

## **ToysToysToys**

A new chain of toy stores, ToysToysToys Ltd., is searching for a number of sites to rent in Sydney. In addition to wanting to pay the lowest possible rent per site, the company has very particular requirements that the sites must satisfy: being on a main road, having at least 100 parking spaces, buildings with space and layout suitable for a toy store, and in locations with the target demographics.

Owing to its lack of in-house expertise, the company decides to hire an external consultant to identify sites. The consultant's compensation is to be specified in a contract.

How will the likely outcomes vary under each of the following contracts? Which is most likely to achieve ToysToysToys' objectives?

- a. An agreed fee for identifying a specified number of potential sites.
- b. An agreed fee for each site found with floor space exceeding a specified area and with the rent below a specified amount.
- c. An agreed fee for each site identified which ToysToysToys decides to rent.

## **Toyota and its Subcontractor**

Consider a contract between Toyota and a subcontractor for the supply of some parts. Compare, in terms of incentive and risk-sharing effects, a contract that specifies a fixed price with a contract that allows the subcontractor to pass on 50% of any production-cost increases.

### **Case Discussion**

The fixed-price contract offers stronger incentives to the subcontractor to limit costs and so it results in lower production costs. But it shifts all of the risk onto the subcontractor. To induce the subcontractor to accept the fixed-price contract, Toyota must offer a price high enough to compensate the subcontractor for the risk he is to bear. If the subcontractor is risk-averse enough, and the scope of production-cost variations is small enough, the fixed-price contract might be more expensive for Toyota than the incentive contract would be.

## **Outsourcing Contracts**

Under privatisation of government factories, suppose the government moves in steps. As owner, it has the power to establish the terms of the contract. Initially, contractors, such as Go Getters Inc., leasing government factories are required to pay a fixed sum of money each year to the government, and allowed to keep any profit beyond this. Later, after seeing how successful the factories have become under private management, the government wants more of the profits, and instead institutes profit-sharing schemes, with 20 percent to 30 percent of profits going to Go Getters, and the rest to the government.

- a. Would this change in policy lead to the government's revenues rising or falling? Discuss.
- b. How will Go Getters' attitude to risk compared to the government's attitude to risk affect the answer?
- c. How will Go Getters' private information about the profitability of the factory under its management affect the answer?
- d. Can you discuss any other management situations that have this property?

## Case Discussion

- a. The surprising answer is that sharing in the profits probably reduces the government's earnings. It costs Go Getters something to increase output and profit: the contractor's managers must work harder, and they must get their employees to work harder. Not all of these costs of increasing output will show up on the accountant's balance sheet. Thus Go Getters bears 100% of such costs. With a fixed-payment contract, Go Getters keeps 100% of any profit it generates above the required payment to the government. With the sharing contract, however, it keeps only 20% or 30% of the return to any extra effort it makes. Under the latter contract, therefore, Go Getters will exert less effort and produce less total output. With the fixed-payment contract, the total to be divided between Go Getters and the government is greater; the government would earn more by raising the fixed payment than by raising taking a share of the profits.
- b. This logic must be modified if either Go Getters is more fearful of risk (more risk-averse) than is the government, or if Go Getters' profit-making potential is known only by Go Getters. Either of these effects can make it in the government's interests to share the profits, but it seems implausible that these effects would be sizable enough to make it in the government's interests to set sharing rates as high as 70% or 80%.

The sharing parameter in this contract between the government and the contractor is 0.2 or 0.3. If we guess at 0.8 for the size of the incentive parameter, then by using the formula in reverse we deduce that the risk premium would have to be 80% in order for the contract with a sharing range to have been optimal, or a risk premium of 47% with a sharing rate of 0.3. These risk premiums imply extreme caution: Go Getters would give up most of its profits to be sheltered from risk. There therefore seem implausibly large. Either the government made a mistake in designing the contract, or they were taking account of other factors not considered in our simple model, or our guess of 0.8 for the incentive parameter  $\lambda$  is too high. If we were more pessimistic about the force of incentives and assumed  $\lambda$  to be 0.2, the implied risk premium assuming the optimality of contract is 20% (for the sharing rate of 0.2) or 12% (for the sharing rate of 0.3).

- d. Other interactions that are logically equivalent to this situation include:
1. A firm is deciding how to pay its production-line workers: fixed wage or piece rates?
  2. A contract for the supply of some equipment is being negotiated between two firms. The cost of producing the equipment are not perfectly predictable. What proportion of cost increases should the purchasing firm allow the supplier firm to pass on to it as the price increases?