

Principal-Agent Problem

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Imagine a firm hires a new employee. His job includes examining the competing bids from the firm's suppliers and preparing reports on the merits of each. How does the firm know the employee will handle this task dutifully? It may be easier to simply make up facts than to thoroughly research the bids. Or the employee may favor one supplier over another for reasons completely unrelated to the merit of the proposal — because of a family connection, for instance.

This is an example of what economists call the “principal-agent problem.” In this scenario, the employer is the “principal” and the employee is the “agent.” The interests of agents are not perfectly aligned with those of the principals. Yet the principals can only imperfectly monitor the actions of the agents. This means that agents can advance their own interests at the expense of those of the principals.

An employer can respond to the agency problem by increasing the monitoring of employees. This could be achieved through, among other things, enhanced management scrutiny of employee work. But this requires a significant investment of the employer's time and resources.

So economists have long pondered less-costly incentive plans that would align the interests of employees with those of employers. The main way of doing that is to tie employee compensation to the performance of the firm or a specific metric of that firm's success or productivity.

One popular policy among publicly listed firms is the granting of stock options to employees, often upper management. These stock options are a part of an employee's compensation and they rise in value as the firm's stock rises in value. This ties the financial well-being of the stock option recipient directly to that of the firm.

However, stock options can create their own set of perverse incentives. In recent years, some firms have been scandalized by the practice of “backdating.” Firms that offer stock options to employees are required to disclose to the government the date at which the stock option was offered. This is used to determine the fair market value of the option. Listing a date that is earlier than the actual date the option was offered could inflate the value of that form of compensation. Yet, stock options are still widely used by publicly listed firms — indeed, analysis has shown that they are an effective way of overcoming the agency problem and accompany increases in a firm's value — although there is

more care paid to their disclosure procedures today.

The link between an individual employee's effort and the performance of the company's stock can be tenuous. A more direct way to deal with the agency problem is performance-based pay. Year-end bonuses are a common form of this sort of pay system. Another type of performance-based pay is one when workers are paid a “piece rate” in which they are compensated per unit of work. For example, vegetable or fruit pickers might be paid by the number of pounds picked. The piece rate system can work well for jobs or industries where the productivity of a worker can be clearly tied to some unit of final production.

The attempts of firms to ameliorate the agency problem could also have effects beyond the walls of the individual firms themselves. In 1984, economists Carl Shapiro and future Nobel Prize-winning economist Joseph E. Stiglitz constructed a model in which a particular solution to the principal-agent problem could increase unemployment.

In the Shapiro-Stiglitz model, employers pay workers an above-market wage called an “efficiency wage” so as to prevent workers from shirking — that is, slacking off. The cost to an employee of getting fired — the lost wages — would be higher, thereby inducing an employee not to shirk.

Yet, if one firm pays efficiency wages, then all firms will likely face an incentive to pay efficiency wages to compete for workers. This would temporarily remove the incentive to avoid shirking since losing a job at one firm wouldn't necessarily entail a pay cut at an alternative job. However, if all firms pay efficiency wages, then wages will be above the market-clearing level, resulting in involuntary unemployment. This decreases the chances that a fired worker will find a replacement job and encourages the employee not to shirk. So, in the end, efficiency wages serve their goal of mitigating the principal-agent problem but at the cost of bringing about higher unemployment.

There are other proposals to align the incentives of workers with employers. One is the use of “seniority wages,” when workers are initially hired at a rate lower than their marginal productivity, but see their wages rise as they demonstrate their value to a company. The type of arrangement that helps solve the principal-agent problem will be largely determined by a firm's production processes, and thus can vary widely across industries.

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