

Triangular Relations in Public Service Economics

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ABSTRACT *This paper critically re-examines the restructuring of public services. Four main decision-making phases are identified: the public oversight to be guaranteed to socially sensitive economic activities; the ways of financing them; the economic organisation of the industry; and the production decisions. By focusing on organisation, the paper reinterprets the market structure in public service industries on the basis of the interactions among three main players: users/citizens, the government and the service supplier. It argues that the issue of public versus private ownership has been overemphasised, and that an effective increase in efficiency can be obtained by introducing appropriate incentives for both public and business players. Instead of using a single policy instrument, namely privatisation, public action ought to be informed by an array of organisational solutions.*

1. Introduction

Over the last decade, public services have been radically restructured all over the world.¹ This has happened because such services have often been perceived as inefficient and ineffective, especially when they are supplied directly by public administrations. The way this problem has been addressed caused a sizeable drop of state intervention in the economy. Many public firms have been privatised, regulation has been reshaped and the public budget quota absorbed by public services has been downscaled. The economic policies enforced by governments can be summed up in three key words: deregulation, privatisation and liberalisation.

The economic literature has bolstered this process with theoretical arguments in support of the reduction of the state's role in public services. It has been argued that: public players, be they politicians or bureaucrats, are egoists (Banerjee, 1997); non-market failures are more serious than market failures (Beesley, 1992); transaction costs are higher in the public than in the private sphere (Dixit, 1996); contracts and regulation are necessarily imperfect (Hart *et al.*, 1997) and therefore the most economically viable solution is to privatise as much as possible (Shleifer, 1998).

In the current debate, the issue of public versus private ownership has been overemphasised, preventing a systematic analysis of the reform options. We believe

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that such an analysis would be worthwhile to put an order among the key concepts of the ongoing, often muddled debate and to highlight the possible public services reform alternatives. With this aim, we present a theoretical framework based on the functional interrelations among three sets of players: government, service suppliers and citizens/users. Our analysis shows how the interests of users, the players for whom services are produced, have too often taken a back seat in the current discussion on the subject matter.

The paper is organised as follows. In the next section, we break down the decision-making process related to public services into four phases: public oversight, financing, organisation and production. Apart from those related to organisation, the choices in question are not dominated by the ownership nature of the public service supplier. The government has to choose between public and private production only when it has to decide how to organise the market.

In the third section, we consider the triangular relations among the above-mentioned players. We demonstrate that, starting from a monopoly situation, it is possible to identify two complementary methods of achieving a more competitive structure. These methods are based on the adoption of measures designed to: (1) disarticulate the monopolistic relationship between supplier firm and public operator, and (2) make the market contestable (when this is feasible) in terms of the relationship between users and supplier firm. The available alternatives refer to two distinct market dimensions: according to circumstances, it may be advisable either to break monopolies down into both dimensions or only into one or not to break them down at all.

The fourth section describes the two competitive models most frequently proposed in the ongoing debate—competition *in* the market and *for* the market (or for the field)—and discusses their main advantages and disadvantages. The fifth section addresses a topic that has so far been neglected in the literature; namely, the existence of costs associated with periodic changes in service operators required by the competition for the market model. The sixth section sums up the principal nodes that public administrators have to address when they (re)organise services. The final section is given over to our conclusions.

2. Public Oversight, Financing, Organisation and Production

There is not a single definition of public services. Public ownership does certainly not provide a clear-cut definition. Often, steel has been produced by publicly owned firms and nobody would be willing to call such an industry a public service. The way in which the service is paid for does not help either: services that are fully paid by the government (for example, street lighting and schooling) are generally considered public services. But also electricity, which in the majority of countries is fully paid by consumers, is regarded in many countries as a public service. For the purpose of this paper, we note that, historically, public services break down into two large families: services that are socially sensitive (education, health) and services that are dominated by economies of scale and scope (electricity, water, gas, communications) and tend to be configured as natural monopolies (Baumol *et al.*, 1982; Sharkey, 1982; Waterson, 1988).

In the latter case, the bilateral relationship between producer and consumer is heavily influenced by public intervention. This gives rise to the *triangular relations* that prompt the interpretative method of this paper. The actors involved can be grouped into three sets: *government* (central and local government, public

institutions), the *service suppliers* (public or private firms, or the public administration in the case of directly supplied services) and the *population*. The latter, in turn, breaks down into two categories of players: (i) *users*, who demand and use the service directly, and (ii) *citizens*, or local residents. It is obvious that not all users are citizens and not all citizens are users of all the services (Fig. 1; see Section 3).

We suggest subdividing the government’s activities in the service field into four phases: (i) public oversight, (ii) financing, (iii) organisation and (iv) production. Such phases ought, ideally, to correspond to as many consequential moments in the decision-making process, which leads to the economic policy choice. They correspond to the following questions. (i) How can the community be protected? (ii) How much of the service should be produced and how can it be paid for? (iii) Who has to produce the service and how should the industry be organised? (iv) How should the service be produced? The distinction between these four phases helps us to understand when and how decisions to privatise, liberalise and deregulate are effectively significant and justified.

We interpret the first phase—the public oversight to protect consumers (safeguarding health, ensuring standards of quantity and quality and avoiding unjustified discriminations)—as a fundamental component of regulatory activity (Chang, 1997). We are well aware that public oversight has to face a large number of problems, including regulatory capture (see the classic account by Laffont & Tirole, 1993, ch. 11). Still, choices concerning public oversight are socio-political in nature, although economic theory may help to inform choices. Decisions regarding the ownership of means of production are not particularly significant in this extent: if, for example, the public authority establishes that drinking water must have given hygienic characteristics, then this applies to both public and private producers. However, the community does not always feel sufficiently protected by the entrustment of certain vital functions to private firms, and may thus, on some occasions, turn to public concerns.

Government exercises two types of control over public concerns: internal and external (Laffont & Tirole, 1993). By internal control, we mean control over inputs, including control over managers, employment levels, plant location and investment. External control, instead, is exercised over the variables—prices, quality and competition—which bind the firm to the environment in which it operates. If the public service is supplied by a regulated private firm, control is only external. In particularly sensitive cases (public order, defence and so on), governments have often opted for a public arrangement of suppliers, since the community is more protected by the right also to exercise internal control.

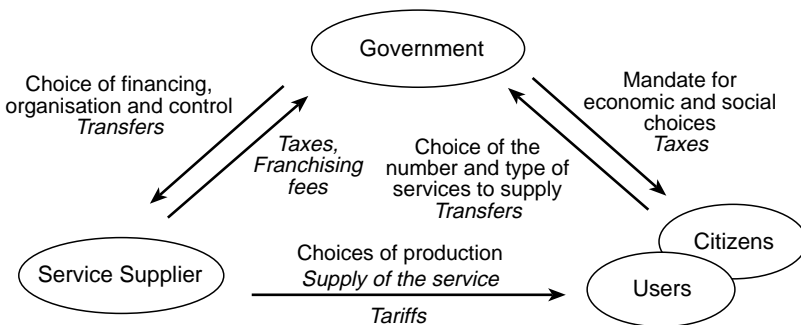


Fig. 1. The triangular relations in public services.

PHASES	DECISION-MAKING SPHERE	INFORMATION SUPPORT	REFERENCE PRINCIPLES	IMPORTANCE OF PUBLIC-PRIVATE CHOICE
Public oversight	Political	Technical and juridical	Quality, public goods, non-discrimination	Significant only if internal control is necessary
Financing	Political	Economic	Quantity, support to merit goods, equity	Non-significant
Organisation	Political	Economic	Allocation efficiency	Significant
Production	Firm administrators and executives	Managerial	Corporate efficiency	Significant for efficiency, but not for service effectiveness

Fig. 2. Public oversight, financing, organisation and production: phases, decision-making spheres, principles.

Although all business activities are, directly or indirectly, subject to regulation, the latter is greater for public services precisely on account of the need to protect consumers (norms on the continuity and methods of service supply). The reorganisation of public services does not necessarily entail the elimination of norms for the protection of consumers. On the contrary, in many cases, the introduction of a different system of incentives and the opening out to forms of competition require a *higher degree* of public oversight. However, the existing regulation in advanced countries has often proved inadequate to present needs² and relatively unsuited to social, technological and institutional change. There is thus a need to re-regulate as opposed to de-regulate.

The *financing* phase involves the procedures whereby the cost of services are subdivided between citizens and consumers: a service may be financed through tariffs³, paid for by users in proportion to their use, and transfers, paid for by citizens through general taxation. The government's choice of the way in which the cost of the service has to be split up between consumers and citizens touches upon special distributive issues, and is thus of political competence, although economic theory may call attention to the distortions of given solutions. (In the Soviet Union, there was a considerable waste of hot water entirely financed by public sources.)

Financing decisions also depend on the quantity of the service to be produced.⁴ If it is decided to finance the service entirely through transfers, the government chooses the quantity of the service, whereas users do so if the service is financed entirely by tariffs. The tariff-transfer combination leaves the choice of the level of production both to the market and to the government. This latter is entitled to divide the cost of services differently among users. For example, in local public transport it discriminates between frequent users (season ticket holders) and occasional users (normal fare payers). Financing choices are, nonetheless, neutral with respect to the proprietary nature of the public service supplier firms. A service may be entirely financed through tariffs and supplied by the public sector, or else entirely financed through transfers and supplied by the private sector. A historical

nexus exists between methods of financing and ownership structure, but this does not necessarily imply that a service financed by the public budget should have public ownership, nor that a service financed by tariffs should have private ownership.

The third decision-making phase concerns the *economic organisation* of the service, which we deal with in the next section. This is a matter of efficiency and equity, and is thus of political competence, albeit with the support of cognitive economic investigation. Since organisational choices also concern the structure of the market, this is the only phase in the entire decision-making process in which the choice between the public and private ownership of supplier firms should assume any relevance.

The fourth phase, *production*, consists of the choices of firms, which have to be made in compliance with the indications of the previous three phases (quantity and quality of the services to be produced, standards of quality, how the services should be paid and by whom) and on the basis of technical considerations (the best combination of productive factors, market strategies, etc). Ideally, there should be no direct political interference in these choices. Issues that influence production, such as environmental standards, should be considered under the public oversight heading since they apply to both public and business suppliers. In our opinion, there is no reason to believe that efficiency should be different between the public sector and the private sector; the real problem is to find appropriate incentives for firms, be they public or private, to minimise costs and maximise the quality of the service on the basis of indications supplied in the first three phases (e.g. Bardhan & Roemer, 1994).⁵

The division we propose here differs from the traditional one between supply and production proposed by Musgrave (1959) and reiterated by ACIR (1987). Although our subdivision acknowledges the need to distinguish between the supply and production of given services, we also believe that it is useful to break down supply decisions further into protection, financing and organisation. Protection and financing decisions have to be based on principles of equity, and organisation and production decisions on principles of efficiency. Public oversight, financing and organisation choices ought to be largely of political competence, whereas production choices ought to be of technical–managerial competence. Politicians thus ought to deal increasingly with problems of the protection, financing and organisation of public services, delegating the responsibility for production to suppliers, be they public or private.

3. The Economic Organisation of Public Services: agents and markets

In this section, we explore the problem of organisation by using the model of the triangular relations identifiable among the subjects involved.⁶ These relations have to be analysed on the basis of two distinct dimensions: (i) decision-making processes and related tools; (ii) the production and exchange of goods and services. To distinguish the decision-making process from the phases of production and exchange, Fig. 1 shows the former in roman type.

In a democratic system, the citizens/voters delegate to the government the economic–social choices on the supply of public services—number and type of services to supply, who should supply them, the number and type of taxes that need to be collected and who they have to be collected by, the tariffs that have to be imposed and the criteria to adopt to choose suppliers. Returning to the analogy of Schumpeter (1942, ch. XXII), Tullock (1965) describes the relationship between

citizens and government as competition between political groups to gain electoral consensus. Groups that gain a majority in national or local elections form the government and take decisions for a limited period of time, during which, in the context of the checks and balances typical of a democratic system, they exercise a monocratic power. The elected government then chooses the players to which to entrust the service; it may perform this service directly or it may delegate it to other profit or non-profit organisations to be chosen directly or by a competitive assessment. The market system may be monopolistic, oligopolistic or competitive. In the wake of a consolidated tradition, dealings between government and supplier are always defined on the basis of Service Contracts designed to give to it a codified, transparent form, defining the rights and duties of the parties, the costs and the other characteristics of services.

The triangular relations are closed by the relationship between supplier and consumers, increasingly regulated by a Service Charter (in the UK under the general heading of Citizen's Charter) containing the minimum standards of quantity and quality of the service that the firm undertakes to supply to citizens. In many countries, the Service Charter derives from a bargaining process with the representatives of users and consumers and is envisaged by the Service Contract itself.

This relationship between supplier firm and users may also be interpreted as a principal/agent one. The service supplier's aim is to maximise the assigned budget or some other egoistic function (in the case of the public concern) or profits (in the case of the private firm). These objectives are different from the ones pursued by consumers, who want effective and efficient public services from the points of view of both production and allocation, but also a certain distribution of costs. Given that the information sets available to different subjects are heterogeneous (for example, the optimal production technique is not known to users, but it is known to the supplier), the agency problem naturally arises when users do not produce or control perfectly a service entrusted to the supplier firm.

In this context, the Service Charter may be interpreted as an instrument to increase the information available to the user and, at the same time, constrain the agent's conduct. It would be advisable for the Service Charter to be the result of a bargaining process between the users, the firm and the government. It might also be incorporated in the Service Contract itself to make the said constraints even more binding, with the specification that charges be payable by defaulting firms.

In terms of principal/agent relations, these dealings describe a dual agency relationship. Citizens delegate to the agent, the government, the supply of services from which they will benefit as users, while the government's position is that of a principal vis-à-vis the service producer/supplier firm. In conditions of symmetrical information and supposing that individuals are egoistic and rational, a structure of incentives exists which pushes the public operator to maximise some social welfare functions,⁷ in order to favour electors and increase the likelihood of being (re)elected (Weingast, 1984). This means imposing efficient (and perfectly controllable) management and the desired quality of the supplied services. But this could happen only if the markets are dominated by perfect information. If this hypothesis is dropped, this desirable sequence of effects falls, and new exogenous incentives must be found. Focusing on the relation between government and supplier, we can envisage an incentive opportunity in the Service Contract mentioned above: the principal/government must seek to optimise the Service Contract, giving also contractual relevance to the standard of performance stated into the Service Charter, to oblige the agent/supplier to behave in the desired way

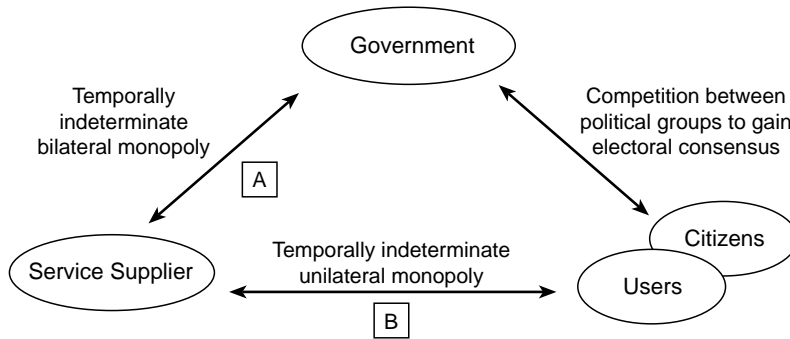


Fig. 3. Public service supply in conditions of temporally indeterminate monopoly.

(the recent literature on optimal contract design is hence extremely important for the re-organisation of public services; cf. Deakin & Michie, 1997).⁸

Figure 3 describes the situation of many public services prior to liberalisation or privatisation whose organisational form is frequently accused of being inefficient, i.e. a temporally indeterminate monopoly (Vickers & Yarrow, 1988). This representation is characterised by the following hypotheses: (a) the relationship between government and users exists exclusively at the moment of electoral voting, when users, in the capacity of citizens, appoint the government;⁹ (b) only one player, the government, acquires a given service; (c) due to institutional, technical or economic factors, only one player, the supplier firm, is capable of supplying the service.

In this way, we highlight a dual monopolistic system: the government and the supplier firm find themselves in a temporally indeterminate bilateral monopoly. The relationship between firm and consumers is, instead, characterised by a temporally indeterminate unilateral monopoly.¹⁰ The historical reasons that have induced many governments to rely on such an organisation are founded, from the economic point of view, on four economies of the monopolist.

- (1) A single producer is capable of exploiting economies of scale (Chandler, 1990; Baumol *et al.*, 1982).
- (2) In industries with strong upstream and downstream integration (e.g. the electricity industry), only one firm benefits from economies of vertical integration (Vickers & Yarrow, 1988). The fact that many business exchanges take place inside the single firm reduces transaction costs (Williamson, 1975).
- (3) If economies of scope exist, a single producer may reduce costs (Chandler, 1990; Baumol *et al.*, 1982).
- (4) Since the producer has no time limits, it does not incur transition costs, which arise when the market arrangement changes or when the supplier firm is replaced (Vickers & Yarrow, 1988; Section 5 below).

In Europe, at the beginning of the 20th century, the expectation that these economies would lead public monopoly to a cost structure lower than the one it would have had in free competition was typical of municipal socialism. Montemartini (1902, pp. 52–53), the movement's most articulate thinker, believed that it makes economic sense to turn certain industries into a municipal concern as opposed to a private enterprise, since he assumed that 'the municipality produces at a lower cost than private entrepreneurs'. Montemartini's assumption was based on

the existence of economies of scale and on the fact that municipalities would not need to charge a profit.

In many cases, however, the economies of the public monopolist proved lower than the costs resulting from the productive and allocative inefficiencies generated by the monopolistic market structure. More specifically, it is worth recalling five diseconomies of the public monopolist that assume special relevance in the presence of asymmetric information.

- (a) Autonomy is limited because managers are, in general, appointed politically and their capacity to resist politicians' improper requests (wage increases, unnecessary employment, provision of services beyond the institutional ends of the firm etc) is extremely low (Shleifer & Vishny, 1994; World Bank, 1995).
- (b) Public administrators can implement policies to guarantee their own 'private' aims as opposed to the public good, generating a distorted used of resources and production factors (Stigler 1971; Shleifer & Vishny, 1994).
- (c) Firms receive no incentive to contain costs because their market share is guaranteed by the fact that they are tied to the public contractor by a bilateral monopoly relationship (Laffont & Tirole, 1993).
- (d) Since users are unable to turn to other suppliers, firms are not motivated to improve the quality of the service and to innovate (Shleifer, 1998).
- (e) The effectiveness of consumer protest is limited,¹¹ since users can only act though the process of the electoral competition, provided they possess information accurate enough to perceive the existence of the malfunction. The electoral reprisal materialises after a long time lag and, in so far as it involves a heterogeneous set of factors (judgement on the management of more than one service, value choices etc), fails to report user protests for a specific malfunction.

If we compare the advantages and the disadvantages associated with monopoly, it emerges that the economies of the public monopolist are technical and economic in nature, while its diseconomies are political and institutional. Faced with a perceived inefficiency in the temporally indeterminate public monopoly, it is thus possible to adopt two different strategies (or any combination of the two extremes): (i) capitalising monopolist economies and looking for institutional devices to tackle diseconomies; (ii) break monopolies, implementing competitive mechanisms and repudiating monopolist economies. Within the reorganisation of public services in the advanced countries over the last two decades, a lot of movement has been visible in the second direction, but much less in the first.

4. The Reorganisation of Services: competition in and for the market

For the fragmentation of the monopoly, two complementary directions are possible: (1) the bilateral monopoly relationship between firm and public operator may be broken; (2) the market may be made contestable in terms of the relations between users and supplier firms. However, eliminating the monopoly in one of the two dimensions does not necessarily mean eliminating it in the other as well. In terms of Fig. 3, it is possible to break the first monopoly situation **A** without undermining the one between users and service supplier firm **B**, but it is impossible to break **B** without undermining **A**. At a general level, the breaking of the monopoly relationship **A** leads to competition *for* the market,¹² whereas the adoption of

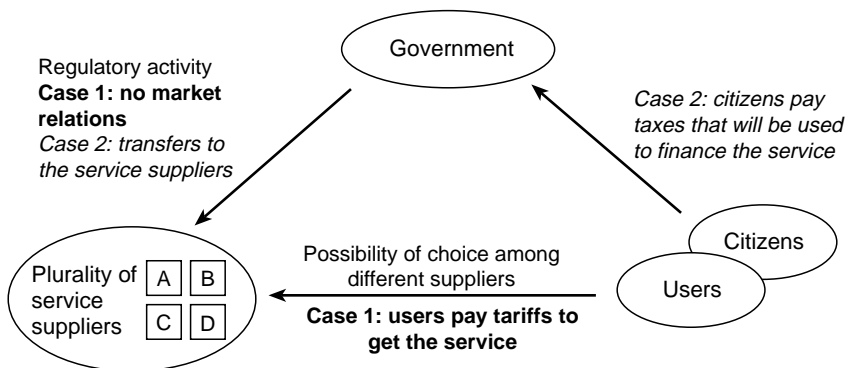
policies designed to break monopolies **A** and **B** simultaneously leads to competition *in* the market.

This latter situation leads to the liberalisation of the market by allowing a variety of atomistic price-taking firms to work in the field (Fig. 4). In this model, the supply is free and competition poorly regulated because the market mechanism guarantees efficient allocation of resources. Opting for competition in the market means promoting liberalisation and deregulation as well as favouring the entry into the market of many players and reducing barriers to entry as far as possible.

As Fig. 4 shows, this paradigm is neutral with respect to financing. Service costs may be sustained by users through tariffs (Case 1): supplier firms compete one against the other; there are no close relations between the government and single firms since the activity of the former is limited to the administrative regulation of the service; citizens are not expected to pay for the service through general taxes. The government may decide whether to impose a tariff or let prices be regulated by the market.

Yet there are cases dominated by different market relations. This is the case, for example, of family doctors in some European countries (Case 2). Here: (i) every doctor can be seen as a supplier firm; (ii) the cost of the service is paid through general taxes; (iii) the market relationship between government and service supplier is characterised by a monopsony. The government performs its regulatory function by identifying the players eligible to practice and negotiating the standard unit price to pay for each patient/service with supplier firms (doctors). Given that the doctors' income is proportional to their market share (number of patients) and that users have the chance to choose their family doctor, the competitive device has nothing to do with the price, but with the quantity and quality of the service offered.

Obviously, between these two extreme cases, different combinations of tariff coverage and general taxation may present themselves, with weights depending above all on distributive concerns. In the event that all or a significant part of the service is financed by tariffs, users may express their choice by deciding where to go and spend. However, even if the service is financed by transfers, they may choose by orienting themselves towards the suppliers who offer the best service (Hotelling,



Case 1: financing 'all tariff' of the service
Case 2: financing 'all transfer' of the service

Fig. 4. Competition in the market.

1929). The model may obviously be applied independently of whether companies are privately or publicly owned.

As an alternative to this organisational structure, it is possible to opt for competition for the market, adopting policies that break the monopoly situation **A**, but not **B** (Fig. 3). In this case, the different operators compete to win the right to exercise a temporary monopoly power (indeed, the model is also known as ‘competition for monopoly’). The contestability of the market refers to the winning of the franchise by tender, often within a framework of regulated prices and tariffs.

Competition occurs at the moment of the tender and its effectiveness depends on the potential competition existing in the market/service, which the public operator subjects to the competitive procedure. With respect to the initial situation, the advantage of this form of organisation is that it prevents the supplier firm—given that competitors might win the subsequent tender—from offering a poor service and/or at over-high tariffs. After the tender, relations between users and winning firms are defined by a total or local monopoly, temporally delimited by the duration of the franchise. In the competition for the market, the government may also decide to finance the service through any combination of tariffs and transfers. Users continue to have no right to choose, since they find themselves in a monopoly situation. This model too is susceptible to different proprietary forms if the tenders are open to both private and publicly owned firms.

Competition for the market may be applied to different forms of organisation: a monopoly extended nationwide or different local or territorial monopolies. The first case applies to sectors in which economies of scale and economies of vertical and horizontal integration dominate (the need to coordinate and plan activities is significant). In these conditions, the optimal size of operating districts is likely to be broader, hence a single firm (the national monopoly) may offer a better service at lower prices than an apportionable supply structure. The firm that wins the tender has to participate in a new tender at the end of the period of the franchise, and the public operator has to establish the optimal duration of said franchise, weighing the need for service supply continuity against the need to maintain an effectively contestable market. The economic relations between the three subjects that are established in this case are described in Fig. 5.

In any case, setting out from situations of temporally indeterminate public monopoly, it is necessary to check to what extent policies oriented towards the

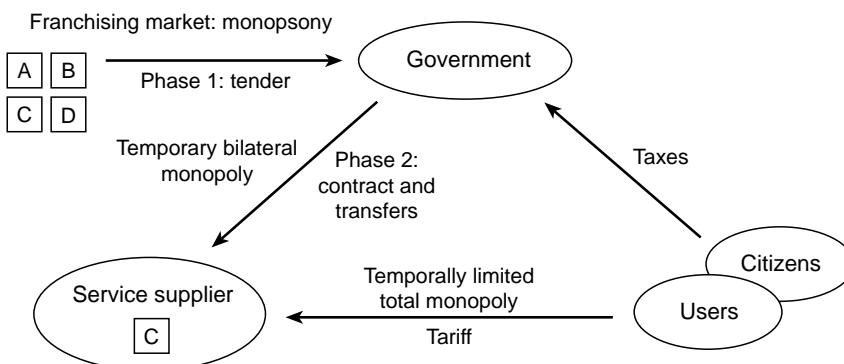


Fig. 5. Competition for the market in the case of a single supplier firm.

introduction of competition for the market are *truly* capable of transforming the market into a temporally delimited monopoly. The theoretical possibility of staging tenders does not, in fact, mean that the market is effectively contestable. For this to happen, different firms endowed with the appropriate economic, technical and size requirements have to exist. This consideration is especially important in the case of services that require large-scale permanent infrastructure (electricity, gas, water). In such cases, conditions of *de facto* bilateral monopoly are likely to be re-established, with a sole public operator and a sole seller (private firm).

If competition for the market were to be reduced to a *de facto* monopoly, it would be necessary to bear in mind different risks. Above all, a public monopoly would be replaced by a private monopoly, and any extra profits would represent a transfer of resources from the community to a (few) private shareholders. Moreover, the quality of the service might deteriorate on account of opportunistic behaviour by the firm that wins the tender, without the government being able to impose acceptable levels of service supply. The only possible way out is to start legal proceedings, but the effects are uncertain and the danger exists of having to suspend the service for a long period of time. With private monopolies, even the effectiveness of user protest is lower: the public monopolist's fear is that dissent will manifest itself during the elections, whereas the private monopolist is free from this threat (Lange, 1936).

The second result that might derive from competition for the market is the coexistence of different monopolies, all in a local context. Where technical production conditions allow (e.g. local public transport and urban solid waste collection), the government may decide to apportion the market and put specific segments up for tender: to each fraction of the market corresponds an organisational structure analogous to the one described in Fig. 5. Here too, even if competitive mechanisms have been introduced at the tender phase, the user continues to find him/herself in a monopoly situation, since (in the case of water, gas, electricity and urban hygiene) only one firm serves his/her home, or (in the case of transport) only one company performs the service on a given route.

The risks of a situation of this kind are more limited than those intrinsic in a full monopoly—namely, the possible interruption of services as a result of disputes between firm and administration—since many firms are capable of competing for a single part of the market and of supplying the related services. Any dispute between the public administration and the winning firm would have effects only on one user's segment. Moreover, the presence of a plurality of operators makes it easier and faster to identify alternative, socially non-traumatic solutions.

The characteristics of the competition for the market highlight three critical aspects of awarding by tender. In the first place, especially if the competition for the market model is introduced after a long period of public monopoly (a market form that often leads to the 'extinction' of the private potential supply), it is necessary to check whether more than one firm will exist capable of offering the services tendered by the government. Secondly, if the expected outcome of the competition for the market model is to achieve the fragmentation of producers and suppliers, it is better suited to sectors with low economies of scale, scope and vertical integration, with high transaction costs and estimated low transition costs. If these circumstances are not created, it would be more advisable to maintain the public monopoly or, in any case, to entrust the services to a single firm. Thirdly, given that, at the end of the competition procedure, users will find themselves experiencing a monopoly situation vis-à-vis the supplier firm, it is necessary to control the quality

of the service supplied and protect the users and the environment. This should be done by creating effective regulation and ombudsmen.

5. Transition Costs and the ‘Baton Hand-over’ Dilemma

In this section, we tackle the problem of the transition costs associated with the passage from an initial state to a different one. Such costs result from the fact that economic players emerge from a tested routine to experience a new one which, albeit more efficient when operational, is not necessarily so in the short term. This issue has not been sufficiently dealt with in the economic literature.¹³

It is possible to identify two different kinds of transition. The first (*structural* transition) is associated with any change from one market form to a different one (for example, from monopoly to competition in the market or for the market). The second (*periodical* transition) is instead associated with the recurring substitution of the supplier within a defined market form; this is the case of competition for the market. Whereas the costs of the first are ingrained in any structural change and are absorbed in the long term, those of the second recur and impinge upon the efficiency of the system. This is why we concentrate our attention on this latter category.

Transition costs may be particularly high in the case of highly capital-intensive public services, characterised by the presence of grids (water, gas, electricity). The architecture of the production process, the local diffusion of sources of income and the number of commercial dealings with users and suppliers are elements of structural rigidity that prevent the substitution of the operator without costs. When the infrastructure endowments and the dimensions necessary for the service supply are limited (as in the case of labour-intensive public services), transition costs may be lower, especially if activities are low-skilled and firm-specific labour-intensive.

The incumbent expecting to lose the tender might find it economically viable to maximise profits in the residual period of the franchise, reducing operating costs to the detriment of service quality, or else limiting spending on maintenance and investment. Besides provoking inefficiencies and the dissatisfaction of users, such forms of conduct may cause costs to rise in the subsequent period, in that the new entrant is forced to pay for expenditure not sustained previously for maintenance and investment. These costs, which we define as *end-of-franchise costs*, may be envisaged by the government as part of the contract that binds it to the supplier firm, for example by introducing a system of guarantees to redeem, following technical checks on the level and quality of investment made by the outgoing firm. Such contractual devices are, however, insufficient to eliminate the costs in question.

If the ownership of the infrastructure remains public, the new entrant takes over solely the management of the services, confining itself to replacing part of the personnel. For the new corporate structure, this substitution entails learning costs that are quite different from those the theory of industrial organisation envisages for firms entering new sectors (Chandler, 1990). In our case, the entrant firm knows the techniques and the industry in which it intends to operate, but it does not know about equipment, specific geographical requirements and the network of local relations. The concrete acquisition of this information makes it necessary to sustain *hand-over costs*. The incumbent operator, who does not sustain these costs, possesses a competitive advantage over new entrants, which enables him/her to make a lower bid in the tender. If hand-over costs are high, they may be an effective barrier to

entry, transforming a monopoly that is apparently (and formally) delimited in time into a temporally unlimited one.

If the service operator is replaced by a new entrant, the transfer of responsibilities is comparable to the hand-over of the baton in a relay race. There exists a period of varying duration in which the service runs at a slower 'speed' than normal (the supply level). This deceleration entails the end of franchise costs, and is followed by the phase of the baton hand-over and the acceleration of the new entrant, during which the normal level of service supply is re-established and take-over costs are sustained.

The cutting of the transition costs entailed in the 'baton hand-over' presupposes a collaboration between the incumbent operator and the new entrant which is, *de facto*, non-existent. The two players are competitors, albeit only at the moment in which the tender is held to award the services. The incumbent operator may thus implement strategies designed to damage potential competitors and/or hamper the take-over of the running of the service, with a net loss in terms of social welfare. These transition costs are directly proportional to the degree of antagonism between operators in the market. The government should determine the optimal duration of the franchise: if this is long, the period of time in which the incumbent operator can implement strategies designed to maximise its own profit to the detriment of users is prolonged proportionally; if it is too short, the period in which the operator learns to 'work operationally' is shortened too and may mean that investment is necessary to offer the service efficiently.

The existence of transition costs may help to explain the difficulties involved in modifying monopolistic arrangements in public services. The government finds real difficulties both in drawing up contracts capable of fully guaranteeing users and in stating an effective system of rules to minimise the negative effects of unfair behaviour of firms at the moment of changeover. This entails higher transition costs and the public service industries are thus not perfectly contestable. In addition to its many defects, a public monopoly has the advantage that it reduces the risk of end of franchise and hand-over costs.

Numerous policies may be adopted, however, to cut transition costs. They include:

- (a) identifying the capital goods that have to remain the property of the government and the ones that may pass from one operator to another, thus reducing the risk connected with the asset hand-over;
- (b) explicitly allocating spending for investment and maintenance between incoming and outgoing suppliers. As the incumbent operator might be tempted to over-cut these spending items, an indemnity (payable by the new entrant) might be guaranteed, equal to the residual value of the depreciation envisaged by the investment plan agreed upon with the administration;
- (c) codifying the methods of running the service to lower the knowledge costs of the new entrants, thus allowing broad participation in tenders;
- (d) subdividing public services into a number of batches. Wherever the technical/economic conditions of service production allow, it is possible to minimise the risk of transition costs by splitting the service into several tenders in the course of time. For example, by organising tenders for solid urban refuse collection services on a lower scale (neighbourhood by neighbourhood), it is easier to reduce the inconvenience and costs connected with the transition;
- (e) directing the development of competition for the market towards low capital-intensive sectors.

6. Applicability of Forms of Organisation and Control Policies

The previous sections allow us to formulate a coherent argument on the reorganisation of public services. Bearing in mind structural factors (demand and supply characteristics), strategic factors (development potential) and social factors (equity, safety and health), decision-making processes have to respect the following priority order: (a) to evaluate whether the service in question should be considered as a *public* service (the issue of ‘protection’); (b) to state the way of financing the service (the issue of ‘financing’); (c) to identify the most suitable forms of organisation. The latter first decision concerns the choice between direct production and contracting out. If it is advisable to externalise the service, we are faced by different options of market structure. The principal alternatives analysed here are: (i) public monopoly or exclusive franchise; (ii) competition for the market; (iii) competition in the market.

To be efficient, the organisational pattern has to be compatible with the structural characteristics of the market. Moreover, every option displays pros and cons, which must be taken into account when deciding upon the economic, organisational and managerial form of each service. The balance between advantages and disadvantages tends to change in time, as the technical conditions of production evolve and demand grows. Hence, an arrangement that is adequate in one context may not be adequate in another.¹⁴ Univocal responses (as often happens in the ideological debate on state versus private ownership) to rapidly developing market arrangements are inadequate. Figure 6 summarises the characteristics of the different market structures.

The economic advantages of the public and private monopoly are substantially similar: namely, the possibility of exploiting the different types of economies existing in the service production phase and the elimination of transaction and transition costs. Public monopoly allows also one to use any profits for socially useful purposes and to enact policies for the development of the service and related infrastructure, even when the necessary investment is not directly profitable for the company. The main disadvantages of the monopolistic arrangement are, to some extent, similar in both public and private cases. They are: (a) the exploitation of consumer’s rent; (b) no alternatives (no possibilities of exit) for the consumer; (c) poor incentives for efficiency; (d) no competitors for comparison by the public authorities. On the other hand, while a public monopoly can be responsible for improper costs and limited managerial autonomy, the private one is hard to effectively regulate.

To minimise the diseconomies of the monopolist, the government can:

- (i) reduce existing asymmetric information by forcing supplier firms to make their cost structure known, creating regulatory institutions (such as sectoral regulators) with specific competencies on the matter, institutionalising Service Contracts between administration and firm and giving full force to the user rights established in the Service Charter¹⁵ by the institution of ombudsmen;
- (ii) institutionalise and strengthen the role and weight of users by creating special watch committees to check the quality of service and to monitor tenders, thus further reducing information asymmetries, determining the competencies of politicians and administrators (and making sure that political parties do not impose improper costs on companies) and identifying tools to check the efficiency, effectiveness and quality of services;
- (iii) submit managers to a system of incentives based on indicators such as yardstick competition, benchmarking and user satisfaction;

(iv) evaluate the viability of the numerous proposals, which cannot be summarised here, emerging in the debate on the present relevance of market socialism (e.g. Bardhan & Roemer, 1994).

There are relevant differences between the two competitive alternatives that are present in the ongoing debate, although both focus on the market. In the case of competition in the market, users are given a considerable power of choice, which may provide the strongest incentives for firms to be efficient, minimising the exploitation of consumer's rent. However, since this organisational form works correctly only in specific environments, it is not always applicable. Competition for the market needs just the contestability conditions to be checked, but it has also to deal with what we labelled transition costs. In particular, if only one firm offers the service, this arrangement fails to ensure power of choice to the user since he or she will not be able to get suitable alternatives.

Finally, it is necessary to bear in mind that the choice of the most appropriate organisational option does not solve the problem of improving the quality of public services. The provision of a good service requires the drawing up of specific support policies and the adoption of appropriate control instruments. The nature of the

FORM OF MARKET	ADVANTAGES	DISADVANTAGES	CONDITIONS OF APPLICABILITY
Public monopoly	<ol style="list-style-type: none"> 1) Scale economies 2) Scope economies 3) Economies of vertical integration 4) Absence of transaction costs 5) Absence of transition costs 6) Public reinvestment of profits 7) Possibility of making investments, even if non-profitable, for the development of infrastructure 	<ol style="list-style-type: none"> 1) Users have no choice 2) Improper charges made by politicians 3) Weak productive efficiency incentives 4) Low managerial autonomy 5) Potential appropriation of consumer's rent 	<ol style="list-style-type: none"> 1) Sub-additivity of cost functions 2) Economic and/or institutional entry barriers 3) High sunk costs 4) Regional and temporal homogeneity of the demand and of the market
Private monopoly	<ol style="list-style-type: none"> 1) Scale economies 2) Scope economies 3) Economies of vertical integration 4) Absence of transaction costs 5) Absence of transition costs 	<ol style="list-style-type: none"> 1) Users have no choice 2) Monopoly rent 3) Weak allocation efficiency 4) Appropriation of consumer income 5) Weak efficiency incentives 	
Competition in the market	<ol style="list-style-type: none"> 1) Users may choose 2) Competitive incentives for efficiency and innovation 3) Lower regulation costs 	<ol style="list-style-type: none"> 1) Duplications 2) Higher transaction costs 3) Lower public control of the service 4) Lower protection of users 	<ol style="list-style-type: none"> 1) Absence of entry barriers 2) Absence of sunk costs (facility of exit) 3) Impossibility for single operators to influence market conditions
Competition for the market	<ol style="list-style-type: none"> 1) Makes it possible to exploit many monopolist's economies 2) The tender rewards the most efficient firms 	<ol style="list-style-type: none"> 1) Transition costs 2) Users have no choice 	<ol style="list-style-type: none"> 1) Contestability conditions 2) Existence of a pluralistic supply structure

Fig. 6. Advantages, disadvantages and applicability of alternative market's organisation for the public services.

supplier and the ownership of the infrastructure may also influence the outcomes of the organisational apparatus. Suggestions on the actions required are summarised in Fig. 7.

7. Conclusions

In this paper, we focused on the relations among three groups of agents: the government, the service supplier and citizens/users. In particular, the relations we have highlighted show the existence of two monopolistic and asymmetric market situations: the relationship between government and supplier firm and the one between supplier firm and users. This triangular structure shows the impossibility of identifying *a priori* a generally optimal form of organisation. According to circumstance, it may be inadvisable to eliminate monopolies, or else to eliminate them in one of the two dimensions, or finally, eliminate them in both.

We have identified four policy-making service phases: public oversight, financing, organisation and production. This helps us to understand that only in one of them—i.e. organisation—is the proprietary nature of the service suppliers significant. Public oversight and financing decisions concern mainly equity, social policy and fairness. The financing of public services through general taxation does not necessarily imply an inefficient supply, even though it is well known that the further the moment of collection of financial resources moves from that of service consumption, the lower the incentives to efficiency, since consumers are less informed about costs, the role of monitoring is reduced and the consumers' behaviour risks becoming relatively irresponsible. If the government decides to finance a service mainly through general taxation, it must replace signals from the market with other institutional-type signals that re-establish the conditions of transparency (monitoring the cost structure, promotion of responsible consumption, sanctions for suppliers and/or users who take unfair advantage of the services).

Our formulation allows us to address the public service reorganisation debate without placing too much onus on the public/private issue, which receives so much emphasis at the moment. The introduction of competitive devices certainly serves to improve the efficiency and effectiveness of public services. It would be wrong, however, to confuse the introduction of competition with privatisation. It is possible to have a competitive supply even if all the supplier firms are public, whereas a privatisation that leads to a private monopoly fails to ensure competitive arrangements. At the same time, privatisation does not necessarily produce a clear benefit for the community. If the market is not liberalised and a pluralistic service supply is not created, the transfer of ownership alone may even make things worse. Ownership *per se* does not generate incentives to efficiency, while market stimuli and a competitive arrangement do (see Vickers & Yarrow, 1988; Shleifer & Vishny, 1994). In many practical cases, privatisation programmes have been followed neither by cuts in tariffs and public financing, nor by improvements in the quality of services (Kagami & Tsuji, 1999).

Triangular relations allow us to distinguish better the functions to be performed by the government. Modern political systems cannot disregard regulatory and redistributive functions, whereas the productive function may or may not be performed by the state. Where effective market competition is viable, sectors with poor economies of scale and scope find it easiest to increase their efficiency through externalisation policies. On the contrary, sectors characterised by significant economies of scale and scope, in which it is hard to create an effectively contestable

FORM OF MARKET	OPTIMAL PROPRIETARY ARRANGEMENTS OF THE FIRMS	OWNERSHIP OF INFRASTRUCTURE AND NETWORKS	INCENTIVES FOR EFFICIENCY	PRINCIPAL RELATED FULFILMENT	CONTROL DEVICES	REGULATION AND CONTROL INSTITUTIONS
Monopoly	Preference to be given to public ownership	To be maintained public or under public control	Government's procurement policy Transparency on the cost structure Yardstick Competition	Inclusive regulation and guarantee of the independence of the firm from undue political interference	Internal control over the firm Users' involvement	Government's control over business Sector authority Ombudsmen
Competition in the market	Prevalently private, but also public or mixed	Property of the firms. In the case of networks used by more than one firm, public ownership or, if private, under rigid regulation	Possibility of obtaining higher market shares	Codification of minimum quality levels and suitable duties of suppliers	Protection of fair competition Users' information	Antitrust authority Sector authority Ombudsmen Government with prevalent protection functions
Competition for the market	Prevalently private, but also public or mixed	Preferably public	Tender Fear of losing the next auction	Unbundling Elimination of institutional entry barriers	Service Contract involvement	Government's (central or local) contracting with suppliers Sector authority Antitrust authority Ombudsmen

Fig. 7. Public policies to control the public service market.

market, draw no advantages in terms of efficiency from externalisation. In such cases, a monopolistic structure combined with a system of regulated institutional and price incentives and controls may prove preferable as far as it avoids transition and transaction costs arising from a more fragmented supply structure.

Our triangular pattern also brings out the leading role of citizens/users in the economic organisation of public services. They are the ‘weak vertex’ of the triangle because the institutional instruments they own to express their preference ratings and demands for change in services are indirect and relatively ineffective. Of course, the introduction of a competitive arrangement in the supply of services is the most direct instrument to limit monopoly power and it allows consumers the chance to choose and exit. However, since this arrangement is not always applicable and effectively realisable, its unconditioned introduction risks entailing net costs.

The main implication of our argument is that, in the event of ineffectiveness of the competitive mechanism (when exit is impossible, difficult or costly), policies must seek to strengthen ‘voice institutions’ for citizens, boosting the role of independent authorities and the bargaining power of users. Looking at the problem from this point of view, we grasp the need to introduce mechanisms designed to promulgate information about the actions due from politicians and suppliers and to set up committees, in charge of controlling services, in which users’ representatives are present. These institutional devices would be advantageous for the public administration itself, which would thus have a channel to monitor the performance of the supplier firms under its supervision and control.

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Notes

1. For an overview, see Centre for the Study of Regulated Industries (1997).
2. On the reform of regulation in industrialised countries, see OECD (1997a; 1997b).
3. The seminal contributions on tariffs are Hotelling (1938) and Boiteux (1956). See also Bös (1986).
4. We assume in first instance that public services consist of labour only (as in the case of home assistance to elderly people). The same concepts can, however, be extended in order to account for the financing of capital investment.
5. This statement is obviously at odds with the view voiced by many, like Shleifer (1998).
6. The structure proposed here assumes that the separation between the government’s two roles—as supplier (public oversight, financing, and choices of organisation) and as direct producer—has taken place. Even if the state supplies the service directly, it is advisable to keep the supply function separate from the production function. We thus assume that the government can split the two roles by identifying the objectives, performances and costs of the services supplied, even though evident relations of causality exist between the two phases.
7. In the light of Arrow’s (1963) Impossibility Theorem, the construction of this function requires the formulation of restrictive hypotheses; for example, in relation to individual preferences (contractible, or intermediate, or single-peaked preferences etc). The literature on the subject is huge; see Sen (1999) and the exhaustive bibliography contained therein.

8. It is worth remembering, however, that the service contract may not, in general, guarantee the achievement of a first best position, but of a second best one.
9. In a democratic system, there are several checks and balances that should protect the users, including parliaments, customer associations and trade unions. Still, the greatest of users' powers is represented by local and national elections.
10. Waterson (1984) call it 'monemporist'.
11. Here we refer to the analytical category of 'voice' (Hirschman, 1972), which seems particularly appropriate in the case of public services supplied under monopoly conditions.
12. The literature on the subject is very vast, see Demsetz (1968a; 1968b) and Baumol *et al.* (1982).
13. With the exception of Laffont & Tirole (1993, ch. VIII and IX) and of Vickers & Yarrow (1988, p. 112) who, nonetheless, confine themselves respectively to the problem of investments and of asset hand-over (that is, the passage of capital goods from the service operator to the new entrant) as part of the bargaining negotiation in conditions of bilateral monopoly.
14. Think of the typical case of some industries—telecommunications and the postal service in particular—which were characterised for a long time by conditions of natural monopoly, and which now, as a result of important developments in technology and demand, tend to justify a sharply competitive arrangement.
15. The reason why suppliers ought to be controlled by independent regulatory authorities with objective functions similar to those of citizens/users (who ought to express judgements on public services for comparison with the contents of the Service Charter) is that, when the principal (citizens/users) is unaware of the realisation of the state of nature, supervisor (politicians) and agents (bureaucrats) collude to the detriment of citizens (Tirole, 1986).

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