

Contracting out the works functions

(Source: Robinson, R and others, 1998. Concepts and systems of road maintenance management. London: to be published by Macmillan.)

Competition

Many government organisations find it difficult to provide work incentives, and this is a particular problem in many road maintenance departments. The result is that work is often carried out inefficiently, and the quality and quantity of output is lower than it could be. Transferring work from the public sector to the private sector is unlikely, in itself, to have a beneficial effect. The problems remain the same: the essential difference is one of management. As a broad generalisation, private companies have simpler objectives than public sector organisations. They have sharper and more immediate motivation, and are often able to operate with greater flexibility. These characteristics make them better suited to problem-solving.

One way of obtaining greater efficiency is to introduce competition into operations. This can be done either by making greater use of existing private contractors, or by allowing public sector agencies to compete with the private sector. Contractors may achieve greater efficiency and lower costs because of competitive pressures that are unlikely to be present in a government organisation. Competition for road works can be expected to:

- Secure the best selection of contractors with regard to price and quality of works (economic effectiveness)
- To adapt supply to actual and varying demand for works, as contractors enter and exit the market (economic efficiency)

Although these general principles apply to all industries, the road works industry has specific features:

- The demand for roads come mainly from government at various levels; toll roads are rare and, where private roads exist, they tend to be short and rare
- The industry has high capital requirements except for small routine tasks
- Leverage is high, since profit and losses are high with regard to equity
- Poor quality of works may appear only after a long period
- There is a risk of corruption, made worse because services are not bought by the final users

In many countries, delivery of new construction works and periodic maintenance have traditionally been carried out by contract. Contractors have also been used for the supply and haulage of gravel and aggregate, as well as for carrying out construction and minor improvement works. It is also possible to carry out routine maintenance by contract, but the work can be more difficult to specify and to monitor. In those countries where there is a weak private sector contracting capability, privatisation may also be an option for increasing competition. However, creating a separate enterprise that still enjoys a monopoly position is unlikely to provide the full advantages, although effectiveness and efficiency are still likely to be increased because of a higher degree of specificity. In countries where the private sector is poorly developed, maintenance contracts can be useful in encouraging the local contracting

industry and in providing an introduction to work in the roads sub-sector. However, it is important to ensure that contractors appointed do in fact have the capability actually to carry out the activities for which they have bid.

If works are to be carried out by contract, then this will affect the size and the skills required of the highway organisation considerably. The organisation becomes one responsible only for planning, management and supervision, and these are sometimes known as 'client' activities. The organisation's responsibility will then be to procure work from 'suppliers'. Client activities include surveillance, inspections, investigations, determination of priorities, and the supervision of all work on the network. In principle, these client services can also be subject to competition in a similar way to works execution. Note also that this system of working also reduces the possibility of resources being diverted to non-legitimate activities.

There is a need to control the elements of quality, cost and time. To do this, managers need information, knowledge, skills, authority, technical and management systems, and resources. Contractors are under incentives to control costs and time because these are related directly to their profitability. Control of quality is much more in the client's interest. Because of this, proper supervision and control are vital for all contract work. Specifications should be used to define technical standards, and checks made to ensure that they are complied with as a means of ensuring quality. Poor or inadequate supervision invariably leads to shortcomings in quality. Supervisory work can often be contracted out to engineering firms or to individuals but, whether this is done in-house or by contracted-out firms or specialists, a system should be set up to inspect the supervisors.

The case for using the private sector

Advantages and disadvantages

Private sector participation in road sub-sector management through contracts can offer the following advantages (Harral and others 1986):

- Strong incentives for improvements in performance and economy
- A more flexible operating environment in terms of managing resources, including greater flexibility in scaling resources to suit changing demands, thus facilitating improvements in cost-effectiveness
- Relief to the government from the burden of direct management responsibilities for large work forces and equipment fleets
- For maintenance works, the need to commit funds for maintenance contracts, with less likely diversion of resources to other activities
- Political support for adequate and more stable levels of funding for road works, provided the contractors can organise themselves into a reasonable lobby
- A better prospect for developing a lasting institutional capacity, in the form of a pool of local contractors skilled in providing efficient and effective services

Contrary arguments include the following:

- Contracting may not decrease costs where redundant government establishment and work forces cannot be reduced or relocated to the private sector

- Contracting could increase costs because the very process of contracting and contract administration may require additional government resources, *eg* for measuring and certifying work quantities for payment
- Contracting may increase costs to the government where there is lack of effective competition in the procurement process, including abuses such as price fixing and corruption in contractor selection
- Government may not have the capabilities necessary to manage contracts properly
- Domestic contractors may not have sufficient capabilities, in terms of management abilities, technical skills, equipment, working capital, and other resources, that are necessary to ensure effective execution of maintenance activities
- Contractors may not be well placed to respond quickly during times of emergency, or to address small scale maintenance needs in remote areas

It is common practice in most countries to carry out all road development and most periodic maintenance works by contract. These works can be packaged into convenient lots suitable for letting to the private sector using conventional contracts. In addition, contracts for routine road maintenance have been introduced in many countries around the world. Cost savings of doing this are often quoted as being in the range 10-15 per cent. However, the cost savings obtained relate to the efficiency of the existing in-house works operation. Madelin (1994b) notes that, when comparing an efficient in-house unit with a private contractor:

- No evidence of savings is found
- Savings can be made with separation of the client and contractor roles - separation gives a clarity of purpose and a focus for management
- Further savings can be made by revitalising the organisation of the in-house operation

Unfortunately, the efficiency of the routine maintenance operations of many of the world's works units leaves much to be desired.

Comparison of costs

There are major difficulties in comparing the costs of in-house works units with those carried out by contract. In-house costings normally exclude significant elements of cost, whereas contractors must employ full cost accounting, including elements for profit, equipment depreciation and down time, supervisory staff expenses, office overheads and insurance. Other omissions are ownership costs of buildings, facilities, office equipment and furnishings, *etc.* For example: a cost comparison between contractors and the in-house unit made in Kenya showed that savings of just under 10 per cent could be made. In order to achieve this comparison on an equitable basis, the figures for the in-house works unit needed to be adjusted to take account of the following:

- Inclusion of all vehicle and equipment depreciation and capital investment costs
- Comparisons had to be undertaken
 - for an equal length of road works

- for roads of equal standard, *eg* adjustments must be made for differences between cross-sections on the different roads evaluated
- Materials acquisition costs needed to be included in the total sum in both cases
- Contract management and training expenditures needed to be included in the total costs

Works functions

This includes those areas where contractors are presently being engaged in many countries. The use of contractors for undertaking development works, or periodic works of surface dressing, overlays and pavement reconstruction, is straightforward, and such activities are commonly carried out in this way in many countries. As such, there is considerable experience of the issues involved. However, it should be noted that procedures for work execution on trunk, urban and rural roads are different. Contract procedures, such as those produced by FIDIC, favour the larger and more complex works. These may need to be modified to suit smaller sized works, such as might be needed for some periodic maintenance activities.

However, the use of contractors for routine cyclic and reactive maintenance poses more problems: works are often difficult to define, they may be spread over a wide area, and their measurement is not straightforward. Innovative forms of contract have been introduced in some countries to deal with this situation in an attempt to obtain greater effectiveness and efficiency. For such operations, it may be necessary to set up term contracts which specify total amounts of work per kilometre of road for each maintenance activity, with emergency repairs being paid for at day-work rates. Successful schemes of this nature have usually involved close collaboration between governments and contractors in defining the work to be done and in planning the work programme. A further advantage is that when contractors become involved in maintenance, their lobbying efforts can increase the budgets available.

The option of the works department of a highway administration operating as a contractor bidding against conventional contractors for work has been introduced successfully in the United Kingdom (Madelin 1994a). This removes the monopoly of the maintenance organisation and makes price-fixing between contractors easier to detect. The change required of the works department is much less traumatic than if it were to rely completely on contractors, but it is important that the organisation takes all of its operating costs fully into account when bidding for work.

However, most highway administrations prefer to undertake emergency works in-house because they consider that they themselves are in the best position to provide the immediacy and flexibility of response in such situations. However, in principle, there is no reason why emergency works cannot be undertaken by contract, and this is done in several countries. Either term contracts can be set up for the purpose, or all maintenance contracts can include clauses obliging the contractor to undertake emergency works, when directed, at day-work rates. Providing that enhanced rates could be used for emergency works, and that penalties are provided for failure to respond within given time frames, then this approach can be effective.

Separating the supply of materials, transport, and other plant and equipment increases the specificity of operations, and can lead to efficiencies and cost savings. With all of these

activities, the separation of functions enables contractors to concentrate their efforts on specific activities, with no need to spread management resources across a wide spectrum of operations. As a result, specialist skills are encouraged to develop and flourish, which increase effectiveness, efficiency and profitability further.

References

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