



The art of writing contracts

Reaching mutual agreements is the foundation of all societies, and a common way of doing so is to enter a verbal or written contract. Contracts can apply to everything from running a bank or hospital, to buying a car or your children's allowance. Oliver Hart and Bengt Holmström share this year's Prize for theoretical work that has extended our understanding of how contracts function and how they can be improved.

A contract is a way of getting us to cooperate when we might have opposing interests. Designing a contract that motivates the parties to make decisions that are beneficial to both is a difficult art. *Contract theory* provides us with mathematical methods for analysing different types of contracts, such as performance pay for business managers, deductibles and co-pay in insurance, and the privatisation of public institutions.

In the late 1970s, Bengt Holmström showed how a principal (such as the owner of a company) should design an optimal contract for an agent (the company's CEO), whose actions the owner cannot observe in detail. Holmström's *informativeness principle* specified how the owner should link the CEO's pay to relevant information. In later work, Holmström extended this analysis to more realistic situations, such as when an agent performs several different tasks, when employees are not only motivated by their current pay but also

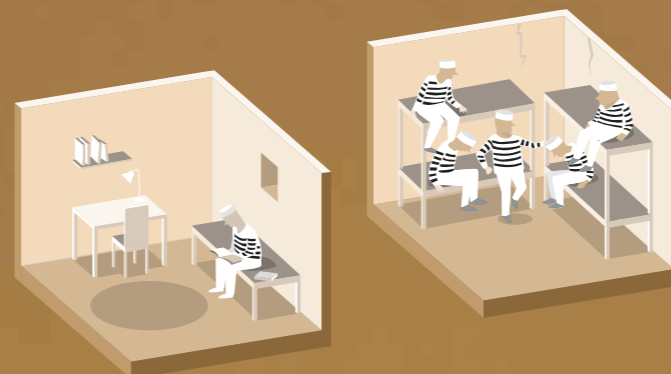
by future career concerns, or when a member of a team can free-ride on the efforts of others.

Starting in the mid-1980s, Oliver Hart made fundamental contributions to a new branch of contract theory that deals with *incomplete contracts*. This theory considers situations when it is impossible to formulate every possible contingency in a contract and shows that the allocation of control rights becomes of vital importance. When the parties do not agree, who should have the right to decide what should be done and under what circumstances? Hart's research on incomplete contracts has shed new light on issues of ownership and control of companies and has been very influential in many areas of economics, law and political science. He has provided researchers with new tools for understanding issues such as when companies should merge, how financial contracts should be designed, or when schools, prisons and other public services should be privately or publicly owned.



Bonus or an ordinary salary?

Most jobs involve many different tasks, some of which are easier to evaluate than others. Bengt Holmström's *multi-tasking model* shows that if you reward an employee for tasks that are easy to measure, but not for ones that are difficult to measure, the employee focuses too much on the tasks that are rewarded. For example, if a CEO's salary is only based on short-term profit because the effects of longer term investments are more difficult to measure, the CEO may neglect the company's long-term investments. In these cases it is often better to avoid performance pay altogether.



Private or public ownership?

Publicly-owned prisons will tend to be inefficiently expensive, because it is difficult to properly reward a government-employed manager for reducing costs. In contrast, private owners of prisons often have too strong incentives to reduce costs at the expense of quality, because the owner benefits directly from the increased profits. Oliver Hart demonstrated that this is likely to lead to conditions being overly harsh for inmates in private prisons.

Oliver Hart

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