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## WORKING PAPER NEW SERIES

### **PUBLIC PROVISION VS OUTSOURCING OF CULTURAL SERVICES: EVIDENCE FROM ITALIAN CITIES**

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# Public Provision vs Outsourcing of Cultural Services: Evidence from Italian Cities

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## Abstract

Cultural policy often implies the transfer of public resources to private cultural institutions. In this contribution we focus on the determinants of a government's choice between cultural transfers and in-house cultural production. We argue that in the cultural field transfers may be seen as a proxy for the value of outsourced services, and we make reference to the empirical literature on outsourcing of local public services. We consider Italian cities' cultural policies in the 1998-2008 period, a time when overall cultural expenditure shrank while cultural transfers increased. Using dynamic panel data analysis and controlling for specific characteristics of each city, we find that outsourcing of cultural services is negatively affected by cultural assets specificity and is more likely to occur in cities subject to fiscal stress. The results also highlight that the timing of elections affects the transfer of public resources to private cultural institutions.

**Jel classification:** H44; L33; H76; Z11

**Keywords:** Public Cultural Expenditure, Local Government, Outsourcing

## 1. Introduction

Cultural policy has been traditionally concerned with providing financial support for the arts, for heritage institutions and for cultural industries. Many economists and cultural policy scholars have discussed the benefits and costs of indirect vs direct public support to cultural activities, where the former is defined as the adoption of tax exemptions on donations to cultural institutions while the latter is the use of public resources to provide cultural services or subsidize private producers (Throsby, 2010). However, within the field of direct public support, less attention has been paid so far to the choice between supplying in-house produced cultural services and supporting private cultural organizations. In this paper we investigate the actual drivers of a government's choice

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between these two alternatives adopting a positive approach to the subject. To our knowledge, this research field has not yet been explored.

As cultural policy often implies the transfer of public resources to the private sector, these transfers are either the effect of outsourcing contracts or subsidies. We argue here that the two are equivalent, though clearly in the second case the mandate is not regulated by a contract. In both cases a government stays in control of the size and, to some extent, of the contents of cultural policy actions, which is not the case when indirect support is the privileged policy. Outsourcing may then take up two distinct forms: contracting out (which we will define as *contractual* outsourcing) and the financing of private institutions (*non-contractual* outsourcing). As a consequence, the extent to which a government's conduct relies on the use of transfers may be evaluated in terms of its attitude in relation to the outsourcing option. In fact, compared to other public services, cultural policy is not one of those governmental functions that are either outsourced or not. It consists of many actions and each of them may be outsourced, so that there is a continuum of positions. This is interesting in view of a quantitative analysis, because for any given government, the ratio of transfers over total cultural spending may vary over time.

We make reference to the by now vast empirical literature on outsourcing of public services (Bel and Fageda, 2007, 2009) and extend it to the cultural sector using transfers as our proxy for outsourcing. Our focus is on the determinants affecting the choice between direct production and outsourcing of cultural services at a *local* level of government. A number of empirical papers have appeared in recent years adopting a positive approach to local governments' cultural policy (Getzner, 2004; Nooman, 2007; Lewis and Rushton, 2007; Werck, Heyndels and Geys, 2008), but they all aim at explaining the *level* of spending, not the *type*.

There are many reasons why a government may prefer to outsource a function: some of them are general, some are specific to the function itself. Among the general reasons, private production is often expected to be less costly than public production, as the latter is affected by government failures. Private production may also be cost wise beneficial because it triggers competition and the choice of a more efficient production scale. Finally, there may be political economy explanations underlying the choice whether or not to outsource the production of cultural services. As for the specific traits of cultural policy that may influence a policy-maker's decision in this respect, peculiar measures of asset specificity (Hart, Shleifer and Vishny, 1997), tourism and the presence of wealthy patrons may play a role.

We consider all these possible determinants and use dynamic panel data analysis in our investigation. Specifically, we concentrate on the outsourcing strategy in the cultural field of 106 Italian municipalities, namely the cities which are provincial administrative centres, in the time span

1998-2008. Italian cities are interesting in that they are big spenders in this respect: they pay for libraries, own museums and theatres, and many of them have organised very popular cultural festivals in recent years. Our results show that the main drivers of Italian cities' choice to outsource cultural services are the value of in-house produced cultural services and the share of municipal current spending on cultural facilities expressing high asset specificity. There is also evidence of a peculiar electoral cycle, in line with the findings of Dalle Nogare and Galizzi (2011).

The relevance of our contribution is also methodological and goes beyond the restricted field of cultural policy. Arguably, the use of transfers as a proxy for the value of a government's outsourced services allows to quantify them in a number governmental functions so far not considered by the literature on outsourcing, such as education. In fact, transfers to the private sector should be considered whenever a government's direct support to a market is only on the supply side and contracting out is mainly by procurement and subsidies, not by concessions.

The paper is organized in the following way: section 2 briefly describes the role of municipal governments in shaping cultural policy in Italy and how it has changed in the recent years; section 3 surveys the relevant literature on outsourcing and cultural policy we make reference to; section 4 illustrates our dependent and independent variables; section 5 describes the estimation strategy; section 6 shows our results; section 7 is about the robustness checks while section 8 finally concludes.

## **2. Recent trends in Italian municipalities' cultural policy**

In the last two decades Italian municipalities have witnessed a growing role within public cultural spending. Traditionally, cultural expenditure in Italy had been mainly public and highly centralised, but towards the end of the last century central government's share rapidly declined from around 60% to 50%. According to Bodo and Spada (2004) in 2000 central government accounted for 52% of total public spending for culture, regions for 15%, provinces for 3%, and municipalities for 30%. More recent but less detailed data (Bodo and Bodo, 2012)<sup>1</sup> for the last decade highlight that the decentralisation process has gone even further, mainly as a consequence of the stark decrease in central government expenditure (-8.6% in the period 2000-2010). The share of central government's expenditure for culture has therefore declined to 36% of total public cultural expenditure. Specularly, local governments' cultural expenditure – dominated by municipalities – increased to reach nearly two thirds of total public cultural spending. Municipalities have been especially active

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<sup>1</sup> The breakdown is only between state and local expenditures, without any further distinction of the local authorities among the regions, provinces and municipalities.

in the fields of the performing arts, heritage and contemporary art, which arguably comes from their being owners of libraries, museums and theatres.

Interestingly, the decentralisation of Italian cultural policy has gone along with a process of growing outsourcing, a completely absent phenomenon in this governmental field of action before the mid-90's.<sup>2</sup> New European laws on economic services of general interest have triggered in the country a general trend towards the outsourcing of public services. The process has however witnessed a lot of variability in time, sectors and level of government (Scarpa, Bianchi, Bortolotti and Pellizzola, 2009). Although Italian public law experts have generally understood culture as a social rather than an economic service, public intervention in this field has been characterized by an outsourcing trend, too. Anecdotal evidence suggests *contractual* outsourcing has been growing especially at the municipal level, although no systematic analysis of quantitative data on the phenomenon and its variability has yet been published.<sup>3</sup> As for *non-contractual* outsourcing, no systematic collection of data has been made so far. However, the number of private cultural institutions, and especially foundations, has boomed in the last 20 years, a quite new phenomenon for Italy. Recent inquiries on the financial resources of cultural foundations highlight that they generally have little endowments and mainly rely on donations by banking foundations,<sup>4</sup> firms and, often prominently, on public support (Centro di Documentazione sulle Fondazioni, 2007). In this perspective, their booming may be the reflection of a rise in *non-contractual* outsourcing.

The data on the 106 Italian provincial administrative centres are quite illustrative of the growing trend in outsourcing. In the time span 1998-2008 the average yearly per capita current spending for culture is 40.9 € equal to 4.4% of total current spending. This figure is rather stable over the years, as the trend of cultural current spending has mirrored that of total current spending (Figure 1), probably a sign of a prevailing top-bottom procedure in municipal budgeting.

[FIGURE 1 HERE]

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<sup>2</sup> Law n. 4, 4-01-1993 on museum's ancillary services (bookshops, catering etc.) was the first law in Italy allowing outsourcing in the cultural field.

<sup>3</sup> Notice that in a number of cases municipalities have formally delegated the production of cultural services to newly created private-public institutions. These hybrid entities are clearly not entirely separate from government, but since in most cases private partners (often banking foundations) finance them in a substantial way, we argue that this case may be considered as outsourcing, too. Some authors argue that the proliferation of municipal companies has often been used by mayors as a temporary escape from the budget constraints imposed by the Domestic Stability Pact (Scarpa et al., 2008). We argue this may not be a correct interpretation of the phenomenon where private partners play a major role, which is almost always the case in the cultural field.

<sup>4</sup> We make reference to civil law foundations here; banking foundations are quite rich and have a different legal status.

The average share of cultural transfers over total cultural spending is 0.20, a value almost double the average share of total transfers over total expenditures. This highlights that in the cultural field municipal governments tend to produce less and subsidize/contract out more than in other fields of action. Figure 2 highlights a growing trend of per capita cultural transfers.

[FIGURE 2 HERE]

As this trend is stronger than the one of total cultural expenditure (in fact, in real terms the latter is rather stagnating), the ratio of cultural transfers over total cultural expenditure is growing over the period,<sup>5</sup> too (Figure 3). This confirms the anecdotal evidence about the growing number of cities adopting outsourcing strategies in the cultural field.

[FIGURE 3 HERE]

### **3. Public provision vs outsourcing of cultural services: analytical framework**

Two bodies of economic literature are relevant for our analysis, namely the contributions on privatization and contracting out of local public services and cultural economics.

The first body of literature uses local governments data to unveil the determinants affecting the decision whether to supply public services in-house or externally through privatization and contracting out. According to the survey by Bel and Fageda (2007), these contributions test for the significance of both economic and political factors which make reference to the public choice approach, the transaction costs literature and contract theory as well as to political economy models. Among the economic determinants, fiscal rules on deficits and expenditures represent a first factor generally considered to have a positive relation with the likelihood to privatize or contracting out local public services (Kodrzycki, 1998; Dijkgraaf et al. 2003). Fiscal stress has been usually captured through variables such as tax burden, legal limitations on tax levels or the size of transfers from the central to local governments. In general, fiscal constraints have been found to have a significant effect on the likelihood of privatization more often in studies analyzing several local services rather than just one. However, compared to studies based on US municipal data in the 80's,

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<sup>5</sup> Table A1 in the appendix shows both the within and between variation of the ratio of cultural transfers.

more recent studies focused on European municipalities tend to invalidate the hypothesis that fiscal constraints are a major explanatory factor of privatization.

Economic efficiency is a second explanation used to justify contracting out as a superior solution with respect to in-house delivery: costs are likely to be reduced by introducing competition where there is a public monopoly (Savas, 1987) or by the exploitation of economies of scale when public services are delivered over a suboptimal jurisdiction (Donahue, 1989). Interestingly, the two explanations have different empirical implications: while the former hypothesis suggests that large cities will privatize more often, since they can take advantage of competition from a larger number of service providers, the latter entails a negative relation between city size and the likelihood to privatize or contracting out local public services. Evidence in this case provides mixed results, with studies analyzing just one service finding more evidence that scale economies are a major determinant of privatization. Indeed, the influence of scale economies varies with the size of fixed costs involved in the production of services (Bel and Fageda, 2007).

When transaction costs and contractual incompleteness considerations are included in the economic analysis of service delivery choice, the latter becomes less straightforward. For instance, the conditions influencing the level of transaction costs (such as asset specificity, or the difficulty of performance monitoring) should be central in determining when a local service can be successfully privatized (Williamson, 1979). Also quality becomes an issue here. Hart, Shleifer and Vishny (1997) suggest that, by contracting out, costs may be reduced without concern for quality erosion, as there may be also positive shocks to quality. Therefore, contracting out will be the strategy implemented by a government when it is expected to reduce costs without a negative impact on the quality of service. From an empirical viewpoint, in order to assess the importance of transaction costs associated with contracts some contributions include variables measuring the degree of asset specificity (Walls et al. 2005) or the degree of citizen heterogeneity (Nelson, 1997).

Turning to the political factors, interest groups' influence and ideological attitudes have been considered as possible explanatory factors for public service delivery choices. In the former case, as in the political patronage approach, local officials are more inclined to use government employees to provide services as this is a way to earn political support. The variables capturing this effect usually suggested by the literature are the percentage of public employees over population or the degree of unionization of public employees. The interest group influence hypothesis has usually been validated when a broad range of services is analyzed. For instance, López-de-Silanes, Shleifer, and Vishny (1997) find that state laws that impose accountability requirements in contracting for personnel encourage privatization, whereas strong public unions discourage it. However, later studies (Kodrzycki, 1998; Walls et al., 2005) testing this hypothesis do not confirm these results.

The ideological preferences of elected representatives or of the local population have been considered as an explanatory factor influencing local service delivery choices. Though there is no specific theoretical contribution modeling the role of ideology in this context, the loose reference is to macroeconomic models highlighting the presence of partisan cycles (Alesina, 1987). A negative relationship between leftism and privatization or contracting out is what these empirical contributions generally test. However, ideology is found to be (moderately) significant in very few studies. Among the studies for the US, ideology is found to be a relevant factor for privatization in Walls et al. (2005) while for European countries, Dijkgraaf et al. (2003) obtain a similar result.

If the empirical literature on privatization and contracting out helps analyze the factors explaining the delivery choices of local public services in general, cultural economics provides an additional and more specific ground for assessing public authorities' strategies in the provision of local cultural services. In this field, several authors have provided justification for public support to the arts and cultural activities considering the public good character and/or positive externalities of such goods. From a welfare theory viewpoint, Frey (2003) suggests that private markets tend to misallocate or under-provide resources in the domain of the arts because of market failures in both the production and consumption of cultural goods. As for the type of government intervention, the choice is between direct measures administered by public authorities and indirect support through the tax system. Although the two approaches are not mutually exclusive, the literature highlights that there have been remarkable differences across countries in the choice of the prevailing policy. On one hand, Western Europe's experience has generally been more oriented towards direct production and public funding to cultural institutions. On the other hand, the United States rely more on tax incentives to encourage private support (O'Hagan, 1998). The two approaches reflect different attitudes with respect to the assignment of responsibility on to the choice of the cultural activities to be subsidized. In the former case, politicians and bureaucrats have a prominent role in allocation decisions, while in the latter the allocation of funds is left to a larger number of individuals and private organizations which direct their donations to cultural institutions and activities according to their preferences (Throsby, 2010). Moreover, it has been highlighted that, from a public choice perspective, public authorities' direct intervention may be subject to failure, as the allocation of public cultural expenditures may be biased by political business cycles, ideology, bureaucratic discretionary power and rent seeking behavior by interest groups and lobbies (Grampp, 1989; Frey, 2003; Getzner, 2002). In this context, Van der Ploeg (2006) suggests the Art Council model established in UK may be a superior solution for the allocation of public funds and grants because it leaves decision-making responsibilities to an independent statutory body made up of



experts in the art and cultural field. However, experts are likely to enjoy some form of discretionary power and asymmetrical information in the cultural policy decision making process, which can arguably lead to rent seeking behavior (Mazza, 2003, Rizzo and Throsby 2006).

From the insights highlighted by the two bodies of literature it is possible to draw a simple analytical framework of government's choice in cultural policy according to two dimensions: perception of government vs market failures and the degree of control over cultural production contents. According to their position with respect to these two issues, cultural policy acquires quite distinct features. The matrix in Table 1 summarizes all possible combinations of government choices in the two dimensions:

[TABLE 1 HERE]

When a government does not consider market failures in the cultural field to be relevant and does not wish to have control over it, it simply lets the market play. A milder version of this attitude is the one by which tax exemptions are granted to donations to cultural institutions. In this case, as recalled before, some market failures are implicitly recognized, but there is no control on the amount of the resources bound to correct them and no control on their destination. This option ideally resembles the American model of cultural funding. In stark contrast, some European countries such as France and Italy, have traditionally privileged in-house production of cultural services, on the premise that there are large market failures to correct and in-house production allows to be in control of the process. Ideological influence on society is not alien to this model of cultural policy as bureaucrats and politicians have a say in the direct allocation of funds and may try to impose their preferences on the cultural sector (O'Hagan, 1998).

Public transfers to cultural institutions play little or no role in these two models. On the contrary, they are relevant in the other two cases illustrated in the matrix. First, a government may wish to correct market failures through its cultural policy, but it may not wish to exert direct control over its contents. This option may be exemplified by the English and the Dutch Art Council model at the national level, but it equally applies for lower levels of government. The choice not to rely on in-house production is here driven by transparency and arms' length principle concerns. Second, the choice to grant subsidies or to contract out cultural services may be driven by the desire to eliminate the X-inefficiencies characterising public production (Leibenstein, 1966) while remaining in control of cultural contents. Here government does not delegate the choice of the beneficiaries of public transfers.

As a result, the top-left and bottom-right models of cultural policy are both mainly based on transfers of public resources to private cultural institutions. Mixed models are also present: in particular, cases in which in-house provision and transfers co-exist are frequent. Our contribution deals with these cases and focuses on the drivers of the decision to move away from direct provision.

#### 4. Data and Variables

In order to investigate the determinants of a government's choice to either provide cultural services through public transfers or produce them in-house, we consider the cultural policies of 106 Italian cities which are provincial administrative centres<sup>6</sup> in the 1998-2008 period.<sup>7</sup>

There are three main reasons why we focus on this subset of Italian municipalities. First, these cities are the most populated towns in their respective geographical areas, so they represent Italy's "urban contexts".<sup>8</sup> Second, in the majority of cases, these cities are historic centres with a rich cultural life<sup>9</sup> and, arguably, with the most relevant cultural policies at the local level. Third, these municipalities are those where election candidates for a mayor position in an administrative centre are almost always members of national parties, thus making political competition and local government orientation clearer than in smaller urban centres. Allowing smaller municipalities to be part of the sample would blur the effect of political variables.

In general terms, our empirical specification tests the following relationships:

$$y = f(FISC, ECON, POL)$$

Where  $y$  is a proxy for municipal outsourcing in the cultural field while  $FISC$ ,  $ECON$  and  $POL$  represent three groups of main explanatory variables, expressing respectively fiscal, economic, and political factors. Table A1 in the appendix presents the summary statistics for these variables.

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<sup>6</sup> Their number has been slightly varying in the course of time with the institution of new provinces. We have considered the cities which were provincial administrative centres in 1998. Notice that there is a couple of cases where two distinct cities jointly share the provincial administrative centre status (Massa-Carrara, and Pesaro-Urbino). In these cases we have included both cities in our sample. This is why our sample consists in 106 cities, while the Italian provinces in 1998 were only 104.

<sup>7</sup> Data on cultural spending of Italian municipalities are available from the Italian Home Office since 1998. 1999 is the time the Domestic Stability Pact came into force. This Pact mirrors the European Stability and Growth Pact and imposes the monitoring of local accounts by central government. In the official "*Certificati consuntivi*" (final budget balances) we consider the headings "*impegni*", as these certify expenses that have actually been decided in the year of interest.

<sup>8</sup> This probably also means more reliable data, because the smaller the towns, the lower the quality of local governments' budget reports. The cities we consider are quite different in size (they have a population between about 20,000 and 2.5 millions), allowing to capture size effects if present.

<sup>9</sup> Today's administrative centres often identify with the capitals of the small states Italy was divided into before it became a unified country in 1861. This is the main reason why they are so rich in cultural heritage.

We choose as dependent variable the ratio between current cultural transfers and current cultural expenditures (*CULTRANSFRATIO*).<sup>10</sup> We argue that the larger the share of municipal transfers in total current cultural spending, the higher is the level of outsourcing in cultural services. Empirical works on local services privatization usually adopt categorical dependent variables to measure the extent of local services outsourcing. The use of municipal transfers arguably represents a novel methodological approach. Considering their weight in overall cultural expenditure allows us to better assess the real economic extent of the scope of government, at least in a sector such as culture where governments' direct support to the market is only on the supply side and contracting out is generally not by concessions. Moreover, as the value of the ratio varies over time within the same city, using this dependent variable allows us to consider the question of the determinants of outsourcing in a dynamic empirical setting.

As for the drivers of outsourcing, fiscal variables capture how central government restrictions on local finance influence the mode of provision of local services. There are two types of variables in this case. First, the effect of different fiscal rules on groups of municipalities can be tested through dummies capturing institutional heterogeneity.<sup>11</sup> Second, measures related to the "fiscal stance" of local governments may capture fiscal stress, i.e. whether or not the fiscal rule in force is (almost) binding in a given municipality. In Italy, all municipalities over 5.000 inhabitants are subject to the same fiscal rule, the so-called Domestic Stability Pact, which came into force in 1999 and sets ceilings on expenditures and deficits of sub-national governments (Ambrosiano and Bordignon, 2009). As the Domestic Stability Pact restrictions apply to all the cities we consider, we cannot use this information to detect variability in fiscal conditions across municipalities.<sup>12</sup> We consider instead two different variables of the second type. The first is total current expenditures per capita (*TOTEXP*). We use it as a proxy for fiscal stress, as high expenditures are likely to cause a municipality to violate the restrictions imposed by the Domestic Stability Pact, and may therefore induce a mayor to impose a cut in the near future.

The second is the value of in-house produced cultural services (*INHOUSE*), obtained as the difference between per capita cultural current spending and cultural transfers. In fact, a Granger test shows that the value of cultural services produced directly by public employees causes cultural transfers, but not vice versa.<sup>13</sup>

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<sup>10</sup> We also consider real per capita municipal cultural transfers (*CULTRANSF*) This allows us to better understand and interpret how changes explained by covariates in the absolute value of cultural transfers determine their relative size in municipal overall cultural spending.

<sup>11</sup> These dummies are frequently adopted in contributions on US states' and cities' outsourcing policies.

<sup>12</sup> In theory, some of the time variability may be due to the repeated reforms the Domestic Stability Pact was subject to in the time span we consider. We argue however that this is unlikely, which has to do with the absence of a rigid enforcement mechanism for the budget rule, except for its informational requirements

<sup>13</sup> Considering two lags, the p-values are 0.03 and 0.92 respectively.

Economic variables address issues linked to economic efficiency arguments. First, we control for the possibly divergent dynamics of public servants' productivity with respect to private employees, along the lines of Baumol's cost-disease argument (Baumol and Bowen 1966). Using OECD data at the national level, we construct the variable (*CPGW/CPI*) as government-consumption price deflator over GDP deflator. When wage costs in the public sector increase more than market prices, we expect a positive relation between the index and the proportion of outsourced cultural services.

Second, in order to control for city-specific factors, we use population size (*POPULATION*), per capita income level (*INCOME*) and a measure of asset specificity in municipal cultural activities (*CULTASSET*) as possible drivers of municipal governments' outsourcing behaviour. While in many works focusing on local public utilities city size captures the effect of scale economies in service delivery, in the cultural sector population is more likely to express the possibility to take advantage of competition from a larger number of service providers. As cultural industries and arts organizations tend to localize in larger and metropolitan urban areas, we expect that this covariate is positively related to the dependent variable.

In turn, per capita income level of a city is generally considered in the literature on local services privatization (Hirsch, 1995; Greene, 1996) as a proxy of public preferences for private service delivery.

In order to control for asset specificity in public cultural facilities we use the share of municipal current spending on 'Libraries, Museums and Galleries' over total cultural expenditures (*CULTASSET*). As compared to theatres, performing arts and the organizations of cultural events, libraries and museums often represent the facilities that provide cultural services with the highest level of asset specificity, as the expenditures devoted for the conservation and maintenance of the book and artworks collections often represent sunk costs and are hardly re-deployable in the short term. Since there are no complete data on cultural facilities at the municipal level, we use a local government's financial involvement in these cultural activities as a proxy for their relative importance. We therefore expect that cities with a higher share of cultural spending dedicated to museums and libraries with respect to theatres and festivals are likely to be less outsourcing-prone.

Finally, political variables account for the possible influence of the distortions induced by politics on the behaviour of policy-makers and for the strength of pressure groups.

The variable *LEFTRIGHT* is a categorical variable capturing the left-wing orientation of the ruling government, and is a standard control in the empirical literature on outsourcing, while *ELECTION YEAR* and *TERMLIMIT* are dummies taking value 1 if the year is an election year or is in a mayor's second (and therefore last) term of office respectively. The variable *ELECTION YEAR* is used to capture politicians' manipulations of governmental outputs so as to favour their chances of re-

election, and we use it in this context because Dalle Nogare and Galizzi (2011) find it a significant driver of the level of Italian cities' cultural spending. As for *TERMLIMIT*, some political economy studies point out that because elections have no disciplinary role for a 'lame duck', the latter is more prone to deviate from the median voter's preferences (Besley and Case 2003 Smart and Sturm 2006). Anecdotal evidence shows that Italian mayors are sometimes tempted, after their last mandate, to consider job offers from non-profit organisations, so it may well be that in order to induce them, they grant these institutions more money before the end of their political career.

Finally, to control for additional factors specific to the cultural and leisure sector, we consider both a measure of the role of a city as a touristic destination (*TOURISM*) and local cultural private spending (*PRIVCULTEXP*). The former is the number of tourist accommodation establishments normalised by population. As the tourist sector benefits from a city's provision of cultural activities this variable is used to test whether the local tourist sector exerts pressure on the municipal government in favour or against outsourcing..

As for local cultural private spending, potentially it may condition a mayor's outsourcing strategy in two ways: on one hand, it may induce her to squeeze non-contractual outsourcing, as cultural institutions may have alternative (private) patrons; on the other hand, the very presence of a rich private patron may make the birth of a hybrid, public-private cultural institution more likely. Unfortunately, there are no aggregate data at the local level concerning cultural and artistic activities sponsored by private firms. Following Dalle Nogare and Galizzi (2011), we therefore consider only cultural spending of non-profit organisations and more precisely those of the so-called banking foundations. These non-profit organizations are by far the richest and most active private subjects in financing projects in the areas of arts and culture. There are 88 banking foundations in total (17 of them spend 80% of aggregate expenditures), and they are mainly concentrated in the northern and central parts of the country (Di Lascio and Segre 2007). As the institutional mandate of bank foundations allows them to fund projects and initiatives only in the area they are located, we use per capita expenditure by banking foundations as a reliable proxy of private cultural spending at the local level.<sup>14</sup>

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<sup>14</sup> Banking foundations are organised in an association, ACRI, from which we got the spending data for each of them. Some banking foundations are present in more than one city. Dalle Nogare and Galizzi (2011) dealt with these cases and imputed a portion of their overall cultural spending to every city they operate in. We use their series and integrated them for the 2006-08 years following the same methodology. The only exceptions are the series for the cities Fondazione CARIPLO operates in, which we re-calculated completely, following the discovery of a mistake in the previous imputations.

## 5. Estimation Strategy

Our dataset consists of a panel, and the model we estimate is the following:

$$y_{it} = \rho y_{it-1} + x_{it}\beta + \alpha_i + \varepsilon_{it}$$

where  $y_{it}$  is current cultural transfers over current cultural expenditure of city  $i$  in year  $t$ ,  $x_{it}$  is the vector of the corresponding values for the explanatory variables,  $\alpha_i$  captures the source of unobserved heterogeneity across cities and  $\varepsilon_{it}$  is a idiosyncratic disturbance term.

One of the major shortcomings of most empirical contributions on outsourcing of local public services is the use of cross-section data with lack of consideration of the dynamics (Bel and Fageda, 2007). The choice of a dynamic specification is justified by the following arguments:

- a) contractual outsourcing generally lasts more than one year (multi-year contracts)
- b) more generally, decisions concerning fiscal policy often persist over time (status quo bias due to the nature of the decision-making process underlying it in a democracy).

A statistical inspection of both nominator and denominator of our dependent variable confirm that they are AR(1),<sup>15</sup> so persistence is an issue we cannot disregard. Lack of consideration of  $y_{it-1}$  would generate inconsistent estimates. In other words, we take advantage of the panel nature of our dataset to control for the (possibly large) effect of last year's proportion of outsourced cultural services on this year's value of the same ratio.

Given our choice of a dynamic model, we rely on the use of Generalized Method of Moments estimation techniques. As a matter of fact, given the fact that our panel is (slightly) unbalanced and the relative size of  $N$  and  $T$ , Monte Carlo tests show that Arellano Bond (1991) estimates outperforms all other estimators (Judson and Owen, 1999).

However, Arellano Bond (1991) estimates have often been found to be characterized by a weak instruments problem. Moreover, as they rely on transformation of the original model into its differenced version, they do not allow to estimate time invariant explanatory variables, and some of the extra variables we intend to use for the robustness checks are time invariant.

As a consequence, we adopt Arellano and Bover (1995) – Blunder and Bond (1998) system GMM as our preferred estimation strategy. To increase efficiency, Blundell and Bond develop an approach outlined in Arellano and Bover: they difference the instruments to make them exogenous to the

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<sup>15</sup> Fisher tests detect no unit root instead.

fixed effects instead of transforming the regressors to expunge them. This is valid assuming that changes in the instrumenting variables are uncorrelated with the fixed effects.<sup>16</sup>

Unlike AB (1991) estimates, system GMM allows consideration of time invariant explanatory variables.

## 6. Results

The main findings of our analysis on Italian cities' outsourcing strategies in the cultural field are summarised in Table 2.

[Table 2 here]

The dependent variable is the ratio between cultural transfers and total cultural expenditures (*CULTRANSFRATIO*). All covariates are in logs (except the political dummies and the variables expressing a ratio), and for all of them (except the political ones) we initially consider both their current value and lag one.<sup>17</sup>

The results obtained by the use of our preferred estimation strategy, namely system GMM, are in column 4. For comparative purposes, in columns 1-3 we show fixed effects, fixed effects with correction for first-order autoregression and Arellano-Bond GMM estimates respectively, all of them with robust standard errors.<sup>18</sup> Column 5 presents system GMM estimates with a correction for potential endogeneity of the *INHOUSEXP* variable. Then a general to specific selection is made, from which a reduced model emerges (column 6). In GMM estimates serial correlation in the first-differenced errors at an order higher than 1 implies that the moment conditions used to derive them are not valid; all of our GMM estimates show no evidence of serial correlation in the first-differenced errors at order 2.<sup>19</sup>

In all dynamic panel estimates of Table 2 the dependent variable lagged one is the most important driver of time t municipal governments' outsourcing strategies in the cultural field. System GMM estimates reveal the substantial sluggishness of political conduct in this governmental domain of

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<sup>16</sup> In order to apply system GMM,  $\rho$  must be less than 1, which in our case all the autocorrelation tests confirm, and cities in which outsourcing grows more rapidly are not systematically closer or farther from their steady states than slower-growing ones. We have no reason to believe this is not the case.

<sup>17</sup> We considered introducing time dummies, but an F test always revealed their coefficients were not significantly different from 0.

<sup>18</sup> We use a static model when considering FE estimates. A Hausman test reveals FE estimates must be preferred to random effects estimates. A modified Wald test and a Wooldridge test reveal FE estimates are affected by both heteroskedasticity and serial correlation of the residuals. A modified Bhargava et al. Durbin-Watson test on the xtregar estimates, confronted with the critical values in Bhargava, Franzini, Narendranathan (1982), highlight that here, too, we must reject the null hypothesis of 0 autocorrelation.

<sup>19</sup> Sargan tests are not applicable because of the use of robust standard errors.

action.<sup>20</sup> As for the other regressors, most of the significant ones are so in all columns, and their sign and size is quite similar. We interpret this coherence as a sign of robustness.

The determinants of Italian cities' outsourcing policy in the cultural field are found to be quite few in the period of interest. In fact, the estimated coefficients of some potential drivers are never significant. We will consider these first, and then illustrate the significant ones.

That total current spending is not significant may be surprising. However, this evidence is in accordance with what the literature on outsourcing generally finds when models have just one governmental function as dependent variable, especially if it is not a major one (Bel and Fageda, 2007, 2009).<sup>21</sup> The relative price dynamics variable *CPGW/CPI* is never significant, either. This may be the effect of considering a *national* proxy for the gap in public and private productivity; unfortunately, there is no local indicator we can use. Ideology does not seem to play a role, either, and that is again in accordance with most empirical works on outsourcing and privatisations at the local levels of government published so far.

The three variables that emerge as significant drivers of Italian cities' outsourcing policies in the cultural domain are:

- the dynamics of the value of in-house cultural production
- the degree of asset specificity, as expressed by the relative size of the expenditures for museums and libraries with respect to those for theatres and festivals
- the timing of elections.

Interestingly, these variables are significant regressors also in models with the *level* of cultural transfers as dependent variable (Table 3), revealing that the dynamics of the denominator of *CULTRANSFRATIO* do not play a relevant role: our results are driven by the growth of the nominator, which Figure 3 already anticipated.

The fiscal variable *INHOUSEXP* is a significant regressor both at time  $t$  and at time  $t-1$ . By interpreting this evidence together with Figure 1 and a Granger test revealing that *INHOUSEXP* causes *CULTRANSFRATIO* but not vice versa, we conclude that transfers are used as a buffer to keep the value of in-house produced cultural services at a desired level: in case of a rise, some services are outsourced, possibly in the hope to reduce costs. It is as if cultural departments were given each year a budget, which is then divided into direct spending and transfers, and this choice depended on last year's choice, with more outsourcing being the chosen option today if last year's value of in-house cultural spending was high. This is compatible with the idea that the head of the

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<sup>20</sup> The coefficient of lagged *CULTRANSFRATIO* is bigger in columns 4-6; this is consistent with the observation of a downward bias in the AB GMM estimator when the true value of the lagged dependent variable is high (Blundell and Bond, 1998).

<sup>21</sup> It is also compatible with the argument that the Domestic Stability Pact, lacking a rigid enforcement mechanism, has often been disregarded by municipal governments (Balassone and Zotteri, 2001)



cultural department is conscious the mayor follows a top-down budget procedure, and outsources cultural services whenever producing in-house becomes more costly. In some sense, this interpretation hints at the idea that, though indirectly, fiscal stress does play a role in a local government's outsourcing policy.

*CULTASSET* is always significant and with positive sign. This again is in line with our expectations: contractual outsourcing is less dangerous, in terms of risks associated with the management of the cultural stock involved, in the field of the performing arts. Therefore, a higher expenditure for museums and libraries, proxying for the presence of a larger numbers of such institutions owned by a municipal government, impacts the relative value of a city's outsourced public cultural activities negatively.

The significance of the *ELECTION YEAR* variable and its negative sign may seem surprising, but in fact, this is coherent with what Dalle Nogare and Galizzi (2011) conclude when considering the determinants of Italian cities' *levels* of cultural spending. They claim that there is a peculiar electoral cycle in Italy at the municipal level of government, by which, in an election year, resources are re-directed by mayors to governmental functions which voters most care for, and culture is not one of them. Our analysis enriches those findings by revealing how spending cuts are made: the easiest way is to curb subsidies to cultural institutions, and this is in fact what the negative sign of the *ELECTION YEAR* variable in our analysis shows.<sup>22</sup>

Some other potential drivers are either significant or not, depending on the model and/or estimation strategy adopted; more investigation is needed (perhaps with the use of more refined data) to assess their real role. Therefore, we limit ourselves here to consider whether when they appear to be significant, their sign is consistent with our expectations.

Our term limit hypothesis, by which a mayor in his last term would be more generous to non-profit cultural organizations, is sometimes rejected by the data, but not always when using GMM. When it is found to be significant, it always has a negative sign, which is in contrast with our prediction of term-limited mayors being more outsourcing-prone.

Population and income are significant only when the possible endogeneity of *INHOUSEXP* is corrected for in a system GMM framework, and not always so. When significant, *INCOME* has the expected positive sign while *POPULATION* has a positive sign at time *t* and a negative one at *t-1*.

As models presented in Table 2 do not include private cultural expenditure and tourism as possible drivers, Table 4 reports the estimates of models including them. Notice that in specifications including private cultural spending, the sample is smaller.

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<sup>22</sup> Cultural transfers are the effect of both contractual and non-contractual outsourcing strategies. The negative sign of the *ELECTION YEAR* variable hints at the prevalence of the latter. In fact, if contractual outsourcing were more important it would not be possible to cut down resources earmarked to it before an election.

Columns 13-16 show that there is no evidence of a significant influence of private cultural spending on cities' outsourcing decisions regarding cultural policies, while not so much changes as to the significance of the other regressors.<sup>23</sup> The irrelevance of the presence of other institutions financing cultural activities possibly means that there are two offsetting phenomena at work here, namely:

- a) presence of private patrons reducing public non-contractual outsourcing (substitution effect)
- b) contractual outsourcing rising because banking foundations create non-profit organizations becoming potential suppliers in procurement contracts.

As for the effects of tourism, it is surprising to find that these, too, are irrelevant (columns 17-20).<sup>24</sup> The explanation of this counterintuitive evidence has probably to do with the proxy we use. The number of hotels is maybe not so correlated with the number of non-resident consumers of cultural services, both because these are often excursionists and because cultural tourism is not the only type of tourism present in Italian cities.<sup>25</sup>

## 7. Robustness check

In order to account for possible non-linear effect of size, we have added the square of (the log of) population. It is never significant, and the only effect it has on the analysis was to make population or income only marginally significant. We have also considered a sub-sample not including the cities recently classified by the Italian law as metropolitan areas, but this does not change our main results.<sup>26</sup>

We have introduced a dummy variable capturing the Northcentre-South divide: it is not significant and does not change the sign and significance of the other regressors. The same happens when we try with a dummy equal to 1 when a city belongs to an Autonomous Region, in which the distribution of governmental functions among the different levels of government differ from the rest of the country.<sup>27</sup>

Finally, as an alternative measure of asset specificity we have used the number of municipally owned museums per 10.000 inhabitants. This measure has some clear shortcomings, as it does not capture the presence of public libraries, the other relevant set of cultural facilities generally owned

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<sup>23</sup> Only income becomes more significant, indicating that the richer the city, the higher the level of outsourcing in the cultural field.

<sup>24</sup> Working on a similar database, Dalle Nogare and Galizzi (2011) show that tourism is not a significant driver of a city's *level* of current cultural spending, either.

<sup>25</sup> It is puzzling to notice that controlling for TOURISM the POPULATION variable does not turn more significant than in the models in Table 2.

<sup>26</sup> The subsample excludes Rome, Milan, Naples, Genoa, Turin, Bologna, Florence, Venice and Bari. Similar results are obtained when excluding only Rome and Genoa, which are the two cities of which we know that their cultural activities are delegated to a company entirely owned by the municipal government (cases in which transfers are not a good proxy for outsourcing).

<sup>27</sup> Each Autonomous Region has a specific status in this respect.

by municipalities. Furthermore, the information is available only for 2006 and therefore the variable is fixed over time. This alternative regressor is never significant.

## **8. Conclusions**

Outsourcing and contracting out of local public services has been a growing trend for government policies in the last decades. Several theoretical and empirical works have analyzed the distinct determinants and conditions affecting local governments' choice for outsourcing, including fiscal, economic and political factors.

In this article we propose a first analysis of the determinants of a government's choice between outsourcing and in-house production in the field of cultural services. First we develop a general analytical framework to take into account both contractual and non contractual outsourcing within a government cultural policy. Second, using data on 106 Italian cities over the 1998-2008 period, we produce estimates of the impact of several standard and sector-specific potential drivers. Our results are in line with the literature on outsourcing in general or in other public functions: outsourcing of cultural services is negatively affected by cultural assets specificity and is more likely to occur in cities subject to fiscal stress. Furthermore, in line with the findings of Dalle Nogare and Galizzi (2011), we find evidence of a peculiar electoral cycle by which incumbent mayors spend less on cultural transfers around an election year.

Finally, the relevance of our contribution is also methodological and goes beyond the restricted field of cultural policy. Arguably, the use transfers as a proxy for the value of a government's outsourced services allows to quantify them in a number governmental functions so far not considered by the literature on outsourcing.

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**TABLES**

**Table 1** - Taxonomy of cultural policies according to degree of a government’s control and pro-market attitude

|  |   | Government control over contents of culture        |   |
|--|---|--|---|
|  |   | Low  | High  |
| Degree of pro-market attitude (ideology) | mkt failures perceived as > gov failures  | public agency grants subsidies; <i>outsourcing</i> | in-house production                             |
|  | gov. failures perceived as > mkt failures | pure laissez faire; indirect market support        | Government grants subsidies; <i>outsourcing</i> |

**Table 2** – Determinants of Italian municipal outsourcing in the cultural sector, 1998-2008

| Dependent Variable: Cultransfratio |                      |                      |                      |                      |                      |                      |
|------------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|                                    | (1)                  | (2)                  | (3)                  | (4)                  | (5) <sup>a</sup>     | (6) <sup>a</sup>     |
|                                    | FE                   | FE Ar(1)             | AB GMM               |                      | System GMM           |                      |
| Cultransfratio(-1)                 |                      |                      | 0.538***<br>(0.107)  | 0.680***<br>(0.071)  | 0.687***<br>(0.101)  | 0.673***<br>(0.085)  |
| totexp                             | 0.056<br>(0.044)     | 0.057*<br>(0.031)    | 0.056<br>(0.044)     | 0.018<br>(0.041)     | 0.008<br>(0.048)     |                      |
| totexp(-1)                         |                      |                      | -0.024<br>(0.034)    | -0.059*<br>(0.035)   | -0.106<br>(0.067)    |                      |
| inhousexp                          | -0.180***<br>(0.026) | -0.163***<br>(0.009) | -0.158***<br>(0.024) | -0.148***<br>(0.023) | -0.160***<br>(0.022) | -0.159***<br>(0.023) |
| inhousexp(-1)                      |                      |                      | 0.077***<br>(0.024)  | 0.107***<br>(0.020)  | 0.120***<br>(0.028)  | 0.116***<br>(0.018)  |
| Population                         | 0.371<br>(0.230)     | 0.032<br>(0.045)     | 0.401<br>(0.262)     | 0.238<br>(0.184)     | 0.391**<br>(0.196)   | 0.365***<br>(0.128)  |
| Pop (-1)                           |                      |                      | -0.024<br>(0.169)    | -0.272<br>(0.168)    | -0.426**<br>(0.190)  | -0.408***<br>(0.136) |
| Income                             | 0.042<br>(0.070)     | -0.022<br>(0.051)    | 0.030<br>(0.114)     | 0.081<br>(0.065)     | 0.087<br>(0.107)     | 0.076**<br>(0.034)   |
| income(-1)                         |                      |                      | 0.008<br>(0.060)     | 0.022<br>(0.052)     | 0.063<br>(0.155)     |                      |
| cpgw/cpi                           | 0.050<br>(0.120)     | 0.041<br>(0.114)     | -0.049<br>(0.206)    | -0.063<br>(0.210)    | 0.031<br>(0.172)     |                      |
| cpgw/cpi(-1)                       |                      |                      | -0.055<br>(0.252)    | 0.0006<br>(0.226)    | -0.164<br>(0.349)    |                      |
| CultAsset                          | -0.213***<br>(0.048) | -0.173***<br>(0.029) | -0.146***<br>(0.036) | -0.122***<br>(0.036) | -0.162***<br>(0.042) | -0.157***<br>(0.055) |
| CultAsset(-1)                      |                      |                      | 0.086<br>(0.055)     | 0.106**<br>(0.048)   | 0.125**<br>(0.057)   | 0.137**<br>(0.058)   |
| Election year                      | -0.009**<br>(0.004)  | -0.008**<br>(0.003)  | -0.012***<br>(0.004) | -0.011**<br>(0.004)  | -0.012*<br>(0.006)   | -0.014***<br>(0.005) |
| leftright                          | -0.022*<br>(0.011)   | -0.012<br>(0.007)    | -0.015<br>(0.021)    | -0.020<br>(0.023)    | -0.023<br>(0.026)    |                      |
| termlimit                          | 0.003<br>(0.007)     | -0.012**<br>(0.005)  | -0.014**<br>(0.006)  | -0.018**<br>(0.007)  | -0.015<br>(0.018)    |                      |
| Observations                       | 1110                 | 1005                 | 884                  | 997                  | 997                  | 1008                 |
| Number of Instruments              |                      |                      | 60                   | 69                   | 123                  | 116                  |
| R2                                 | 0.103                | 0.095                |                      |                      |                      |                      |
| AR(1)                              |                      |                      | -3.415***            | -3.827***            | -3.653***            | -3.878***            |
| AR(2)                              |                      |                      | -1.520               | -1.489               | -1.475               | -1.242               |

Standard errors in parentheses: \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1.

In regression (2) the value of the estimated rho is 0.592.

GMM estimates show two steps results with Windmeijer bias-corrected robust standard errors,

a - estimations with correction for potential endogeneity of inhousexp variable.

**Table 3 - Determinants of real per capita cultural transfers of Italian municipalities, 1998-2008**

| Dependent Variable: Cultransf   |                       |                      |                      |                      |                       |                      |
|---------------------------------|-----------------------|----------------------|----------------------|----------------------|-----------------------|----------------------|
|                                 | (7)                   | (8)                  | (9)                  | (10)                 | (11) <sup>a</sup>     | (12) <sup>a</sup>    |
|                                 | FE                    | FE Ar(1)             | AB GMM               | System GMM           |                       |                      |
| Cultransf(-1)                   |                       |                      | 0.376***<br>(0.139)  | 0.520***<br>(0.147)  | 0.683***<br>(0.088)   | 0.691***<br>(0.082)  |
| Totexp                          | 0.0059*<br>(0.003)    | 0.007***<br>(0.002)  | 0.004<br>(0.003)     | 0.009***<br>(0.003)  | 0.007**<br>(0.003)    |                      |
| Totexp(-1)                      |                       |                      | -0.004<br>(0.003)    | -0.001<br>(0.004)    | -0.007*<br>(0.004)    |                      |
| Inhousexp                       | -0.244***<br>(0.040)  | -0.168***<br>(0.024) | -0.168***<br>(0.043) | -0.186***<br>(0.046) | -0.218***<br>(0.050)  | -0.210***<br>(0.045) |
| Inhousexp(-1)                   |                       |                      | 0.012<br>(0.060)     | 0.024<br>(0.080)     | 0.125*<br>(0.064)     | 0.129**<br>(0.064)   |
| Population (10.000 inhabitants) | 0.070<br>(0.131)      | 0.025<br>(0.207)     | -0.172<br>(0.139)    | -0.152<br>(0.145)    | -0.110<br>(0.189)     |                      |
| Pop (10.000 inhabitants) (-1)   |                       |                      | 0.077<br>(0.102)     | 0.0009<br>(0.124)    | -0.029<br>(0.191)     |                      |
| Income                          | -0.00002<br>(0.0003)  | 0.0001<br>(0.0003)   | -0.00001<br>(0.0006) | 0.0009<br>(0.0009)   | 0.0008<br>(0.0008)    | 0.0008**<br>(0.0003) |
| Income(-1)                      |                       |                      | 0.0001<br>(0.0004)   | 0.0004<br>(0.0004)   | 0.0003<br>(0.0004)    |                      |
| cpgw/cpi                        | 2.344<br>(8.410)      | 1.166<br>(4.638)     | -4.56<br>(16.277)    | 14.650<br>(20.416)   | 21.570<br>(37.227)    |                      |
| cpgw/cpi(-1)                    |                       |                      | -1.71<br>(17.845)    | -9.920<br>(21.224)   | -23.395<br>(41.291)   |                      |
| CultAsset                       | -14.588***<br>(3.634) | -9.743***<br>(2.089) | -9.092**<br>(3.978)  | -9.241*<br>(5.172)   | -11.908***<br>(4.613) | -12.624**<br>(5.999) |
| CultAsset(-1)                   |                       |                      | -0.968<br>(4.303)    | 0.962<br>(5.051)     | 7.988**<br>(3.342)    | 6.317**<br>(2.931)   |
| Election year                   | -0.524*<br>(0.295)    | -0.442*<br>(0.257)   | -0.394<br>(0.266)    | -0.614**<br>(0.313)  | -0.954*<br>(0.515)    | -1.273***<br>(0.413) |
| Leftright                       | -1.217<br>(0.727)     | -0.014<br>(0.574)    | -0.691<br>(0.754)    | -0.223<br>(1.109)    | -0.852<br>(0.856)     |                      |
| Termlimit                       | -0.120<br>(0.472)     | -0.603<br>(0.375)    | -0.391<br>(0.651)    | -0.141<br>(0.559)    | -0.079<br>(0.952)     |                      |
| Observations                    | 1107                  | 1002                 | 878                  | 992                  | 992                   | 1003                 |
| Number of Instruments           |                       |                      | 60                   | 69                   | 123                   | 114                  |
| R2                              | 0.0172                | 0.0031               |                      |                      |                       |                      |
| AR(1)                           |                       |                      | -2.395**             | -2.693***            | -3.409***             | -3.592***            |
| AR(2)                           |                       |                      | -1.464               | -1.337               | -1.181                | -0.933               |

Standard errors in parentheses: \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1.

In regression (8), the value of the estimated rho is 0.571.

GMM estimates show two steps results with Windmeijer bias-corrected robust standard errors.

a - estimations with correction for potential endogeneity of inhousexp variable.



**Table 4** –Role of Local Private Patrons and Tourism on cultural outsourcing, Italian Cities 1998-2008

| Dependent Variable: Cultransfratio |                              |                      |                      |                      |                      |                      |                      |                      |
|------------------------------------|------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|                                    | (13)                         | (14)                 | (15) <sup>a</sup>    | (16) <sup>a</sup>    | (17)                 | (18)                 | (19) <sup>a</sup>    | (20) <sup>a</sup>    |
|                                    | Private Cultural Expenditure |                      |                      |                      | Tourism              |                      |                      |                      |
| Cultransfratio(-1)                 | 0.698***<br>(0.079)          | 0.676***<br>(0.080)  | 0.701***<br>(0.123)  | 0.654***<br>(0.066)  | 0.699***<br>(0.080)  | 0.639***<br>(0.103)  | 0.690***<br>(0.098)  | 0.679***<br>(0.084)  |
| totexp                             | 0.037<br>(0.047)             |                      | 0.019<br>(0.077)     |                      | 0.026<br>(0.045)     |                      | 0.004<br>(0.051)     |                      |
| totexp(-1)                         | -0.106**<br>(0.049)          | -0.079**<br>(0.036)  | -0.122<br>(0.091)    | -0.083*<br>(0.048)   | -0.056<br>(0.036)    |                      | -0.101<br>(0.072)    |                      |
| inhousexp                          | -0.155***<br>(0.028)         | -0.141***<br>(0.028) | -0.163***<br>(0.029) | -0.160***<br>(0.023) | -0.148***<br>(0.023) | -0.131***<br>(0.024) | 0.157***<br>(0.026)  | -0.156***<br>(0.022) |
| inhousexp(-1)                      | 0.112***<br>(0.026)          | 0.124***<br>(0.023)  | 0.118***<br>(0.037)  | 0.138***<br>(0.027)  | 0.111***<br>(0.022)  | 0.093***<br>(0.023)  | 0.119***<br>(0.027)  | 0.115***<br>(0.021)  |
| Population                         | 0.080<br>(0.212)             |                      | 0.121<br>(0.446)     |                      | 0.240<br>(0.187)     |                      | 0.405*<br>(0.212)    | 0.245**<br>(0.107)   |
| Population(-1)                     | -0.102<br>(0.203)            |                      | -0.096<br>(0.437)    |                      | -0.271<br>(0.172)    | -0.060*<br>(0.033)   | -0.436**<br>(0.201)  | -0.287***<br>(0.105) |
| income                             | 0.009<br>(0.085)             | 0.072***<br>(0.021)  | -0.027<br>(0.136)    | 0.078***<br>(0.028)  | 0.069<br>(0.071)     | 0.097**<br>(0.046)   | 0.082<br>(0.116)     | 0.074*<br>(0.044)    |
| income(-1)                         | 0.110<br>(0.076)             |                      | 0.123<br>(0.151)     |                      | 0.021<br>(0.053)     |                      | 0.062<br>(0.127)     |                      |
| cpgw/cpi                           | -0.143<br>(0.272)            |                      | -0.090<br>(0.262)    |                      | -0.074<br>(0.221)    |                      | 0.022<br>(0.167)     |                      |
| cpgw/cpi(-1)                       | 0.010<br>(0.224)             |                      | -0.138<br>(0.294)    |                      | 0.024<br>(0.245)     |                      | -0.155<br>(0.255)    |                      |
| CultAsset                          | -0.152**<br>(0.071)          | -0.175***<br>(0.047) | -0.183***<br>(0.063) | -0.202***<br>(0.066) | -0.123***<br>(0.037) | -0.133***<br>(0.032) | -0.158***<br>(0.050) | -0.154***<br>(0.047) |
| CultAsset(-1)                      | 0.103*<br>(0.059)            | 0.139**<br>(0.055)   | 0.131<br>(0.086)     | 0.145**<br>(0.073)   | 0.104**<br>(0.047)   | 0.123**<br>(0.052)   | 0.125**<br>(0.060)   | 0.141**<br>(0.056)   |
| Election year                      | -0.008*<br>(0.004)           | -0.011**<br>(0.005)  | -0.013**<br>(0.005)  | -0.014***<br>(0.005) | -0.010**<br>(0.004)  | -0.011***<br>(0.004) | -0.012<br>(0.008)    | -0.013**<br>(0.005)  |
| leftright                          | -0.014<br>(0.021)            |                      | -0.021<br>(0.023)    |                      | -0.019<br>(0.023)    |                      | -0.022<br>(0.024)    |                      |
| termlimit                          | -0.013*<br>(0.007)           |                      | -0.011<br>(0.013)    |                      | -0.018**<br>(0.007)  | -0.015**<br>(0.007)  | -0.015<br>(0.019)    |                      |
| PrivCultexp                        | -0.005<br>(0.005)            | -0.005<br>(0.003)    | -0.004<br>(0.005)    | -0.002<br>(0.005)    |                      |                      |                      |                      |
| PrivCultexp(-1)                    | 0.007<br>(0.005)             |                      | 0.011<br>(0.009)     |                      |                      |                      |                      |                      |
| tourism                            |                              |                      |                      |                      | -0.003<br>(0.010)    | -0.001<br>(0.018)    | -0.003<br>(0.013)    | -0.011<br>(0.013)    |
| Observations                       | 859                          | 892                  | 859                  | 892                  | 997                  | 1008                 | 997                  | 1008                 |
| Number of Instruments              | 71                           | 62                   | 125                  | 116                  | 69                   | 62                   | 123                  | 116                  |
| AR(1)                              | -4.331***                    | -4.248***            | -3.804***            | -4.331***            | -3.753***            | -3.57***             | -3.674***            | -3.858***            |
| AR(2)                              | -1.292                       | -1.059               | -1.234               | -1.102               | -1.477               | -1.191               | -1.474               | -1.216               |

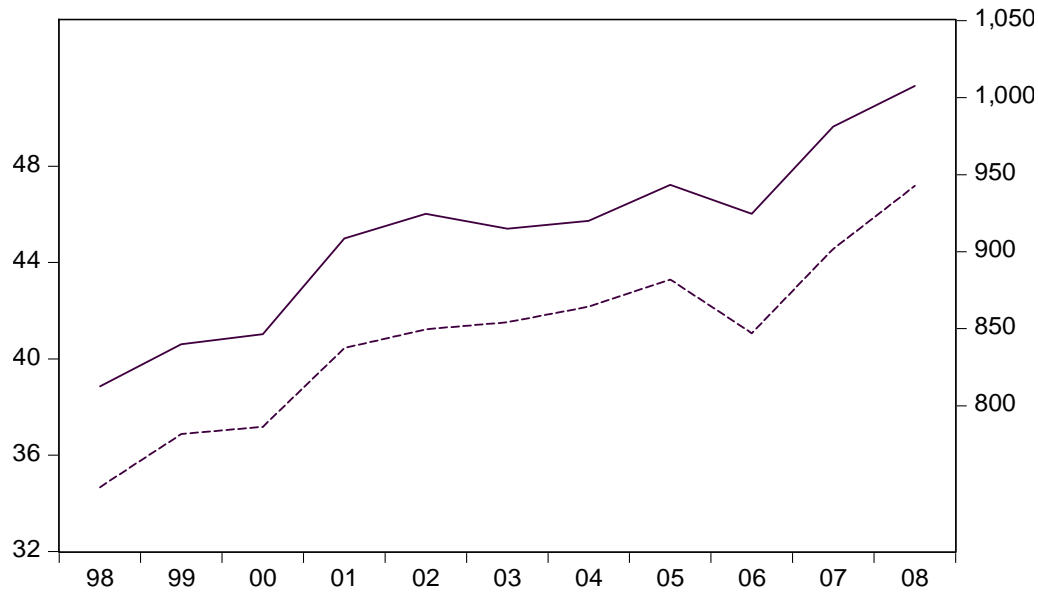
Standard errors in parentheses: \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1.

GMM estimates show two steps results with Windmeijer bias-corrected robust standard errors.

a - estimations with correction for potential endogeneity of inhousexp variable.

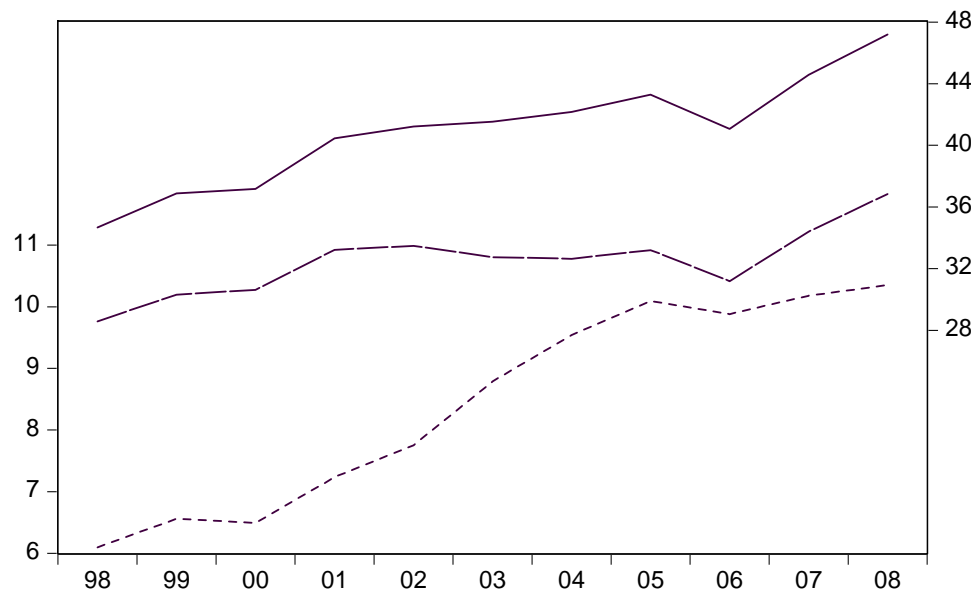
## FIGURES

**Figure 1: yearly average of per capita total and cultural current expenditures in current €**



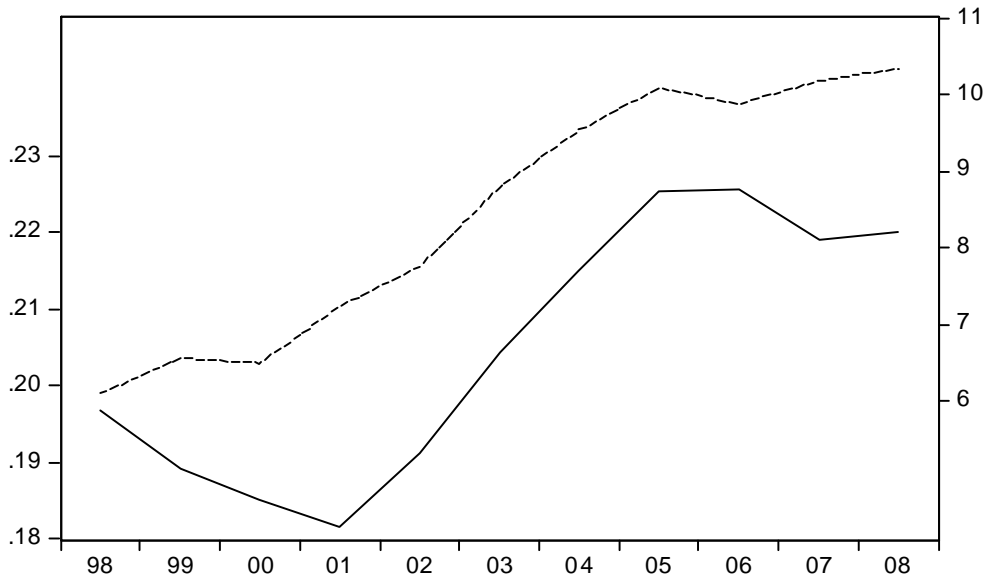
*Continuous line: yearly average of cities' total current spending per capita (right axis)*  
*Dotted line: yearly average of cities' cultural current spending per capita (left axis)*

**Figure 2: Per capita current cultural spending, in-house cultural production and cultural transfers**



*Continuous line: yearly average of per capita cultural expenditures (right axis)*  
*Semi-continuous line: yearly average of per capita in-house produced cultural services (right axis)*  
*Dotted line: yearly average of per capita cultural transfers (left axis)*

**Figure 3: current cultural transfers and ratio of cultural transfers over cultural expenditures**



*Continuous line: yearly average of current cultural transfers in current € (right axis)*

*Dotted line: yearly average of ratio of current cultural transfers over total current cultural expenditure (left axis)*

## **DATA APPENDIX**

In Table A1 we summarize the statistical properties of the main variables we use in our model specification. All variables are in logs, except for the political variables (which are dummies or categorical ones) and the variables expressing ratios (*CULTASSET* and *CULTRASFRATIO*).

The information in our Dataset has been obtained from different sources.

Data on municipal cultural expenditures come from the Database of the official ‘certificati consuntivi’ (final budget balances) made available by the Italian Home Office (<http://finanzalocale.interno.it/apps/floc.php/in/cod/4>, last access on 25.10.2012).

Data on private cultural expenditure refer to banking foundations’ cultural spending and have been provided by ACRI (Associazione di Fondazioni e di Casse di Risparmio).

As for socio-economic variables, the source for the population data is the National Statistical Office (ISTAT). Income data refer to per capita tax base at municipal level and the source is the Ministry of Economy and Finance

([http://www.finanze.it/export/finanze/Per\\_conoscere\\_il\\_fisco/Fiscalita\\_locale/addirpef/dati\\_statistici.htm](http://www.finanze.it/export/finanze/Per_conoscere_il_fisco/Fiscalita_locale/addirpef/dati_statistici.htm)).

Political data on Italian municipalities have been collected by Fabio Padovano for IREF (Institut de Recherche Economique et Fiscal). Finally, data on consumer price and government wage deflators come from OECD Statistical Database (Source: <http://www.oecd.org/statistics/>, last access on 25.10.2012).

**Table A1 – Summary Statistics**

| Variable      | Description   |         | Mean   | Std. Dev. | Min    | Max    | Observations |
|---------------|---|---------|--------|-----------|--------|--------|--------------|
| Cultrasratio  | ratio between current cultural transfers and current cultural expenditures                          | overall | 0.201  | 0.171     | 0      | 0.872  | N = 1137     |
|               |   | between |        | 0.151     |        |        |              |
|               |   | within  |        | 0.082     |        |        |              |
| Totexp        | per capita total current expenditures   | overall | 6.670  | 0.220     | 6.051  | 7.439  | N = 1148     |
|               |   | between |        | 0.199     |        |        |              |
|               |   | within  |        | 0.097     |        |        |              |
| Inhouseexp    | Per capita direct current cultural expenditures   | overall | 3.150  | 0.732     | 0.402  | 5.095  | N = 1137     |
|               |   | between |        | 0.683     |        |        |              |
|               |   | within  |        | 0.273     |        |        |              |
| Population    | City Population   | overall | 11.467 | 0.861     | 9.622  | 14.817 | N = 1166     |
|               |   | between |        | 0.864     |        |        |              |
|               |   | within  |        | 0.022     |        |        |              |
| Income        | Income per Capita   | overall | 9.413  | 0.225     | 8.698  | 9.935  | N = 1166     |
|               |   | between |        | 0.222     |        |        |              |
|               |   | within  |        | 0.040     |        |        |              |
| cpgw/cpi      | Ratio between government-consumption price deflator and GDP deflator                                | overall | 1.180  | 0.049     | 1.107  | 1.246  | N = 1166     |
|               |   | between |        | 0         |        |        |              |
|               |   | within  |        | 0.049     |        |        |              |
| Cultasset     | Ratio between municipal current expenditure in "libraries, museums and galleries" and Total current | overall | 0.386  | 0.202     | 0      | 1      | N = 1126     |
|               |   | between |        | 0.187     |        |        |              |
|               |   | within  |        | 0.410     |        |        |              |
| PrivCultexp   | Municipal banking foundations per capita cultural spending  | overall | 1.690  | 2.169     | -5.095 | 6.711  | N = 1009     |
|               |   | between |        | 2.076     |        |        |              |
|               |   | within  |        | 0.782     |        |        |              |
| Election year | 1 if the year is an election year; 0 Otherwise  | overall | 0.218  | 0.413     | 0      | 1      | N = 1164     |
|               |   | between |        | 0.047     |        |        |              |
|               |   | within  |        | 0.410     |        |        |              |
| Leftright     | Municipal Government Political orientation; 1 (left), 0.5 (centre) or 0 (right)                     | overall | 0.604  | 0.488     | 0      | 1      | N = 1154     |
|               |   | between |        | 0.381     |        |        |              |
|               |   | within  |        | 0.309     |        |        |              |
| Termlimit     | 1 in all years of a mayor's last term; 0 Otherwise  | overall | 0.361  | 0.480     | 0      | 1      | N = 1164     |
|               |   | between |        | 0.169     |        |        |              |
|               |   | within  |        | 0.450     |        |        |              |
| Tourism       | Number of hotels and similar tourist establishments in 2005 per 1000 inhabitants                    | overall | 0.872  | 1.353     | 0.035  | 9.524  | N = 1166     |
|               |   | between |        | 1.359     |        |        |              |
|               |   | within  |        | 0.000     |        |        |              |