JOURNAL OF PUBLIC PROCUREMENT, VOLUME 7, ISSUE 1, 34-61 2007

HYBRID ORGANISATIONS IN THE PROVISION OF LOCAL PUBLIC SERVICES

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ABSTRACT. The aim of this work is to investigate the risk of anti competitive behaviour implied by temporary groups of service providers. The point bears policy implications as local authorities, following European Union directives, have stressed the role of such alliances in the public procurement of services. We first summarize the fragmented literature on temporary horizontal alliances in public works and services. We then deal with a case study on local public transport in order to evaluate the performance of temporary groups of service providers. The coopetitive perspective is finally discussed as an explanation stressing that, within firms' groups, both processes of value creation and value sharing take place.

INTRODUCTION

The introduction of competition into service markets, previously monopolized by public agencies, has slowly developed in Italy in the last ten years under the pressure of European Directives encouraging the diffusion of a culture of competition in central and local government.

The classical public choice arguments on competition in the public sector have strongly influenced the ongoing reform. Competitive pressures may provide the incentives or the constraints'

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structure required in order to direct the behaviour of public officials towards the public interest. "This does not imply that transferring responsibility for a publicly funded service to a private organisation is sufficient to increase efficiency. It is competition on the market that is important, not whether production is public or private" (Boyne, 1998, p. 697).

In this perspective there is little recognition that hierarchies may, in some circumstances, be more efficient than markets, because transaction costs connected with the competitive tendering may be higher than efficiency gain so generated. In fact, public monopolists are not replaced by other agents through spot contracts in markets where buyers and sellers have complete information. According to Williamson (1975) transaction costs are associated with writing contracts, monitoring performance and controlling the behaviour of contractors.

We are mostly concentrated on another cost of competitive tendering, though, that is not considered in the classical public choice literature: namely the rent seeking behaviour followed by organisations whose aim is to win tenders for public services provision.

The notion of rent seeking could be applied to competition between public bureaus and private firms because "[w]hen councils embark upon a process of competitive tendering both the in-house workforce and external agencies have an incentive to persuade decision makers that they should be awarded a temporary monopoly on the service provision, because the additional expense of tendering recurs every time a contract is renewed by competitive tender" (Boyne, 1998, p. 701).

In the last years the Italian Antitrust Authority has more and more frequently given indications about the risks of anti-competitive effects of grouping of firms in public tendering for the provision of services. In particular, "regarding the widespread phenomenon of temporary grouping of undertakings, the Authority pointed out that this form of cooperation among firms could easily be used to restrict competition thereby conflicting with the interests of the contracting administration as well as with the aims of national and community legislation, in which this form of association was viewed as a means of enlarging the number of participants and thereby increasing the competitive challenge during the call for tenders" (AGCM, 2003, part e). The

point bears policy implications as local authorities, following European Union directives, have stressed the role of such alliances in the public procurement of services. A study of the relationship between the reform and the spread of this kind of groups cannot but raise a number of questions.

First, it should be asked whether the temporary character of the alliance is able to exclude the possibility that it will later develop into a more stable form of collaboration between firms - such as a consortium or even a merger or take over- or if it is an occasional phenomenon for participating to a tender.

As a second point, it should be asked if these temporary groups represent, as has been suggested by the Piedmont Regional Government, a suitable form of response to a change in the competitive environment, calling for a greater degree of concentration in the local transport industry, to be able to compete outside the area of origin.

The paper will provide a theoretical framework of hybrid organisations, present a case study of local public transport in Piedmont, discuss the results of the case study in terms of coopetitive strategy, and finally present the implications for Italian regulation policy in the field.

THEORETICAL BACKGROUND

Temporary Groups of Firms

The Directive 2004/17/EC of the European Parliament and of the Council dated 31 March 2004 applies to activities relating to the provision or operation of networks providing a service to the public in the field of transport by railway, automated systems, tramway, trolley bus, bus or cable (Article 7). It explicitly admits that groups of economic operators may submit tenders or put themselves forward as candidates (Article 11).

The reason behind such statement is that the EU law-maker's aim is to have the widest possible participation of small and medium firms in tenders, so as to allow the exploitation of synergies and scale economies. In fact, tenders, because of their technical, organisational and financial complexity, would otherwise be beyond the possibility of a single firm or small firms. In this way the almost irrecoverable costs,

incurred in creating a company, whose activities are going to be liquidated immediately if the tender is unsuccessful, are avoided.

This led various sized firms to make temporary agreements in the provision of public services. The most widespread form of grouping is a temporary association of firms, while fewer consortia and subcontracting arrangements are registered. As a preliminary step to evaluate the role played by these different structures we need to draw a complete picture of the temporary groups, including their legal characteristics.

Temporary groups of firms, formed for a period of time sufficient to carry out a specific activity, are created for the mutual benefit of two or more firms which desire to take part in a tender or to be awarded a contract for important public work. Only by collaborating can they guarantee that the whole work will be completed to everyone's satisfaction.[1]

The internal relationships shed within the group do not even form the conditions for it to be said that a partnership or a company has been created, as the statute excludes such a hypothesis and the result is somehow similar to a consortium with external activities.

The European Commission is aware of the risks of instability connected with the lack of a legal form so that Article 4 of the Directive of the European Union 18/ 2004 reads: "groups of economic operators may submit tenders or put themselves forward as candidates. In order to submit a tender or a request to participate, these groups may not be required by the contracting entities to assume a specific legal form; however, the group selected may be required to do so when it has been awarded the contract, to the extent to which this change is necessary for the satisfactory performance of the contract."

This does not lead, then, to the compulsory creation of an autonomous legal entity that remains discretionary. By creating a temporary association, the partner firms, while remaining legally separate, can submit a joint tender obliging each other to complete the work together. Such a tender is submitted by the firm holding the partners' proxies which assumes the role of representative and takes on the task of managing the relations within the group and with the contractor. It represents the group in all the activities for which the

association has been formed, but ceases to represent the group when the activity is completed.

Relations between the members and the leader are often informal, based on collective trust, more than on written rules, so that a temporary group of firms is without its own identity or legal autonomy, even though the associate firms offering to supply services together assume joint responsibility with regard to the contracting body.

As the group does not form an autonomous legal entity each member firm keeps its own autonomy regarding fiscal and social responsibilities. There is not an organization of merged firms but associate competitors who, vis à vis the tender, assume joint responsibility with regard to the administration, as well as to the subcontracting firms and the suppliers. There are no specific agreements, as in the case of subcontracting, nor more stable grouping such as consortia (regulated by the Italian Civil Code Article 2602).

Temporary associations can be horizontal, vertical or mixed. In the case of horizontal associations a relationship is established among firms carrying on a homogeneous activity: these firms join together so as to be able to provide the necessary requirements to take part in a tender. In the second case, vertical associations, a firm carrying out the kind of work which is the main activity involved in the tender, assumes the role of leader and brings together the other firms through subcontracting.[2] In the third case, mixed temporary associations, both horizontal and vertical features are present.

Temporary groups of firms must not, however, be used to create restrictive agreements regarding competition. From an anti-trust point of view, in fact, a temporary association of firms, created in order to take part in a tender, is not different from a cooperation agreement among firms who find it advantageous to jointly supply a product or service on the market. This legal paradigm should therefore be considered in the light of the usual antitrust criteria, taking into account the kind of competitive relations existing among the parties and market structure. As regards the first point it is worth noting that possible restraints on competition should be looked for in temporary associations of firms, given that they are formed by direct or potential competitors willing to reduce supply. On the other hand, agreements

among firms at different stages of the manufacturing process will usually bear positive effects.

With this in mind the European Commission has stated in the Communication on cooperation between enterprises of July 29, 1968, that decisions and practices agreed between firms which do not restrict competition "should have the sole aim of creating a group to carry out a work together when the firms taking part are not competing with each other for the work to be done or they are not able to do the work alone."

Such temporary associations of firms were born, mainly, in the house building industry, as forms of cooperation, characterized by a high degree of instability and high turnover of participants. On the contrary, in the case of services provision studied in this paper, collaboration is closer and continues among the same firms for the whole length of the contract for providing local transport service awarded by the public authority. These temporary groups may, thus, appear as a mere defensive weapon aimed at protecting local firms against the potential outside competitors in the area.

The Economics of Hybrid Organizations

The creation and development of temporary contractual relationships among firms of various sizes aimed at coordinating activities for the completion of a specific task, while the members remain autonomous and independent, are usually favourably considered by economists in the new institutional literature.

Cooperation agreements between firms are, in fact, an intermediate organizational form, somewhere between the two extreme alternatives of firms' growth, endogenous or exogenous by leveraged buy outs, and market transactions. In the words of Ménard (2005, p. 297), "the underlying idea is that when investments among partners are specific enough to generate substantial contractual hazards without justifying integration and its burdens, and when uncertainties are consequential enough to require tighter coordination than what markets can provide, parties have an incentive to choose hybrids."

Furthermore, Ouchi (1980) comments that the relationships between the participants have the characteristics of a clan. Finally, Holmstrom (1988) observes that the contractual relations can be so

informal as to lead to transactions between participants not dissimilar from those taking place within a firm.

Why are alliances formed? Richardson (1972) was the first to point out how such agreements are the most efficient form of expansion when firms intend to develop complementary activities, difficult to achieve because of the effort needed to acquire skills, know-how as well as a productive and organizational structure. In Italy, Mariti (1980) pointed out the relevance of such alliances as a second best solution when they limit the need to invest resources in research and production. Mariti and Smiley (1982) found that the main reason lies in technological complementarities, economies of scale and willingness to enlarge respective market.

According to Williamson (1990), though, an agreement is attractive when internal growth is considered to be very risky, that is to say, when the returns on investment are expected to be decreasing and when the costs of expansion tend to increase. Cooperation between firms gives rise to inter-organisational groupings in which the boundaries between one firm and another gradually become less distinct and more permeable as relations between the firms become more permanent and so call for a degree of coordination between the parties which will condition the behaviour of the firms involved.

Endogenous explanations for interfirm cooperation stem from the fact that a firm must solve technical, organisational and financial problems in order to develop its own strategy. So Williamson sees collaboration as a means to reach greater efficiency in order to reduce transaction and production costs, while Pfeffer and Salancik (1978) consider it as a way to reduce uncertainty by making relationships with the environment more stable, and yet others see it as the pursuit of a competitive advantage through sharing and jointly developing resources and skills (Das & Teng, 2000).

From the point of view of efficiency, an agreement is clearly better than the alternative of a merger when at least one of the partners' production costs are lower than the others', for example, because of the large firm's external diseconomies. An agreement is also to be preferred to market transactions when there is high uncertainty and it is difficult to put a value on the service (Barney and Ouchi, 1985). For instance, an agreement based on a rule to share results that allows the joint use of resources and information among firms being in a condition of mutual hostage, while the requisites, regarding the

performance and the behaviour of the parties involved, are not specified ex-ante.

When looking at temporary groups of firms created in order to participate in a public tender, we are faced with a moving terrain, where definitions are not stabilized yet (Ménard, 2000). There is, indeed, a great variety of agreements among legally autonomous entities doing business together without unified ownership. The list of hybrid organizational forms offered by Morroni (2006, p. 199) includes "long term supply relationships, strategic alliances, franchising, collective trademarks symbiotic arrangements equity cross-holdings, joint ventures, partnerships, consortia, supply chain systems, business associations, networks."

The list is probably incomplete as it does not include the subject of our paper, namely the temporary groups of firms. All of them are consistent with the model developed by Williamson (1971), according to which hybrid organisations are neither markets nor hierarchies and have to be analyzed focusing on their own specific characteristics.

Business studies scholars in many papers describe how subcontracting operates in certain industries (mostly in the automobile case), whereas sociology and management journals pay more attention to these organisations (Grandori & Soda, 1995). Some common features of this kind of agreements can be summarized as follows.

First, economic incentives are the driving force behind these arrangements. By pooling their resources firms aim at increasing rents when full integration could result in a loss of flexibility, even though sharing collectively accrued rents requires strict coordination agreements. In fact, "hybrids are selective systems: choosing partners is a key issue, because they provide complementary resources, thus creating dependencies" (Ménard, 2005, p. 298).

Second, hybrid organisations always involve a form of joint planning, at least for decomposing tasks among partners.

Third, information flows among partners often show strong asymmetries, particularly when the arrangement is organised around a leader whose bargaining power may affect the continuity of the relationship. The success of the agreement requires a certain level of cooperation, so that partners lose part of the autonomy they would enjoy acting separately in the market, while not gaining the whole rent

acquired by the hierarchical organisation, which is shared among partners, in a way that may be heavily biased towards the leading firm.

Careful attention has to be paid to the forms in which competition takes place: on one hand different hybrid organisations may bid for the same transport route while one firm is present in two different groupings. On the other hand, different firms participating in the same organisation are competing against each other in different geographical transport markets. In most case, partners' firms compete in the private transport market, whilst they cooperate in the same area in the local public transport.

The role of uncertainty, stressed in the explanations of hybrid organisation both by Eccles' work (1981) on construction industry and by Ouchi's theory (1980) of clans, seems to be less central in the creation of temporary alliances in local public transport, as it is difficult to ascertain uncertainties connected to transaction in inputs or related to output or both. Inputs are heavily standardised, and output, measured by vehicle kilometres provided, is not connected to market demand and consumers' preferences, because it is fixed and predictable at the time of the auction.

However, the settling of long term relational agreements allows partners firms to face unpredicted contingencies by organising reserves such as equipment, and capabilities, consisting in our case of buses and drivers, so that hazards can be shared among partners. Mutual dependence or bilateral dependence from a leading partner, developed within a hybrid arrangement, makes the rule for sharing rents a key issue, just as in cartels determining the instability of the agreement.

The difference in the case of hybrid organisational forms is based upon two points: the lack of outside options for each firm has to be considered, along with the fact that partners' firms remain legally autonomous and responsible for a very large set of decisions when the network is quasi integrated (Ménard, 2005). Mutual dependence is accepted because it generates gains offering a strong incentive to protect partners' rents sheltered from market forces. (Goldberg, 1980).

The following questions may arise. First, is efficiency improved within the hybrid organisation in comparison with single operating firms? If parties remain legally autonomous how can efficiency be

improved, or even measured, within the organization, in such a weak institutional environment? For instance, Ghosh and John (1999) underline that two different kinds of opportunism may arise, one in which parties engage in behaviour that reduces their own costs regardless of its effects on total gain for the partners in the network, such as shirking; and the other in which parties engage in a behaviour that imposes costs on their trading partners to force a more favourable share of the original, such as hold up.

Reducing these kinds of contractual hazards implies a very accurate selection of partners and clauses that can efficiently reduce the presence of opportunistic behaviour. Provisions that can constrain opportunism are limited because contracts remain incomplete being too costly to establish fully binding rules, particularly when many different firms are involved in the organization. It is, however, worth noting that contractual relationship in our case lasts for a long period of time, even longer than in the Eccles' sample, where the average contractual relationship lasted for five years or more.

The second question stems from the fact that firms engage in hybrid organizations because they expect quasi rent or accrued value resulting from their participation. What is, then, the potential that determines the existence of such rents in our case? A single contract with the local authority for a whole transport basin, instead of many contracts for different routes included in the area, gives more bargaining power to the association enabling it to apply a uniform pricing policy within the area, whereas it is difficult to ascertain if prices charged by the group are related to costs imposed by the system.

In fact, as it is well known, an agreement between firms, especially a horizontal agreement, serves above all to increase the firms' market power. However, the possible anticompetitive effects of horizontal groups have been stressed only with regard to international alliances that might be defined as pure cooperation agreements, because they are characterized by maximum coordination and absence of dominance. Just the opposite happens in our case study, because of the dominant role assumed by the proxy holder firm with regard to the contractor, especially when the alliance concerns a large number of small firms and a much larger proxy holder.

The temporary groups seem to increase profitability or improve returns on investment not so much by taking advantage of economies of joint production, (i.e. using more intensively the fleet of vehicles or workers of one firm by another partner firm), as by an increase in market power with the consequent raising of barriers of entry into the transport service area, where the licence is awarded to one temporary group only.

The third point, strictly related to the quasi rent formation, is the problem of their sharing because of the impossibility of fully specifying ex ante any kind of enforceable rule, since the mix of pooled assets, non- observability and legally distinct property rights opens room for opportunism. According to Ménard (2005, p. 301) three regulatory mechanisms are identified by the literature on hybrids:

One is the reputation effect. Hybrid organizations are characterised by repeated transactions among partners. Frequency of transactions provide them with the possibility of withdrawing future effects if fair play is not the guideline in sharing gains generated by mutual efforts. A second possibility is the existence of formal negotiations. A third mechanism is the creation of a formal authority.

We can add a fourth one in hybrid organisations characterized by the presence of a major firm as the main partner to whom is attributed the distribution of the accrued rents, by simply giving proxies for negotiation with the contractor.

A last question has to be debated, namely the restrictive provisions in contracts that limit the range of action of partners and identify zones of overlapping where collective decisions prevail. In the case of horizontal organizations, these restrictions usually distort competition and have negative consequences on prices. We need to compare these negative effects of contractual restriction in horizontal hybrid organizations with their eventual positive effects as a coordinating device implementing efficiency.

It seems in our case that the major firm in the network plays the role of the private administrative agencies whose presence has been underlined in several works by Ménard (1995; 2000). The leader's power, explained by the presence of hierarchical elements in contractual agreements, is mainly based on her capacity to influence the contractor responsible of the public procurement.

Little attention has been paid, though, to the conditions enabling to establish equilibrium between the firms in a temporary group, particularly between the leader firm and the other firms. Available information indicates that the strategy adopted by the association is seldom distinct from that of the leading firm, particularly when it is the largest firm, therefore considered to be the most suitable to ensure coordination between participants. It therefore follows that the group seldom adopts a different price strategy to that of the member firms, which continue to carry out the service they carried out autonomously before the group's creation.

There is, thus, no incentive for them to become more competitive so as to reach objectives which would otherwise be beyond their reach. As economic relations between the partners are not clearly defined, the distribution of costs and benefits must be negotiated and given the different sizes of the member firms, the distribution of the advantages is often unequal.

It should be mentioned that the growth of collaboration among local public transport firms is certainly in response to pressures derived from liberalizing the market, but the alliances, which are always horizontal and created with geographic criteria, have the objective of keeping the participants' activity in the area of origin. Real and potential competition between the operators of the different bus services in the transport service area has been reduced, but efficiency has not necessarily been increased through the resulting economies of scale and/or the possibility of using complimentary resources more efficiently, even though the reform has definitely reduced uncertainty.

CASE STUDIES

Temporary groups of LPT firms in Piedmont

We now deal with the case of temporary grouping present in the local public transit (LPT) sector in Piedmont. The choice of a regional extent is particularly relevant because of its consistency with the Italian regulatory framework issued from the LPT reform process started with Law 542/1997 and following legislative modifications still under way. In particular the Constitutional Law n. 3/2001 transferred the exclusive competences from the national state to the twenty regional authorities. Each of them is now responsible, in its territorial jurisdiction, for planning and policies relative to LPT.

The example of Piedmont can then be generalised to the other Italian regions. Piedmont's regional law relating to local public transport (L.R.n.1/2000) defines a temporary group as a legal entity to be privileged when participating in tenders and when they are being assigned.[3]

But what have been the consequences of this reform on territorial planning and firms' strategies? The Region of Piedmont has delegated responsibility to local authorities, introducing wide-ranging decentralization for planning and assigning contracts for local transport services provision.

The delegated authorities, identified in the 8 Provinces of Piedmont responsible for inter-city transport and 16 large municipalities for urban services, have defined, through transport plans, the boundaries of the service areas. The new traffic basins seem simply to reflect the provinces and municipalities' jurisdictional boundaries, having been obtained by adding up the existing routes. This passive transport policy seems rather awkward as the definition of network size bears relevant implications: both on the cost of service provision, because of the exploitation of scale economies and on the number and strategic behaviour of firms, as a tender for a whole basin requires large firms or temporary groups.

There are two types of tenders for the allotment of the services: the first one mainly concerning intercity transport at province level and the second one urban transport at municipality level. Transport contracts are made not with single firms, but with temporary groups of firms. Temporary groups were in fact created, bringing together firms which previously had the licence to provide bus service on the different lines, later gathered in a transport service area. As urban transport is characterised by huge variability, which makes meaningless to work with average indicators, we will focus on temporary groups submitting tenders for intercity transport.

By elaborating information made available by the Region of Piedmont, we built a data set including 78 LPT companies, 66 privately owned and 12 publicly owned, mainly local municipal companies. They cover nearly 95% of the total transport supply of bus transportation at urban, intercity and mixed (both urban and intercity) level in Piedmont in 2002 and are grouped in 25 temporary associations. Descriptive statistics referring to technical and economic efficiency have been built for both firms and groups.

Table 1 presents descriptive statistics for the sample of public firms and private firms, while Table 2 shows the same descriptive statistics for temporary groups. Public and private firms are very different in size. We use as a proxy for the potential supply of the considered companies the vehicles/kilometres equal to the product of the number of travelled kilometres by the number of available vehicles, whereas vehicles and employees are the inputs considered.

Public companies run more than 6.3 million vehicle-Km per year and their mean size in terms of number of employees and vehicles is 366 and 142, respectively. On the other hand, private firms cover on average about 833,000 vehicle-Km per year employing 26 employees and 22 vehicles.

TABLE 1
Descriptive Statistics of Transportation Firms in Piedmont (2002)

	Mean	Median	Std. Dev.	Min	Max
12 Publicly Owned Buses					
Vehicle-Km (in 1,000)	6,385.4	1,612.5	12,500	64.716	58,000
Employees	365.5	60	830.4	3	3,578
Vehicles	142.2	44	249.3	2	1,471
66 Privately Owned Buses					
Vehicle-Km (in 1,000 Km)	832.6	381	1,236.9	5.18	5,735
Employees	26.2	13	38.5	2	194
Vehicles	21.7	15	26,5	2	125
Share of Publicly-Owned and Privately-Owned Bus Firms					
Types of Transport		Public (%)		Private (%)	
Intercity Transport*		0.16		0.71	
Urban Transport		0.22		0.02	
Mix Transport		0.62		0.27	
Total		100.0		100.0	
Sized of Firms		Public (%)		Private (%)	
Small firms		0.44		0.86	
Medium		0.16		0.10	
Large firms		0.40		NA	
Total		100.0		100.0	

TABLE 2
Descriptive Statistics for Temporary Groups in Piedmont (2002)

	Mean	Median	Std. Dev	Min	Max
Vehicle/km	3,949,397	2,931,805	3,693,133	620,628	130,184,414
Employees	130	88	125	10	436
Vehicles	93	50	124	5	528
Number of firms belonging to each group	6	3	6.6	2	24

Public and private companies are also characterised by different forms of differentiation in supplied services. Public companies mainly supply mixed services (both urban and intercity transport), while private firms mainly provide intercity service. Besides most private firms are small in size (less than 50 employees), while public firms are either very small or very large (with more than 150 employees). The Piedmont public transport market is dominated by the public company belonging to the municipality of Turin providing mixed services and entitled with nearly 50% of the regional employees of the LPT sector.

In summation, public firms are characterised by larger size and mixed urban and intercity services, while private firms mainly supply intercity services and are smaller in terms of employees, vehicles and travelled kilometres.

Table 2 presents the same descriptive statistics for the 25 temporary groups providing intercity transport for the year 2002. High variability is present as well. The mean group includes 5.9 firms with 130 employees and 93 vehicles. There is one group formed by just two firms and at the opposite one group formed by 24 firms. Is efficiency enhanced by groups submitting tenders as compared to single firms?

Table 3 compares indicators of economic efficiency for intercity transport as provided by private companies, public companies or groups. Such comparison is justified on the grounds that public and

private bus companies, that provide local intercity transport in Piedmont, are the natural alternative to groups.

As regards the impact of ownership all indicators point to a lower performance for publicly owned firms. (Ottoz, Fornengo & Di Giacomo, 2005). The share of labour cost over total costs for the groups (0.539) is in between the average private share (0.52) and the public one (0.56). The average cost, represented by total cost over vehicles kilometres, is higher for the groups (2.31), as compared both with the private (1.99) and the public (2.15) average costs. The average cost of labour (33,675) is again higher than the public (33,400) and the private (32,875) costs. The cost of labour per vehicle kilometre (1.24) is again higher for the groups as compared with public (1.16) and private (1.02) values.

TABLE 3
Indicators of Economic Efficiency: Intercity Transport (2002)

	Private companies	Public companies	Intercity groups
Share of labour cost over total cost	0.52	0.56	0.53
Total year cost per vehicle/km Euro 2002	1.99	2.15	2.31
Cost of labour per employee Euro	32,875	33,400	33,675
Cost of labour per Vehicle/Km Euro	1.02	1.16	1.24

The available data for firms and temporary groups show that cost efficiency has not been improved by grouping. This comparison should remind us of the possible anticompetitive effects of horizontal agreements in terms of restraints on competition and collusive behaviour. A piece of information which may be particularly relevant in giving a realistic picture of the interrelations among groups is given by the simultaneous consideration of the firms present in each group together with the groups to which each firm belongs. Table 4 provides such picture.

TABLE 4
Local Public Transit Groups in Piedmont (2002): Number of Firms in Each Group and Groups to Which Each Firm Belongs

Number of Firms in Each Temporary Group	Number of Temporary Groups	Group Sizes to Which Each Firm Belongs	Number of Firms
2	13	1	48
3	4	2	18
4	1	3	6
6	1	4	2
7	1	5	2
8	1	6	1
12	1	8	1
13	1		
14	1		
24	1		
	25 groups		78 firms

Twenty five firm associations are created in the area of Piedmont for intercity public local transport, whose dimension greatly varies as Table 4 shows. At least one of them includes over 20 firms, however, most groups include only 2 or 3 firms. A similar variability is seen in the distribution of the firms in the different groups. In fact most firms, 48, are members of only one group, 18 firms are present in two, but there are cases of firms belonging to 5, 6 or even 8 groups.

"The sole aim of creating a group is to carry out a work together when the firms taking part are not competing with each other for the work to be done or they are not able to do the work alone," as the Communication of the European Commission of July 1968 75/3 reads. This does not seem to be the case of the dominant public firm, which is present in 8 out of 25 groups.

Two polar cases provide evidence for this statement. In the first one, summarized by Table 5, the already mentioned largest public firm in Piedmont LPT industry, is present in 8 groups: one represents its core activity with 80.6% of vehicles/kilometres being provided, whereas the participation in the other 7 groups is very scattered. But

the firm has a dominant position at least in three other groups, where it covers a relevant share of the total supply, as Table 5 shows.

TABLE 5
Share of the Dominant Public Firm in the 8 Intercity Temporary Groups in Piedmont (2002)

	% vehicle/km of the firm in the group	% of firm's total vehicle/km
Temporary group 1	39.2	0,6%
Temporary group 2	10.2	0,7%
Temporary group 3	9.9	2,2%
Temporary group 4	43.8	8,7%
Temporary group 5	0.5	0,1%
Temporary group 6	74.2	6,8%
Temporary group 7	12.7	0,1%
Temporary group 8	96.7	80,6%

The opposite situation characterizes one of the provincial basins, Cuneo, where 24 firms have formed a temporary group whose structure is depicted in Table 6. In this case it appears that 16 out of 24 firms have in fact gathered exactly "because they were not able to do the work alone" producing in some case 100% of their output in the group itself. On the opposite the participation of one of the two public companies does not appear to be justified in terms of efficiency as it covers only 2.2 of its total vehicle/km.

DISCUSSION

Cooperation, Competition or "Co-opetition"?

A significant part of the literature examined shows that the standard neo-classical explanation of firms' agreements as rent seeking behaviour, oriented toward increasing market power does not usually hold (Ménard, 1995; Gulati, 1998; Ghosh & John, 1999). In our case study this perspective emphasizes the search of above normal profit realized when the firms' network gets higher prices for

TABLE 6
Composition of the Largest Temporary Group in Local Public Transit in Piedmont (2002)

Firms	% vehicle/km of the firm in the group	% of firm's total vehicle/km
Firm 1 (private)	0.1%	100.0%
Firm 2 (private)	4.2%	100.0%
Firm 3 (public)	33.3%	82.4%
Firm 4 (private)	0.4%	2.6%
Firm 5 (private)	0.3%	10.8%
Firm 6 (private)	5.8%	80.4%
Firm 7 (private)	0.5%	100.0%
Firm 8 (private)	0.8%	18.7%
Firm 9 (private)	3.3%	36.8%
Firm 10 (private)	0.5%	100.0%
Firm 11 (public)	9.9%	2.2%
Firm 12 (private)	3.2%	81.8%
Firm 13 (private)	0.2%	100.0%
Firm 14 (private)	0.7%	31.6%
Firm 15 (private)	9.6%	91.6%
Firm 16 (private)	3.8%	89.4%
Firm 17 (private)	0.8%	69.7%
Firm 18 (private)	1.1%	100.0%
Firm 19 (private)	2.0%	58.1%
Firm 20 (private)	2.5%	86.3%
Firm 21 (private)	12.2%	83.2%
Firm 22 (private)	1.9%	83.1%
Firm 23 (private)	2.7%	100.0%

the transport services it provides, or at least if it is awarded the contract offered by the local public authority or the renewal of it. With reference to the horizontal interdependence, this perspective underlines the rent seeking behaviour of the partner firms taking place through the value creation of the hybrid organization, that brings to each firm higher profit than those obtainable by acting alone. This is the polar case represented by Table 6, showing the participation of the largest public firm to 8 temporary groups,

participation which cannot be explained in terms of efficiency. According to Padula and Dagnino (2002, p. 7) in this case:

The creation of economic value occurs within the firm whereas interfirm interactions influence the distribution of that value. That is the case both for horizontal and vertical interdependence. With reference to the former, the price of exchange explains the part of economic value retained by the supplier and the part of economic value allocated to the client. With regards to the latter the above normal returns result from the allocation of customer preferences among competitors (if they exist). Since competitive success and value appropriation by one firm means the defeat and the loss of value of the other firm involved in the game, firms' interdependence is based on a zero sum game. In a business world in which any interdependence qualifies a zero sum game the interest functions of the firms involved in the game are in unrecoverable contrast.

As a reaction to this approach, the cooperative perspective emphasizes the development of collaborative advantages among firms pursuing convergent interests and deriving mutual benefits. This perspective seems to apply to the second polar case summarized in Table 6 representing the case of the Cuneo basin, at least for firms without outside options, because temporary groups cover all their transport capacity.

The advantages of cooperation have been intensively examined by the new institutional economists following the transaction costs paradigm, mainly in vertical interfirm organisations. They stress the importance of interfirm relationships as a strategic asset and a source of competitive leadership in the current competitive environment, particularly in high technology industries where strategic alliances in R & D are usual, or in complex technological systems, like aerospace or automobile production. According to Padula and Dagnino (2004, p. 8) the theoretical framework underlying the "cooperative" perspective can be summarized as follows:

The sources of the economic value creation and the roots of the firm superior performances are located within the firm 'interdependence. Firms' interdependence is based on a positive sum game whether the value creation is a joint process which takes place among two or more partners or whether partners take part in the cooperative game with the goal of deriving mutual benefits. It follows

that the more successful a partner is, the larger are the benefits for the other partners and vice versa. Moreover, the importance of joint value creation implies a mutual dependence game structure that is a strong antidote against the risk of opportunistic behaviour and, by consequence, a powerful incentive to collaborate.

The "coopetitive" perspective (Brandenburger & Nalebuff, 1995; 1996) recognizes that within firms' groups either processes of value creation or value sharing take place. Both competitive and cooperative pressures are present giving rise to a strategic interdependence among firms that can be described as "coopetitive system of value creation." This is the case of intermediate groups, laying in between the two discussed polar cases, where we ignore the way in which the value, jointly created in the network, is translated into actual benefits for each firm. The sharing problem inside the hybrid organisation implies some kind of fairness into the cooperative game structure among partners (Grandori, 2001) facing the uncertainty deriving from the variability of the benefits each partner would enjoy from cooperation, as these benefits can't be known ex ante.

Uncertainty implies, of course, the possibility of one or more partner to behave opportunistically (Grandori, 1999) and the development of trust inside the network weakens the capability of detecting such behaviour. Opportunism and trust coexist in the network. Within the above mentioned forms of firms' organizations we can detect different degrees of trust in interfirm relationships, which has to be particularly strong in our case of temporary grouping where formal contractual relations are very weak or even non existent.

To sum up, competitive and cooperative pressures are both simultaneously present in hybrid organisations in view of the fact that partners have both private and common interests. They are in fact, really "coopetitive" as the benefit for each firm derives from the contract the temporary group can obtain as compared with the contracts each firm might obtain participating to the bidding separately.

There is, however, a competitive pressure when mutual dependence is not balanced, as it happens if very important differences in size, between the leading company and the other ones, are present. In this case the scope of the alliance is relatively low for

the large firm, which could easily compete for the bid standing alone, but is very high for the small and medium sizes firms, which could be withdrawn from the competition. According to Padula and Dagnino (2002, p. 10): "The relative scope of an alliance describes the business shares of the partners who fall into the object of an alliance and explains the distribution between individual or private benefits and the common benefits."

In our case, we can hypothesise that when both asymmetric size and low relatives scope are present, the value sharing of the hybrid organisation is heavily biased in favour of the large firm. A better knowledge of the contractual relationships inside hybrid organizations seems necessary in order to identify consequences relevant from the antitrust perspective. According to Loven and Krus (2004, mimeo) we need at least to distinguish three types of "cooperation" as follows:

- *Neutral "Coopetition"*. In this case, the results of each firm can be simply added, for instance when a group is formed by two firms servicing two routes within the transport area instead of each firm servicing one route alone. No improvement in efficiency is foreseeable because each firm does exactly the same job it was doing before grouping, with the same resources. Only the transaction costs of the local authority are reduced because of a single service contract instead of two. In this case it is easy to share the profits in direct proportion to the number of units produced by each firm.
- Competitive "Coopetition." In this case, the joint value is less than the sum of values each firm could produce by itself. This could be the case if a considerable effort is needed in order to be able to combine the result, such as overhead costs required to coordinate people. In this case our reasonable assumption is that if one firm is dominant and support the overhead for participating to the bid, it should take most of the benefits thus allowing a negative result for smaller partners.
- Cooperative "Coopetition." In this case the combined value is higher than the sum of values of each participant, because of the existence of scale or scope economies that are obtained only when the single efforts are combined, for instance if individual partners have complementary capabilities.

POLICY IMPLICATIONS

European directives as well as Italian laws accept the grouping of enterprises with the aim of increasing the participation of small and medium undertakings. In Italy, almost each local authority envisages firms' aggregation in order to submit a common bid for local transport services.

Careful attention has been devoted to the fact that the larger, the market considered the higher is the probability of the creation of barriers to entry for small and medium firms, even though one of the most important aspects of the procurement design is to promote entry. On the contrary little attention has been paid to the consequences of such grouping of firms in terms of competition among bidders.

However, even if official rules allow firms' temporary groupings in order to submit a common bid and no restrictions to grouping exist in the law, usually national antitrust authorities provide some indications about the pro-or anticompetitive effects of such grouping, The usual criteria is that, in order to obtain a sufficient level of competition in the auction, grouping should be prevented between two or more suppliers able to bid individually (Piga, 2004). This kind of discretionary restrictions seems insufficient to achieve a good level of competition in the provision of local public transport services.

Moreover it is worth noting that in such auction usually the firm's group may be the sole participant to the bid, whilst an acceptable level of competition should require at least two or even more participants. In order to limit collusion, competition could be increased by splitting the contract to be assigned in relation to the structure of the potential markets (urban-intercity, conventional-weak demand areas).

Lots accessible to small firms might be a better policy, even if in such case the relevance of scale economies, as well as technical criteria strictly related to operating transport systems, should be carefully evaluated.

The time length of the contracts could also be reduced whereas until now it has been successively lengthened over time, or renewed in favour of the operating groups. In fact, as Milgrom pointed out (Milgrom, 2004), short contracts facilitate the rotation of firms while longer contracts create a lock-in effect tying the administration to

purchase the transport service from the same firm for a long period of time.

CONCLUSION

Public procurement is becoming increasingly important in public services provision, including local transport examined in this paper. The aim of our work was to investigate the risk of anti competitive behaviour implied by temporary groups of service providers. The point bears policy implications as local authorities, following European Union directives, have stressed the role of such alliances in the public procurement of services. National reform policies still underway should be reviewed in order to deeply take into account anticompetitive risks of temporary groups of firms.

Ideas developed within business strategies and organizational literature appear to be useful for the analysis of hybrid organizations, such as temporary groups of firms, and for antitrust intervention. Firms learn how to act in public service markets by widening the conventional boundaries of their organisation in more complex structures where competition and cooperation merge to form new perspectives where firms seem to adopt a sort of coopetitive behaviour. This concept has been introduced in the strategic management literature to describe a rather paradoxical behaviour, if compared with the classical perspective of competition and cooperation as separate strategies. Whereas competitive models mainly focus on rent appropriation strategies and cooperation on collective strategies for rent generation, coopetition highlights new ways to both strategically interact and seek for rents.

Applying such notions to the case study of local public transport firms' groups in Piedmont, it appears that the process of cluster creation stabilizes relationships between them through cooperation, by reshaping relations between the local firms and local bodies. On the other hand, it seems to be mainly beneficial to the largest firms, generally being the ex-municipally owned, by strengthening their position, both at the regional and the single provincial levels.

The potential and the limits of the temporary alliances emerge from the analysis of the case study rather neatly. There is no improvement in efficiency in the transport areas either because the same firms, which previously had operated by themselves their own

routes, now offer the same services as members of a temporary group having won a public contract in a larger area, or because their bargaining power towards the contractor has strengthened.

This is precisely the reason why the Italian Antitrust Authority in recent years has stressed that: "call for tendering should, except in exceptional circumstances, limit the possibility of two or more undertakings forming an association when they have been able to fulfil the technical and financial requirements individually" (AGCM, 2003, Part E).

AKNOWLEDGMENTS

We wish to thank Luca Sanlorenzo and Cristina Bargero for assistance and the Direzione Trasporti, Regione Piemonte for the data. Financial support from Hermes (Higher Education and Research on Mobility Regulation and the Economics of Local Services) Research Centre is kindly acknowledged.

NOTES

1. Article t. 13 of Law n. 109/1994, later modified by Law n. 415/1998 and Law n. 166/2000 introduced a legal definition of a temporary association of firms.
2. This is according to Article 13 comma 8 of law n. 109/94 (known as the Merloni law).
3. Article 21 comma V states: In order to encourage groupings among operators and to overcome the obstacles of small size and excessive fragmentation which make it impossible to enjoy the benefits of synergy and economic efficiency, all parties which are operating on 31 December 1999 services in each of the areas should form a group of firms as described in Article 23 comma 2 of lgs 158/1995 and are invited to submit a tender.

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