product of labor (as in the standard textbook model), and there will be full employment. Although this model is simplistic, it demonstrates one reason why wages do not fall below the fair wage level: under the model's assumptions, no profits can be made by pushing down to the point where workers withhold effort.

A RELATIVE DEPRIVATION MODEL

A more sophisticated model allows the fair wage level itself to be endogenous, and examines the interactions between two groups of workers who supply distinct types of labor. Each group sets its effort level as in the simple model, based on its own idea of a fair wage. In this case, however, the fair wage for each group is variable, dependent partly on the relative demand for its own labor, and partly on the wages received by the other group. (More formally, each group's fair wage is a weighted average of the market-clearing wage for its own labor and the current wage received by the other group.)

With the addition of some technical assumptions about firms and production, this model leads to three types of equilibria. In an integrated equilibrium, all firms hire both types of workers, and some low-paid workers are unemployed. In a partially segregated equilibrium, some firms hire

both types of workers, and some hire only low-paid workers; and in a fully segregated equilibrium, each firm hires only one or the other type of workers. There is no unemployment in the partially and fully segregated equilibria, but there can be persistent wage differences and labor market segmentation.

Consider, first, the integrated equilibrium. It is impossible, or unstable, for both groups of workers to be fully employed and providing normal effort: low-paid workers would consider their wages unfair, since they would receive less than the others, and would reduce their effort accordingly. This would make it less attractive to employ the low-paid group, causing a decline in the demand for their labor. On the other hand, there cannot be unemployment of the higher-paid group in equilibrium; if there were, it would be doubly profitable for employers to reduce their wages, since this would also reduce the lower-paid group's idea of fair wages.

From these arguments it can be deduced that the low-paid group will receive its fair wage. Since they experience unemployment in equilibrium, firms can set the cost-minimizing wage for low-paid labor; but as in the simple model, there are no profits to be gained by cutting wages below the fair wage level. The high-paid group, on the other hand, receives its market-clearing wage and is fully employed. (The market-clearing wage is above the fair level for the high-paid group, so fairness is not a binding constraint for this group.)

SEGREGATED EQUILIBRIA AND SEGMENTATION

The integrated equilibrium creates an opportunity for "deviant" firms to profit by hiring only low-paid workers. Fairness is not an issue within the deviant, or segregated, firms, since there are no higher-paid workers for the employees to compare themselves to; these firms are free to pay the market-clearing wage. The presence of segregated firms increases the demand, and hence the market-clearing wage, for low-paid workers. This increases the fair wage for low-paid workers at integrated firms (since the fair wage depends on the market-clearing wage), and hence increases the wage these workers receive at integrated firms. If enough segregated firms enter the market, there will be full employment for low-paid workers. However, they will earn less at segregated firms (the market-clearing wage) than at integrated firms (the fair wage). This corresponds to standard descriptions of dual labor markets, with jobs for low-skilled workers in both the primary and the secondary sectors.

As segregated firms begin hiring low-paid workers, their fair wage rises, leading integrated firms to reduce their employment of this group. In the extreme, the formerly integrated firms might become unwilling to hire any low-paid workers. All firms would then hire only one or the other group of workers. With segregated workforces, fairness issues would not arise within firms; both groups of workers would be fully employed at their market-clearing wages. However, this is not necessarily an efficient outcome. In the fully segregated equilibrium, considerations of fairness prevent any firm from employing both types of labor (since low-paid workers would then demand higher, fair wages) -- even though it is almost always efficient to combine workers of different skill levels in complex production processes.