The relevance of groups in local public transport: the case of Italy

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The relevance of groups in local public transport: the case of Italy

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Abstract

The paper investigates the local public transport in Italy taking into account the reality of groups and agreements among firms. The results, obtained through the elaborations done on the AIDA data base, part of *the Bureau* Van Dijck, on 484 firms for the year 2007, allow a more accurate description of the real concentration of the local public transport market, which appears to be sensibly higher than usually assumed. Our results are so far merely descriptive, but they may bear policy implications, as local authorities responsible of transport policies shouldn't disregard the links connecting firms, while defining the transport basins or choosing the local provider.

Keywords: local public transport, groups

JEL: L91, L33

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Introduction

Local public transport (LPT) in Italy has been thoroughly analyzed through studies dealing with structure, efficiency and regulation in the light of the Italian regulatory framework issued from the LPT reform process, started with Law 542/1997.

The conventional LPT description, as it emerges from the National transport account, points out a very fragmented structure with small sized firms: about eight hundred publicly owned firms and three hundred private ones.

There are, though, signals coming from the LPT market which seem to tell a different story, where market concentration is sensibly higher.

The Italian Competition Authority (AGCM) on 09/11/2005 opened an official investigation versus some LPT firms, to ascertain the realization of anticompetitive agreements; in 2007 the inquiry was closed finding a serious infringement of article 81 of the EC Treaty, as restrictive competition agreements were detected. The facts were related to a competitive tendering procedure for the assignment of franchised monopolies in LPT services in Rome, where concerted practices among the participants had given rise to macro groups of undertakings at a national level. In 2006 the inquiry has been extended to other firms taking part in the three principal alliances of LPT firms.

In the words of AGCM. "*After the introduction of the legislative decree n. 422/97, the LPT sector has been, in.fact, interested by a tendency towards cooperation among the several firms active in the single local transport basins, because of the future competitive tendering for the assignment of LPT.services. Such tendency has meant a reduced phenomenon of external growth, as opposed to the birth of numerous alliances of operators active in different zones. These alliances have been sometimes formalized through agreements by which consortia or companies have been created..The perspective of competition has determined in the first years after the reform a change of the strategies of both large and small undertakings, Italian and foreigners, public and private. Having competitive tendering in mind some important foreign operators have bought smaller firms, while others have resorted to cooperative strategies with the competitors.*"

An analogous situation took place in France where le Conseil de la Concurrence with the decision reached on 7-5-2005, concerning the practices realized in the urban LPT, blocked the creation of a cartel whose aim was to coordinate the participation in the competitive tendering procedures and fined the three LPT leading operators in France. In the 122 procedures there was, in fact, an explicit agreement not to compete and in 27 cases the potential entrants had been opposed. (Yvrande- Billon A., 2006).

According to these facts, we wondered if the fragmented LPT market description, deriving from a single firm approach, had to be substituted with a picture which would take into account agreements among firms, both temporary groups of firms and real groups.

This work is part of a research project, whose aim is the.reconstruction of firms' groups operating in the Italian public utilities, so as to depict.a more accurate description of the real concentration of such market where the real boundaries between public and private are difficult to state. We present here the first results actually obtained in the case of LPT, through the elaborations done on the AIDA data base, part of the Bureau Van Dijck, on 484 firms for the year 2007.

Our data base includes nearly one fourth of the firms present in the National Account for transport (484 versus 1158), both privately and publicly owned, but nearly 90% of total employees.

The picture emerging by examining AIDA's balance sheets when the focus is on single firms looks consistent with a fragmented market structure, but the pictures dramatically changes when we take groups into account. Our findings show a level of market concentration sensibly higher which deserves careful investigation by competition authority because of the implications in term of firms' behavior and industry performance.

Many are the consequences of agreements and links among firms. If there is a situation of cross-ownership, not necessarily of control, or other links with competitors the incentives to collude will, in fact, be enhanced. As pointed out by Motta, 2004:" *First if a representative of a firm is sitting in the board of directors of a rival firm, it will be easier to coordinate pricing and marketing policies. It might also be easier to exchange information on the marketing and pricing policies, which makes it easier to* *monitor a rival's behavior……Second, even if a firm did not have any say in the business policies of the other, but just owned a share of it without representation on the board, the incentives to compete in the marketplace might be reduced. This is because the profit of the rival firm would affect the firm's own financial performance, composed of market profits and financial returns: an aggressive market strategy (like an aggressive market price) would be less profitable than if there was no stake in the rival firm, because it would decrease the returns on financial investments.*"

If this argument is referred to LPT where firms should compete for the market by taking part to the tendering procedures for the assignment of franchised monopolies in LPT services, such links might soften competition and avoid low bidding in tenders.

As to the debate concerning the impact of ownership no attention has been paid to the interrelations in the mixed properties units, but even within groups, where the control may be either public or private and the subsidiaries can have a different ownership.

Moreover groups have not been taken into account when reasoning about liberalization and privatization issues, where single firms have always been considered the only legal subject.

Our results are so far merely descriptive, but they may induce local authorities responsible of transport policies to be more aware while defining the transport basins or while choosing the local provider.

1. Statistical issues: enterprises, pyramidal and horizontal groups

In our research aiming at demonstrating that Italian local public transport is far from being the fragmented sector too often described in the relevant literature, we first have to pay attention to the differences existing in the available statistics and data base between enterprises and groups.

According to the usual national and European statistics [2] the enterprise is the smallest combination of legal units that is an organizational unit producing goods or services, which benefits from a certain degree of autonomy in decision-making, especially for the allocation of its current resources. An enterprise carries out one or more activities at one or more locations and may be a sole legal unit.

The enterprise thus defined is an economic entity which can therefore, under certain circumstances, correspond to a grouping of several legal units**.**

According to the usual data sources an enterprise is also an institutional entity when it is an elementary economic decision-making centre characterized by uniformity of behavior and decision-making autonomy in the exercise of its principal function. A unit is regarded as constituting an institutional unit if it has decision-making autonomy in respect of its principal function and keeps a complete set of accounts.

In order to be said to have autonomy of decision in respect of its principal function, a unit must be responsible and accountable for the decisions and actions it takes.

In order to be said to keep a complete set of accounts, a unit must keep accounting records covering all its economic and financial transactions carried out during the accounting period, as well as a balance sheet of assets and liabilities.

An enterprise group is an association of enterprises bound together by legal and/or financial links; it can have more than one decision-making centre, especially for policy production, sales and profit policy. While certain aspects of financial management and taxation may be centralized, it constitutes an economic entity which is empowered to make choices, particularly concerning the units which taking part of the group.

[2] The European Council Regulation n.177/2008 (February 20, 2008) establishes a community coordination in drawing up business registers for statistical purposes. In Italy the business register called Asia is kept by Istat and offers aggregate statistics on groups from 2002 to 2007.

Applying these rules in the LPT sector leads to very different solutions for entities which do not clearly possess both characteristics of an institutional unit.[3]

- Entities forming part of a group of enterprises and keeping a complete set of accounts are deemed to be institutional units even if they have surrendered, in fact if not in law, part of their autonomy of decision to the central body (the holding company) responsible for the group's general management. The holding company itself is deemed to be an institutional unit distinct from the units which it controls.

- Entities which do not keep a complete set of accounts are combined with the institutional units in whose accounts their partial accounts are integrated.
- Entities which, while keeping a complete set of accounts, have no autonomy of decision in the exercise of their principal function are combined with the units which control them.
- Entities forming part of a group of enterprises and keeping a complete set of accounts are deemed to be institutional units even if they have surrendered, in fact if not in law, part of their autonomy of decision to the central body (the holding company) responsible for the group's general management. The holding company itself is deemed to be an institutional unit distinct from the units which it controls.

The last case easily detected in the LPT sector as it is the case of business groups, either controlled by public bodies or private owners, usually structured as multilevel pyramids. This is, for instance, the case of the foreign direct investors, either publicly owned as the French RATP and Transdev or privately owned like the British Arriva[4].

Even in the pyramidal groups it is not easy to detect the boundaries between public and private ownership and control. In fact despite the fact that the ownership and control of the holding company, which is obliged to

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[4] For details see Bargero & Fornengo, Foreign direct investment in Italian LTP, 2010.

keep both individual and consolidated accounts, clearly results, it may happen to have either private minority shareholders in firms controlled by a public owner, (example given by Dolomitibus, a private firm within Transdev or LFI within the RATP group) or publicly owned firms within a private owned group like Arriva (Trieste Trasporti).

Within the.Italian.LPT sector.the picture could become even more complicated and the boundaries between public and private ownership very difficult to draw, where we have firms, and public bodies connected through inter-corporate shareholdings as well as common ownership ties and other cross shareholding structure, usually composed by minority shares.

In these cases it appears difficult to apply the usual notion of horizontal group as opposite to the pyramidal or vertical group. It seems clear that these kinds of groups can acquire economic dominance in the public transport service in different geographical areas of our country, by cultivating more powerful political influence than the single firms.[5]

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2. The groups in the LPT

2.1. The data

Data on European firms are extracted from the AIDA database maintained by the Bureau Van Dijk, which includes Italian companies with a sales revenue exceeding 500.000 Euros. By selecting the firms under the ATECO codes, 49310, passengers' transport in urban and intercity areas, and 602100, other regular passengers' transports, we obtained a sample of 484 firms for 2007.

The AIDA database is accompanied by the BvDEP Ownership Database, by which firms can be classified as privately or publicly-owned. The database reports data for owner and subsidiary links; a link is defined as an ownership relationship between two entities, a shareholder and a subsidiary. A shareholder might be a corporation, a private individual, a

[5] It is along these lines that the Italian Competition Authority has sanctioned an agreement by which firms would segment the participation to competitive tendering for the provision of LPT services according to their local predominant position.

government or a collectively described entity, such as local authorities at region, province or municipality level.

The Database provides data on direct and indirect shareholders and on the domestic and global Ultimate Owner, if any. The Ownership Database tracks control relationships rather than patrimonial relationships; therefore, when there are different categories of shares, only those with voting rights are considered.

A link between two entities is indicated even when the percentage is very small and the main shareholder is identifiable. It can be direct, when an entity owns a certain percentage of a company, or indirect, when an entity owns a certain percentage of a company through a participation in a third company.

Moreover, the Database reports the Ultimate Owner if any. For all the companies not classified as independent, consequently without an Ultimate Owner, the shareholder with the highest direct or total percentage of ownership is identified. If this shareholder is independent, it is defined as the Ultimate Owner of the subject company. If the highest shareholder is not independent, the same process is repeated to him until the Ultimate Owner is found, distinguishing between a domestic and a global Ultimate Owner.

In order to analyze the differences between private and public firms and the peculiarities of publicly-owned firms, we define as public all the firms either with an Ultimate Owner classified as Public or, in case of an independent firm, with the controlling shareholder classified as Public.

Our data set includes nearly one fourth of the firms present in the National account for transport (484 versus 1158), both privately and publicly owned, but nearly 90% of total employees.

As indicated in table 1 publicly owned firms are 152 (31%) with 80.228 employees (86%), private 324 (67%) with 12.367 (13%) employees, mixed properties firms are 8 (2%), with 309 (1%) employees..Public firms are few, but are much larger, as it results evident from the number of employees.

Tab. 1 Data set, (AIDA 2007)

Firms	Number. *(%)*	Employees. *(%)*
Public	152 *(32%)*	80.228 *(86%)*
Private	324 *(67%)*	12.367 *(13%)*
Mixed	8. *(2%)*	309. *(1%)*
Total	484	93.904

Table 2 provides an indication of the LPT firms' distribution divided by classes of employees, stressing the ownership. The majority of firms are in the class 0-5 employees, where private firms are predominant. As the size increases private firms become rarer. Over 500 employees only 3 private firms are detected. The average number of employees is 527 for public firms, 37 for private and 163 for mixed ownership firms.

Tab. 2 Distribution of LPT firms for employee's classes and ownership, (AIDA 2007)

Employees	Public firms	Private firms	Mixed firms	Tot
From 0 to 5	39	122	4	165
From.6 to 20	6	72	0	78
From.21 to 50	12	65	1	78
From 51 to 100	14	34	0	48
From 101 to 500	51	28	2	81
From 501 onwards	30	3	1	34
Firms	152	324	8	484

2.2. Links

The starting point for disentangling the complex system of relations existing among the different subjects present on the market has been the recollection of links, either direct or indirect, as defined above.

Such links have made it possible to identify the entity and relevance of ownership connections, even for very small percentages, giving rise to 53 different clusters including a total of nearly 2000 links, providing evidence of a rich network of alliances and agreements.

We can then infer that the subjects building the so called *clusters* are either the shareholders of the LPT firms, the LPT firms themselves and their subsidiaries: the heading shareholders includes besides private subjects also local authorities such as municipalities, provinces and regions.

The result of this exercise shows that the Italian LPT market is much interconnected: region boundaries are not respected and the north- south divide doesn't seem to exist on that respect. Given the typology of the firms under observation it is possible to observe some important movements: large LPT firms make alliances with other relevant firms, which can stay anywhere in Italy; small firms usually make agreements within a limited geographical zone.

Table 3. Clusters resulting from links, (AIDA 2007)

Number of links	Clusters
More than 1000	**1**
51-100	**3**
11-50	**3**
0-10	**46**

There is one huge cluster including 1574 links, nearly 83% of overall connections.

Links are useful to provide an idea of the overall level of interconnections in the LPT, but cannot represent an object of analysis as relationships of ownership and control may be very small.

The next step has been to impose a threshold on the link so as, so as to observe how the number of *links* varies as the required threshold of ownership is augmented. As that threshold varies, starting from.0 where.any minimal percentage of ownership is taken into account,.so does the number of connections detected, as some weak ties are broken, so that there is an increase in the number of independent connected groups.

Figure 1. Number of links according to threshold of ownership, (AIDA 2007)

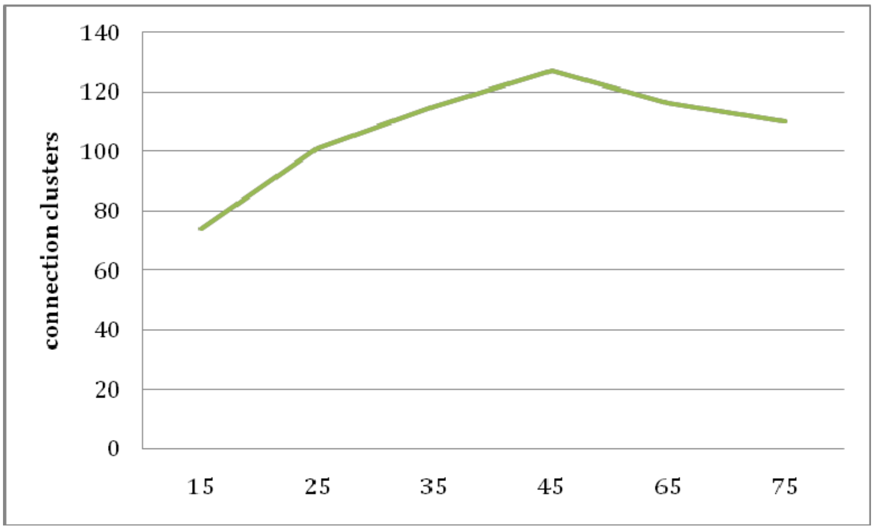

Table 4, (AIDA 2007)

Threshold	Clusters
0	58
15	74
25	102
35	115
45	127
65	116
75	110

2.3 Public and private groups

In a following stage we decided to address the proper study of groups utilizing a threshold of 25% of ownership link, following the approach used in the AIDA data set. At that level we also analyzed the precise relations among shareholders, subsidiaries and cross subsidiaries.

The picture resulting from the AIDA data, when the observation unit is the single firm, is consistent with the information contained in the National Transport Account (CNT), which describes a fragmented market structure..If we exploit the possibility, provided by the data set, to reconstruct groups, the resulting picture changes dramatically.

The number of firms in a group varies from only two firms per group, to groups, one public and the other private, which have 57 firms each.

The LPT firms which are not inserted in a group are 237 with 7445 employees versus 247 firms in groups with 86.459 employees. Firms taking part to proper groups are 147 over 484, but they account for 86.459 employees; 89% of employees work in public groups.

First of all there are 39 firms which present a consolidated balance sheet, 34 public accounting for 57.096 employees, 4 private accounting for 575 and 1 mixed for 336 employees.

Table 3 shows that there are 119 groups, (39 consolidated and 85 reconstructed on the basis of ownership and control relationships): 70 public with 88.690 employees, 48 private with 13.236 employees and 1 mixed with 340 employees..The comparison between public and private groups in term of number of groups is quite balanced (70 vs. 48), but in term of employees they are very different as public groups account for approximately 87% of groups' total workers.

Because of diversification strategies, groups may include firms which do not provide LPT services and this explains why the number of employees calculated in the groups' reconstruction exceeds LPT employees..The problem mainly concerns public groups as diversification in non related sectors is typical of public firms, whereas private firms mainly diversify in correlated activities..The value of 86.000 employees is prudential and has been obtained as the difference between total workers minus those employed in firms not related to groups, so as not to count workers belonging to other sectors.

Tab. 5 Groups by ownership, (AIDA 2007)

	N. groups	Employees
Public	70	88.690
Private	48	13.236
Mixed	1	340

Tab. 6 Firms in each group, (AIDA, 2007)

Firms	Public groups	Firms	Private groups	Firms	Mixed groups
2	16	2	24		
3	5	3	8	10	1
4	4	4	7		Tot. 1
5	6	7	2		
6	8	9	1		
7	4	10	3		
8	4	11	1		
9	2	54	1		
10	2	75	1		
11	1		Tot. 48		
12	4				
13	2				
14	1				
15	1				
17	2				
19	1				
20	1				
24	1				
27	1				
33	1				
45	1				
55	1				
72	1				
	Tot. 70				

The consistency of groups in terms of belonging firms is rather interesting: there are 40 groups made of just two subsidiaries (16 public, 24 private), but 2 groups, one public and one private, made of over 70 firms. The usual idea of small private firms is here contradicted. The mixed group is rather small and contains 10 firms.

The impact is strengthened when we look at the groups' consistency in terms of employees in table 7. The distribution for employees' classes is very different as compared to table 2 relative to single firms. The strength of private groups emerges as one of them counts more than three thousand employees.

Tab. 7 Consistency of groups. Classes of employees, ***(AIDA 2007)***

Employees per group	Public	Private	Mixed	Total
0-5	2	9	0	11
6-20	1	2	0	3
21-50	0	7	0	7
51-100	5	13	0	18
101-500	27	13	1	41
501-1000	10	2	0	12
Over 1000	25	2	0	27
Total	70	48	1	119

3. The implications of groups

Firms' groups are generally organized as pyramids and controlled by families. Whereas past studies particularly underlined the aim of expropriating the control rights of the minority shareholders, more recent studies stress how the access to capitals is easier for a firm part of a group, due to tunneling.

Until recently existing studies were mainly concerned with emerging countries from Asia (Japan, South Chorea, China, Indonesia, Thailand and India), where groups have long been existing and with countries of Latin America; among western countries Italy and Sweden.[6]

Only recently Almeida and Wolfenzon (2006) tried to build a taxonomy of groups claiming that often differences between ownership and control are very weak and that the organization of firms in groups is convenient when external borrowing is higher as compared with internal one, with a consequent diffusion of situations where the investors are less protected.

Groups' pros would then be particularly evident in emerging countries and, in general, whenever the group's reputation replaces market asymmetry with positive consequences for the affiliated firms. Access to external financing becomes then easier, in a sort of risk sharing of fluctuations in the capital market. Sustained investments in managerial training should be responsible for the superior performance.[7]

As regards Italy the existing studies, based on quoted companies and developed by the Bank of Italy,[8] concern the relationship with financial markets and corporate governance aspects.

To our knowledge there are no studies concerning groups in utilities[9] and in particular in LPT, a part some research made by FEEM and Civicum, which only consider publicly owned groups, while ignoring private groups.

[6] See also Masulis et al. (2009).
[7] Positive evaluations emerge in Khanna T. & Yafeh Y, (2007).
[8] See in particular Bianchi M. et al. (2005), and specifically chapter 3. For a european context see Grospietro G. M, et al. (2001).
[9] A part from Scarpa et al., (2007) and Fondazione Civicum, Le società controllate dai maggiori comuni italiani, anni vari.

The consequences of the groups shouldn't be ignored in the policies' decisions by the regulator as the existence of LPT groups might on one hand bear relevant consequences on the market's structure and on the financing potentialities and conditions of firms within groups, on the other on the efficiency and strategies of the actors.

The risk of anticompetitive behaviors has already been mentioned in the introduction recalling the investigation carried out by the Competition Authority for infringement of article 81 of the E. C. Treaty.

Local authorities are responsible for the competitive tendering procedure introduced for the assignment of franchised monopolies in LPT services; in particular they have to decide ex ante the organizational form and the boundaries of the service area with particular attention to efficiency and economies of scale. In order to help local authorities furnishing useful policy indications, several empirical researches have been carried out concentrating on the impact of ownership on efficiency and on the presence of density, scale and scope economies in the Italian LPT.

Results show that private firms are slightly more efficient, whereas mixed ownership firms are in an intermediate position (see Ottoz, et al. (2008), Boitani et al. (2010), but nothing is known when the boundaries between public and private become less clear-cut within the groups.

Many empirical studies concentrated on the presence of density and scale economies in the provision of LPT services in Italy. Cambini and Filippini (2003), Ottoz, Fornengo and Di Giacomo, (2008), Cambini, Piacenza and Vannoni (2007), Boitani, Nicolini and Scarpa, (2008).

Here again the fact to refer to groups instead of examining single firms might carry on different results concerning efficiency, because scale economies are, in some studies, decreasing in the firm's size, so that public companies show smaller economies of scale and this result might be worsened when the observation unit is a much larger group.

Moreover empirical studies investigating the relevance of scale and scope economies in the provision of urban and intercity bus transport are relevant as local authorities must decide ex ante on the organizational form: either holding a competitive tendering procedure for urban and intercity transport or unbundling and opening separate tenders for each type of transport. The choice relative to unbundling affects efficiency in conflicting ways: positively as bidding is then accessible to more operators (single mode and multi mode operators) with higher competition, and negatively because scope economies (if they exist) between urban and intercity transport are going to be lost. *Cambini, C. et al. (2003), Farsi, M., et al. (2007), Fraquelli, et al. (2004), Di Giacomo M. et al. (2010.)* Empirical studies generally show positive scope economies between urban and intercity local transport, but, here again, groups might imply different results.

The regulator should also make a decision about the bundling or unbundling of the whole transport service, bus and rail, of a given area when deciding the competitive tendering organization, so that the study of intermodality economies becomes relevant. So far bus and rail have been separately treated, but an integrated transport strategy might set the conditions for a better service in terms of timetables, ticketing and tariffs integration. The fact that all major European players are multimodal, rail and bus, leaves little doubt about the presence of such intermodality economies and on the advantages of such a market penetration, which might be regulated if the responsible local authorities considered the whole group and not the single firm.

4. Conclusions and further developments

The consequences stemming from the fact that the single firm has always been considered the fundamental productive unit of the sector are manifold.

As concerns the debate concerning the impact of ownership no attention has been paid to the interrelations existing between the two forms in the mixed properties units, but even within groups where the control may be either public or private and the subsidiaries can have a different ownership.

Moreover no attention has been devoted to groups in the debate about liberalization and privatization issues, where single firms have always been considered the only subject.

As concerns the debate on the impact of ownership, public or private, on the efficiency of a firm, the analysis failed to grasp the increasing interrelations existing among the two types of ownership within mixed groups, but even in those groups whose control may be either public or private and whose subsidiaries may have a different ownership.

Our findings show a level of market concentration sensibly higher which deserves careful investigation by competition authority because of the consequences in term of firms' behavior and industry performance.

These results are so far purely descriptive, but they suggest some questions to the local responsible of LPT policy when deciding the transport basins and in the choice of local providers.

The availability of accounting data for a sufficient number of years will make possible a comparison, through the utilization of economic and financial indicators, of the different performances of firms belonging to groups as opposed to single firms, so as to verify the existence of benefits connected with an easy credit access, better risk sharing and transfer of managerial competences.

It will be interesting to verify in the Italian groups' context the results obtained by Boitani et al. (2010) on a sample of large firms of LPT in Europe. They found higher total *factor productivity* in firms which had been selected through competitive tendering and a lower one in public firms.

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