

# **Anomalously Low Spending of Municipalities and Citizen Dissatisfaction: An Analysis of Recreation Supply**

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## **Abstract**

Local authorities deliver services that seek to contribute to the socio-economic development of countries, and increasingly, these services fulfil the non-basic needs of citizens, including cultural and tourism initiatives. This article studies the impact of local public expenditure for non-basic service delivery on the cultural and socio-economic satisfaction of the population, with a specific case study of a conurbation where spending for recreation is anomalously low. It is found that citizens respond positively only to substantial expenditure but are dissatisfied if such expenditure is small and does not reach a minimum-level threshold.

**Keywords:** public spending; local government policy; citizen satisfaction; non-basic services

## **1. Introduction**

In the twenty-first century, both basic and non-basic services are provided by local governments to ensure answer to need claims of resident populations. Due to recent changes in citizen expectations in developed economies, the focus is now on a high quality and sophisticated supply (Osborne and Brown, 2005), including more and more services that are not strictly necessary, such as those fulfilling the needs of recreation (Zimmermann and Allen, 2009) and providing cultural and tourism initiatives. Spending in general service delivery in a developed economy could influence the satisfaction of the resident population and their attitude toward public spending (Lewis, 1980; 1983; Jacoby, 1994). Specifically, public service delivery has had a large influence on the state- and nation-building process in European history (van de Walle and Scott, 2011). Considering that cultural-related services have both an economic and non-economic impact on society, due to the advantage of public support for cultural initiatives (Srakar and Čopič, 2012), public spending for the delivery of non-basic services related to cultural measures would increase the probability of a positive attitude of citizens towards government spending. In a developed economy, citizens expect that public services meet or beat their needs (James, 2009). Hence, it is worth investigating the level of citizens' satisfaction regarding the delivery of non-basic services in developed economies, and specifically investigating those areas where the level of local public spending on culture is systematically lower than the national average.

We adopt a model similar to the one described by Jacoby (1994) to examine citizens' attitudes toward public spending. Unlike most existing research, we test the effect of spending at a local government level, in the belief that these policies are more likely to shape citizens' opinions than those

enacted at a national level. Finally, we build on the suggestions of James (2009) and test whether the level of spending on culture has an impact on citizens' satisfaction in an area where the level of spending is systematically lower than average. This article documents that in a developed economy the satisfaction of citizens requires the achievement of minimal thresholds of non-basic service delivery. We find that local public spending on culture has a systematically positive impact on citizens' level of satisfaction, but below a minimum threshold of public expenditure the relation is significantly negative, implying that populations in developed economies have a fundamental interest in non-basic cultural service delivery, and that spending less than enough provokes citizen dissatisfaction.

The contribution of this article is manifold. First, this is the first article specifically addressing local government spending in non-basic service delivery; second, we confirm previous results documenting the relevance of local government service delivery, and underlining the suitability of a peripheral approach to the analysis of government spending; finally, we add to the literature by showing that in a developed economy there are areas for further development, and highlighting the relevance of non-basic (more specifically, recreational) service delivery, in shaping citizens' cultural and socio-economic satisfaction in those areas.

The relevance of this study is connected to the emerging interest in local authorities taking a pro-active role in service delivery to enhance citizens' level of satisfaction. On the basis of our findings, policy makers in developed economies might consider the appropriateness of programs addressing the delivery of non-basic services. This article presents an empirical investigation of the relationship between the level of local public expenditure for recreation services and the degree of cultural and socio-economic satisfaction expressed by the resident population.

After this short introduction, in the first part of the article, the theoretical basis of the research is presented. Subsequently, the research model is described and developed, and the empirical findings are discussed. The last section provides a brief conclusion.

## **2. Theoretical Analysis**

Earlier studies on citizens' attitudes toward government expenditure show mixed results. Some researchers find a predominantly pessimistic perception of public spending, which is considered as a waste (Bennet and Bennet, 1990); others document that public opinion on government spending varies across policy areas (Eismeier, 1982; Jacoby, 1994) and by clientele group (Sanders, 1988), and show that citizens' opinions about national public expenditure capture a symbolic perception of spending policy more than a concrete perception of the specific policy enacted (Jacoby, 1994). In this article we investigate citizens' attitudes toward local government spending in non-basic service delivery.

Local government spending is basically aimed at satisfying the public's need for useful services. The needs expressed by a population can be variously classified. The most common classification separates basic needs from non-basic needs. Basic needs refer to inescapable and pressing claims<sup>1</sup>, "which possess absolute necessity for achieving a universally valuable end, whereas non-basic needs are needs relevant for achieving a private non-universally valuable end" (Schuppert, 2013: 27). Service delivery is the main instrument adopted by governments to support the meeting of the needs of their population. Furthermore, public spending in service delivery has a fundamental role in the growth of a country (Aschauer, 1989), both in developed (Mottram, 1995; Birkenhoff, 2005; Batley, 2004; Van de Walle and Scott, 2011) and in developing economies (Rondinelli and Mandell, 1981b; Harris, 1999; Burger, 2005; Krugell et al., 2010). In developing economies most of the discussion is related to basic service delivery, while in developed economies the claim for services is more complex (Osborne & Brown, 2005), and is addressed both to basic needs and non-basic needs, which are considered a fundamental interest by the population, and are clearly neither urgent nor necessary. Notwithstanding the notion that non-basic needs are typically related to contingent claims, it

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<sup>1</sup> Basic needs can be defined as survival related (Reader and Brock, 2004), or focused on avoiding harm (Doyal and Gough, 1991). In this article we refer to a broad definition, considering that the analysis involves a developed economy.

seems that citizens' expectations influence public opinion about the quality and quantity of service delivery, and produce asymmetrical attitudes toward public spending (James, 2009). Citizens will be dissatisfied until services meet and exceed their expectations.

Collectively, previous studies on developed economies show that public opinion about government spending varies across types of program supported (Eismeier, 1982; Jacoby, 1994), and depend on the degree of meeting of the respective public needs (James, 2009). The literature has long investigated the services satisfying basic needs (Rondinelli and Mandell, 1981b; Harris, 1999; Burger, 2005; Krugell et al., 2010), or the need for services in general, but, to the best of our knowledge, so far no specific research has focused on non-basic needs. This study verifies the different attitudes of citizens toward public spending in non-basic services, with the aim of contributing to the analysis of the growth of under-developed areas in developed countries. We measure citizens' satisfaction in a developed economy (Italy), with a case study from an area where the level of government spending in non-basic services is lower than the average.

Local governments supply many services that are not efficiently produced in the private marketplace. Our analysis focuses on recreation initiatives, which mostly belong to this category, being non-essential, non-shareable and non-payable, offered in a "quasi-market" environment (Girth et al., 2012; Palmer, 1994). Economists have extensively discussed the role of public cultural services in building positive externalities (Bramley, 1990). Throsby (1999) suggests that when planning cultural policies, both economic and cultural values should be considered. Due to the economic impact of culture on society (Hutter and Shusterman, 2006) and to the public nature of cultural events or measures (Srakar and Čopič, 2012), Netzer (1978) and Fullerton (1992) list various types of externalities and invoke them to justify public financial support for culture. Public support for culture is better expressed through decentralization, and through the delegation of cultural policies to the lower governmental tiers (Osborne and Gaebler, 1992).

Collectively, the literature overwhelmingly recognizes the economic and social relevance of public expenditure for cultural service supply, particularly at a peripheral level. Nevertheless, thus far, few contributors have studied the socio-economic consequences of public expenditure for cultural service delivery. Richards (2000) verifies that countries that have reduced spending in quasi-public goods encountered a reduction in broad-based social welfare. Jacoby (1994) examines the nature, sources, and consequences of citizens' attitudes toward government spending at a national level. The literature studying the effects of public expenditure at the level of local government is sporadic. Ingram and Copeland (1981) test the existence of a strong relationship between municipal accounting information and voting behavior of citizens, assessing the relevance of accounting information for residents. Andriotis (2003), studying a Greek tourist-relevant area, focuses on how municipalities' actions produce externality gains for the tourism industry; nevertheless, more efforts are required by citizens. The issue is more and more relevant in under-developed economies (Rondinelli and Mandell, 1981a), where local service delivery is expected to contribute to development (van de Walle and Scott, 2011), and accountability matters in this process (Jilke, 2013).

Analysis of the socio-economic consequences of public expenditure in the specific field of recreation initiatives is still lacking, notwithstanding the broad literature specifically dedicated to tourist service management (e.g., Long, 1994).

With a lack of a free market competition for public services, checking the opinion of the population is the only way to reasonably assess their level of satisfaction with service delivery. Thus, scholars often choose the customer/citizen survey to measure the quality of public services (Miller and Miller, 1991; Boukaert *et al.*, 2005; Boyne *et al.*, 2002). Broussine and Wakefield (1997) involve residents even in the selection of criteria for the evaluation, with the rationale that adaptation to consumers' needs is more relevant than business modelling, in the investigation of quality of service delivery.

Conclusively, this article investigates whether anomalously low expenditures of municipalities on (non-basic) services for recreation supply, are mirrored in the level of satisfaction of their population and how anomalously low levels of expenditure cause dissatisfaction.

### **3. Research Model and Empirical Analysis**

Italian municipalities deliver public services belonging to 12 different categories<sup>2</sup>: administrative services, justice, security, education, culture, sports, tourism, traffic and transportation, environment, welfare, economic development, and in-house productions. In a developed economy, we can easily consider necessary: administrative services, justice, security, education, sports (which often, especially in smaller towns, are strictly connected with education), traffic and transportation, environment, welfare and economic development, as they are aimed at fulfilling basic needs, even though at a complex level. In-house production cannot be categorized, because it includes heterogeneous types of productive activity. Culture and tourism satisfy non-basic and contingent needs, which are particularly felt in tourism-relevant areas. Hence, in this article we focus our analysis on municipalities' spending on service delivery for recreation, as an example of non-basic service delivery. 'Recreation' here only includes cultural- and tourism-related services. Other types of leisure are not considered. The range of cultural and tourism services delivered is quite large and an exhaustive list cannot be provided, as each municipality sensibly chooses what to include in those programs. Moreover, we cannot separate cultural and tourism services, as we noticed that often the municipalities report expenses in those items interchangeably: some kinds of expenditure (e.g., the financial support for the country dance group of the town) are recorded as expenses for culture by some municipalities and as expenses for tourism by others. In brief, our aim is the investigation of local government spending for culture, and we have to investigate contemporarily their spending for tourism, in order to avoid the described bias.

The research is developed in three steps.

In the next part of this section the level of service delivery is evaluated. This first step theoretically builds on James' (2009) prediction of an asymmetrical attitude of citizens, who are dissatisfied until the level of service delivery achieves a minimum threshold. We wish to investigate the level of satisfaction for non-basic service delivery expressed by populations living in those areas where it is more likely for the quality and quantity of non-basic service delivery to stand below that minimal level. In this study, we consider the amount of expenditure for recreation as a proxy for the level of non-basic service delivery. Therefore, the expenses of a sample of Italian municipalities in culture- and tourism-relevant projects are examined, using information contained in their financial reports. Comparing the level of expenditure, we selected the conurbation where the expense appeared to be the lowest and used that sub-sample in the following steps of the analysis.

Subsequently, in a second step, to verify the public opinion on service delivery, cultural and socio-economic satisfaction was tested by surveying the local population of the sub-sampled area.

In a third and last step, following the model elaborated by Jacoby (1994), our econometric model was used to measure correlations between the public expenditure of local governments for recreation (independent variable) and the degree of satisfaction expressed by residents (dependent variable), plus a set of demographic controls.

The three steps of our analysis are respectively presented in the three following paragraphs.

#### **3.1 Sample Selection: Analysis of the Expenditure for Recreation**

The initial data panel is composed of 11 Italian conurbations<sup>3</sup> that are similar in the prevalent economy, as they are similarly involved in beach tourism<sup>4</sup>, and are positioned in each Italian region

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<sup>2</sup> The categorization reported herein is the one officially used in Italian local governments' financial reporting.

<sup>3</sup> We selected the sample using results of a survey to various persons differently involved in the management of towns where beach or religion tourism is relevant (115 interviewed and a total of 47 respondents from all over Italy), from 69 different sea-side conurbations in Italy (selected using a list provided by Osservatorio Nazionale del Turismo, 2009: 43). We asked them to select one area in the north, one in the centre, and one in the south of Italy that they considered the most comparable to their own, in terms of economic activity and culture. We finally selected 1 conurbation in each Italian region that reported the highest percentage of preferences, collecting a total of 11 areas.

<sup>4</sup> We suppose that municipalities economically involved in tourism pay more attention than others to the efficient supply of services for recreation (Gursoy et al, 2002).

that borders the sea<sup>5</sup>. We randomly selected 3 to 6 municipalities<sup>6</sup> in each area. In addition, we examined the expenses for cultural services (*Culture*), for tourism-related services (*Tourism*), and their sum (i.e.,  $Expense = Culture + Tourism$ ) represented in the final financial statement<sup>7</sup> of the municipalities over 3 years (2007 to 2009)<sup>8</sup>, for a total number of 144 town-year observations. Archival data were collected from the official databank of the Italian Government. To allow the comparisons, the observed variables were scaled by the resident population of each single town.

**Table 1:** Mean equality test

<i>Variable</i>	<i>Northern Italy</i>	<i>Southern Italy</i>	<i>Selected area</i>	<i>Difference by means</i>		
	(57 obs.)	(87 obs.)	(18 obs.)	(1)-(2)	(2)-(3)	(1)-(3)
<i>Culture</i>	37.93	9.97	6.95	27.96*** (9.43)	3.02* (1.97)	30.98*** (9.98)
<i>Tourism</i>	39.88	13.63	8.97	26.25*** (5.16)	4.66 (0.28)	30.91*** (3.19)
<i>Expense</i>	77.82	23.61	15.93	54.21*** (9.98)	7.68* (2.02)	61.89*** (6.06)
<i>Inhabitants</i>	11,444	14,951	8,529	-3,507* (-1.86)	6,422 (2.65)	2,915 (1.25)

**Figure 1:** Differences by national and regional means of Expense



<sup>5</sup> Sicily, Sardinia and Friuli Venezia Giulia are excluded from the analysis as they are governed under a special arrangement that gives local governments enlarged powers and consequently expenditure in those areas could be completely different from the rest of Italy.

<sup>6</sup> Less than 6 municipalities are sampled only where the conurbation includes less than 6 towns.

<sup>7</sup> Financial reporting for municipalities in Italy adopts the single entry accounting method and a cash flow-based accounting system. Accruals are not reported.

<sup>8</sup> As a robustness check, tests similar to the ones reported here, were undertaken on a panel of five years of data (2005 to 2009) and on a cross-section of one year (2009) data. The results were closely similar and are omitted in the article for the lack of space.

To better examine the phenomena in the sample and individuate systematic differences in the level of spending among various conurbations, the difference in means by categories was measured. A systematic difference was noticed between areas located in the north and areas located in the south of Italy<sup>9</sup>, as shown in Figure 1, and tabulated in Table 1, which reports the test of equality of means. Conurbations located in southern regions mostly report *Expense* that is lower than the average national level (45.06€ per capita); on the contrary, conurbations located in northern regions mostly report *Expense* that is higher compared with the national mean of *Expense*. Hence, *Expense* in southern regions is systematically lower than in northern regions. The average expenditure in one of the southern areas (Puglia) is significantly lower than in other areas (mean=15.93€ per capita). Furthermore, expenditure in the south was compared with expenditure in each of the single southern areas of the sample, and we found the most significant results (i.e., p-value of t-test <0.1%) in the test of equality in means when comparing that area (Puglia) with the rest of southern Italy. The tests are displayed in Table 1 for that area, but untabulated for the rest of southern Italy for brevity reasons. Hence, we can state that the level of expenditure in southern Italy appears to be lower than the level of expenditure in the north. Furthermore, the expenditure in the selected towns of Puglia is systematically lower than the average expenditure in southern Italy, and as a consequence of the described analysis, it appears that Puglia includes municipalities whose expenditure is anomalously low. Thus, we selected Puglia to test our hypothesis in detail and enlarged the sample to the whole conurbation (totally composed of 16 municipalities), located in northern Puglia, in the so-called Gargano Area.

Looking at summary statistics for expenditure, displayed in Table 2, including the selected area as sampled for the (described above) test of difference in means (6 towns), and including all the towns of the area (16 towns), it can be noticed that the values of the whole selected area are quite close to the ones of the initial benchmark sample, and definitely lower than the ones related to the overall Italian sample (48 towns). Hence, municipalities included in Gargano provide services for recreation spending anomalously lower than average comparable areas in Italy, and thus, they can be considered good experimental area to test whether any increase in spending produces effects in satisfaction and to what extent.

**Table 2:** Descriptive statistics

<i>Variable</i>	<i>Mean</i>	<i>Median</i>	<i>Max</i>	<i>Min</i>	<i>Std.dev</i>	<i>Obs.</i>
<b>Panel A</b>	<b><i>Randomly selected area, 6 towns</i></b>					
<i>Culture</i>	6.95	5.99	14.69	0.00	4.54	18
<i>Tourism</i>	8.97	3.83	59.84	0.29	13.91	18
<i>Expense</i>	15.93	10.53	70.95	0.49	16.23	18
<i>Inhabitants</i>	8,529	6,309	15,739	4,339	4,680	18
<b>Panel B</b>	<b><i>Selected area, 16 towns</i></b>					
<i>Culture</i>	10.21	9.18	36.83	0.00	8.31	48
<i>Tourism</i>	29.06	5.30	520.43	0.29	88.23	48
<i>Expense</i>	39.27	17.68	520.43	0.49	86.34	48
<i>Inhabitants</i>	12,148	7,220	57,704	367	12,162	48
<b>Panel C</b>	<b><i>Whole Italian sample, 48 towns</i></b>					
<i>Culture</i>	21.04	14.15	103.68	0.00	22.10	144
<i>Tourism</i>	24.02	12.58	166.96	0.00	32.39	144
<i>Expense</i>	45.06	30.30	187.67	0.49	41.42	144
<i>Inhabitants</i>	13,563	9,576	44,081	987	11,102	144

The antecedent of our analysis is that local governments in the selected area, spending systematically less than other comparable municipalities, most likely provide low-quality service

<sup>9</sup> Traditionally, in Italy the North/South division is the most adopted character to investigate every phenomenon which has a spatial distribution, due to relevant economic and cultural differences between those areas. In this article, Liguria, Veneto, Toscana, Emilia-Romagna and Marche are included in the north, while Lazio, Abruzzo, Molise, Puglia, Basilicata, Campania and Calabria are included in the south.

delivery, which has a predictable high probability result of producing dissatisfaction in citizens. Thus, we study how the levels of expenditure for recreation in the selected area is correlated with citizens' satisfaction about the cultural and socio-economic service supply in their towns.

### 3.2. Citizens' Satisfaction Survey

To verify peoples' opinions about the service supply by local governments, a satisfaction questionnaire was administered to local residents concerning the cultural and socio-economic sustainability of their towns<sup>10</sup>. The questionnaire, displayed in details in the Appendix, consists of two main sections, one about cultural sustainability and the other about socio-economic sustainability. Changing the bivariate answers into numbers, a score of 0 to 10 for each section is extracted. Hence, the results of the survey can be compared with the expenditure policies using econometric analysis.

### 3.3. Econometric Analysis

We verified whether the degree of satisfaction of the residents depends on the level of public expenditure by applying statistical instruments to the survey results and regressing them together with the information about the expense of the municipalities. Once applied, the binary response model, testing expected degree of satisfaction (dependent variable  $Y$ ), was pooled together with several demographic control variables gathered through the survey (dummy qualitative regressors) and the level of expenditure of each municipality (continuous explanatory variables). The binary regression model is set as follows:

$$Y_i = \text{Binom}(10, P_i) \quad (1)$$

where ( $P_i$ ) is the probability the citizen is fully satisfied. The consequent ordered probit function is as follows:

$$\text{Probit}(P_i) = \beta_0 + \beta_1 \text{Age}_i + \beta_2 \text{Gender}_i + \beta_3 \text{Job}_i + \beta_4 \text{Expense}_i + \varepsilon_i \quad (2)$$

where *Age*, *Gender* and *Job* are the distributions of the opinion of citizens in different classes of age (*Age I* indicates 18- to 25-year-old, base group; *Age II* indicates 25 to 35; *Age III* indicates 35 to 55; and *Age VI* indicates respondents aged over 55), gender (*Gender F* stands for female, base group; and *Gender M* is male) and occupation (*Job Unempl.* is unemployed, base group; *Job Freel.* indicates freelancers; *Job Employee* indicates subordinated employed people; *Job Retiree* includes retired workers; and *Job Student* stands for students). Literature documents the relevance of age, gender, income and social class on citizens' attitude toward local government (Klingemann and Fuchs, 1995; Svallfors, 1997; Edlund, 1999). Thus, we control for the impact of those factors on our estimate respectively including the variables *Age*, *Gender*, and *Job*<sup>11</sup>. The continuous explanatory variable *Expense* assumes the same meaning stated previously, being the sum of municipalities' expenditure for culture (*Culture*) and tourism (*Tourism*) service delivery, and is considered only for the final statement of the year 2009 (the year ended a few months before administration of the questionnaire).<sup>12</sup> After checking for non-perfect correlations and absence of collinearity, respectively, using (unreported) the Pearson's correlation matrix and VIF tests, the regression (2) was tested using the Probit Ordered Model, and the robustness of estimates was further verified using Ordinary Least Squares (OLS) Model, obtaining very similar coefficients and significances.

In addition, to better test the relationship between the expenditure variables and the satisfaction level, we evaluated any non-linear relation, and improved the probit estimate as follows:

<sup>10</sup> The survey was administered in February 2010 and involved in more than 1 % of the total population of the area. Details are available in the Appendix.

<sup>11</sup> The variable *Job* is expected to summarize information related with both the income and the social class of the respondent.

<sup>12</sup> We assumed that citizens are more influenced in regards to their satisfaction level by the most recent expenditure policies (one year). Regressing two years or more collinearity affects the analysis. A panel structure is not feasible in our econometric analysis as the questionnaire was submitted only once over time, and the dependent variable requires a cross-section analysis.

$$\text{Probit}(P_i) = \beta_0 + \beta_1 \text{Age}_i + \beta_2 \text{Gender}_i + \beta_3 \text{Job}_i + \beta_4 \text{Expense}_i + \beta_5 \text{Expense}_i^2 + \varepsilon_i \quad (3)$$

Table 3 illustrates the coefficient estimates of the functions described in Equations (2) and (3).

To corroborate our results, we even decoupled the dependent variable into the score given for the cultural satisfaction and score of the socio-economic satisfaction, respectively, displayed in Table 3, columns (3.a) and (3.b).

**Table 3:** (1) Linear function  $\text{Probit}(P_i) = \alpha + \beta_j \text{dummy}(x_i) + \beta_k x_i$   
(2) Non linear function  $\text{Probit}(P_i) = \alpha + \beta_j \text{dummy}(x_i) + \beta_k x_i + \beta_l x_i^2$

		Cultural and Socio-Economic Satisfaction (1)	Cultural and Socio-Economic Satisfaction (1)	Cultural and Socio-Economic Satisfaction (2)	Cultural and Socio-Economic Satisfaction (2)	Cultural Satisfaction (3a)	Socio Economic Satisfaction (3b)
		OLS	ORDERED	OLS	ORDERED	ORDERED	ORDERED
<i>Age I</i>		-	-	-	-	-	-
<i>Age II</i>		-0.0028 (0.91)	0.0239 (0.80)	0.0081 (0.74)	0.0582 (0.54)	0.0070 (0.64)	0.0011 (0.94)
<i>Age III</i>	$\beta_1$	-0.0165 (0.54)	-0.0117 (0.90)	-0.0103 (0.69)	0.0062 (0.95)	0.0090 (0.57)	-0.0193 (0.27)
<i>Age IV</i>		0.0601* (0.05)	0.3169** (0.01)	0.0359 (0.24)	0.2441** (0.04)	0.0365* (0.05)	-0.0006 (0.97)
<i>Gender M</i>		-	-	-	-	-	-
<i>Gender F</i>	$\beta_2$	-0.0137 (0.24)	-0.0644 (0.15)	-0.0154 (0.18)	-0.0707 (0.11)	-0.0152** (0.04)	-0.0001 (0.98)
<i>Job Unempl.</i>		-	-	-	-	-	-
<i>Job Freel.</i>		-0.1838*** (0.00)	-0.7456*** (0.00)	-0.1882*** (0.00)	-0.7690*** (0.00)	-0.1978*** (0.00)	0.0095 (0.60)
<i>Job Employee</i>	$\beta_3$	0.0994 (0.67)	-0.0199 (0.83)	0.0073 (0.75)	-0.0264 (0.77)	-0.0125 (0.39)	0.0198 (0.22)
<i>Job Retiree</i>		0.1578*** (0.00)	0.6842*** (0.00)	0.1638*** (0.00)	0.7089*** (0.00)	0.0654*** (0.00)	0.0983***
<i>Job Student</i>		-0.1135*** (0.00)	-0.4009*** (0.00)	-0.1262*** (0.00)	-0.4458*** (0.00)	-0.1018*** (0.00)	-0.0244 (0.14)
<i>Expense</i>	$\beta_4$	-0.0106** (0.04)	-0.0048** (0.01)	-0.0047*** (0.00)	-0.0164*** (0.00)	-0.0021*** (0.00)	-0.0026*** (0.00)
<i>Expense<sup>2</sup></i>	$\beta_5$			0.0000*** (0.00)	0.0001*** (0.00)	0.0000*** (0.00)	0.0000*** (0.00)
<i>R<sup>2</sup></i>		0.17	0.04	0.20	0.05	0.22	0.08
<i>Prob(JB)</i>		0.10	0.52	0.42	0.02	0.00	0.00

#### 4. Analysis of Results and Discussion

The coefficients give the signs of the partial effects of each variable on the response probability.

In the ordered probit function, interest lies primarily in the response probability given in  $P > |z|$ . Considering the results of the regression analysis *sub* Equation (2), we can state that *Job* (hence, the information about income and social class of the respondent) appears to be one of the most influential variables affecting the cultural and socio-economic satisfaction. With a very high significance level, freelancers evaluated the services for recreation offered by their city much worse (approximately 18% less) than the unemployed ( $\beta_3 < 0$ ), whereas the opinion of the retired group was generally more optimistic ( $\beta_3 > 0$ , approximately 16% more), and that of students ( $\beta_3 < 0$ ) was worse than the group of retired (approximately 11% less), but better than freelancers (approximately 4% more). Consistently, looking at *Age* categories, the elderly interviewed provided the most optimistic opinions ( $\beta_1 > 0$ ). This implies that the provision of services by the municipality is sufficient to satisfy the needs of recreation of elder and retired citizens, but is not enough to respond to the claims of the younger working force of the town.

Testing the influence of the expenditure variables on the opinion of citizens, we conclude that there is a systematic negative relation between the level of satisfaction of the population and money spent by municipalities on culture- and tourism-related services ( $\beta_4 < 0$ ), even if the slope is quite small (around -1%).

That is the bellwether for the subsequent nonlinear regression, displayed in Equation (3) and shown in Table 3, columns (2). In the nonlinear regression, the study of the signs of coefficients has



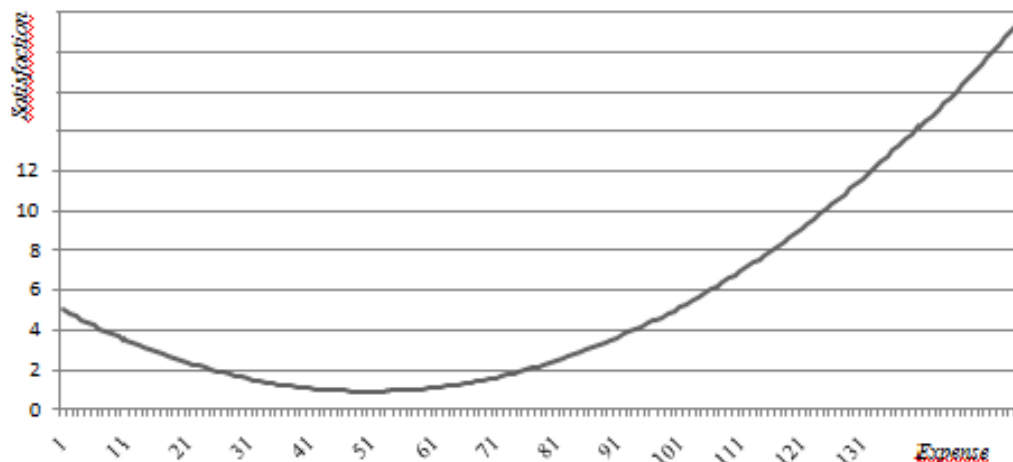
the most interesting effect. The signs of coefficients of *Expense* and of *Expense*<sup>2</sup> were always opposite, with statistical relevance ( $\beta_4 < 0$ ;  $\beta_5 > 0$ ). This means that the satisfaction depends on the expenditure variables with a parabolic curve progression.

As a corroborating analysis, we shared answers in the 2 sections of the questionnaire and analysed separately as a dependent variable the score of the cultural satisfaction (column 3.a) and the score of the socio-economic satisfaction (column 3.b). The results maintained significance, and the signs of coefficients did not change<sup>13</sup>.

Interestingly, enhancing the level of current expenditure in recreation, the satisfaction of the resident population at first decreases to a minimum point, which occurs when *Expense* equals 51.20 € *per capita*, and then grows toward a fully satisfied level, as displayed in Figure 1. From an economic point of view, the described circumstance implies that the resident population is negatively affected by small expenditure levels and only begins appreciating the expenditure efforts of its municipality when levels of spending increase significantly. This is congruous with the circumstance that the per capita expenditure in the sample is anomalously low. Furthermore, the minimum threshold measured using the coefficients of Equation (3), that equals approximately 51 € per capita, appears to be sensible when looking at the description of the spending policies of other towns included in the initial sample in this article (shown in Table 2), as it is slightly above the average spending in the whole Italian sample (45 € per capita), far below the average spending in the northern Italy subsample (77 € per capita), and far above the average spending in southern Italy subsample (23 € per capita).

The residents do not appreciate small increases in spending for recreation, most likely because the implementation of the necessary quality of services requires a greater effort on the part of the local government and much higher levels of expenditure. This non-linear growth of satisfaction is coherent with James (2009) results. “The relationship is not symmetric between satisfaction and dissatisfaction” and due to higher expectations “the predicted probability of dissatisfaction falls more rapidly than the predicted probability of satisfaction rises’ (p. 107).

**Figure 2:** Cultural and socio-economic satisfaction and expenditure for recreation services



## 5. Concluding Remarks

This research provides an empirical investigation with the aim of understanding whether, and to what extent, the level of public expenditure for non-basic services by local governments can influence the satisfaction level of the resident population, when the level of service delivery is pretty low. This article notices and explains a negative correlation between the expenditure for the delivery of recreation services in municipalities (explanatory variable) and the level of the satisfaction survey

<sup>13</sup> Totally robust results found using the OLS Model are omitted for brevity reasons.

administered to the local population of each town (dependent variable). It is found that the expenditure has a great influence on the level of satisfaction of residents. Thus, spending on non-basic services for recreation is important to enhance the satisfaction level of the population.

An increase in spending has a negative effect on the level of satisfaction of the population in the investigated area. This unexpected finding is explained as a result of the circumstance that the level of public expenditure for recreation in some of the municipalities included in the sample is anomalously low. Improving the analysis with a nonlinear regression model, we find that the resident population provides a positive scoring to service supply for recreation provided by their municipality only when the level of spending of the municipality is above a minimum expected level of approximately 51 € per inhabitant.

Jacoby (1994) finds that the citizens' attitudes toward government spending varies across different spending projects, documenting a significant positive attitude of citizens only toward government spending for social programs (i.e., welfare and school). Similar results are found by Lewis (1980, 1983). All other projects are somehow considered as a waste of money, provoking mixed results in Jacoby's research. This article helps to explain the partial inconsistency of those findings, and adds a demonstration that the adequacy of expenditure to meet the respective needs has an influence on the formulation of citizens' opinions.

The article contributes to literature documenting asymmetric behaviour in the local population degree of satisfaction, who are unsatisfied if the amount of expenditure by the municipal authorities does not fulfil a minimum threshold. The anomalously low expenditure produces the local population dissatisfaction. A non-linear rise in satisfaction, growing only when the expenditure exceeds a minimum level of spending, that is probably determined by citizens' expectations, confirms and adds to the literature investigating the relationship between expectations and satisfaction about public sector services. Because of the effect of higher expectations, satisfaction and dissatisfaction are not symmetric. The local government meets citizens' expectations only by considerably increasing the amount spent (i.e., spending in recreation more than expected). Above the threshold, the opinion of residents changes, and they start recognising the efforts of local authorities in delivering a proper quality and amount of services for recreation.

In conclusion, policy makers can learn from this empirical analysis that it is worth considering that non-basic services do have an impact on the satisfaction of citizens. If a politician wants to increase spending in non-basic service delivery, then she would be best advised to ensure that the increase in spending meets citizens' minimal needs in that particular policy area. In a developed country, non-basic services should be offered with respect to a minimum expected (and required) level, as offering services at a less-than-expected level increases dissatisfaction.

## Appendix

This section provides details about the survey submitted to the resident population of the subsampled area called Gargano.

Data were collected via a stratified random sample with self-administered questionnaires being delivered to all houses in streets, randomly chosen after defining a map of streets for each town, and trying to capture into the sample a range of views from different socio-economic conditions of the population, with the aim of getting a sample as much as possible representative of the target population. A total of 8,000 questionnaires were distributed, with hand-collection of 2,121 fully filled questionnaires. Less than 1% of questionnaires (19) were excluded as they were incomplete or wrongly filled. They were interviewed, and there was a response of slightly more than 1 % of the total population of the area, with a response rate of 26.5%. Although it is recognised that there may be non-response bias in the data, the stratified administration of the survey and a comparison of the socio-demographic characteristics of respondents with the universe of residents of Gargano (unreported for brevity reasons) supports a reliable generalisation from the results.

Table 4 provides details on the questionnaire administered to the population and the binary score attributed to the answers. The questionnaire was developed in two stages. First, looking at previous literature using survey analysis to measure the level of satisfaction of the resident population for service supply (Boukaert *et al.*, 2005; Boyne *et al.*, 2002; Broussine & Wakefield, 1997; Miller & Miller, 1991) and investigating local governments involved in tourism and cultural event management through surveys (Godfrey, 1998), we selected 100 possible useful questions (with yes/no answers), 50 concerning cultural satisfaction and 50 concerning socio-economic satisfaction analysis. In a second stage, we used a Likert scale and interviewed various persons differently involved in the management of towns where beach or religion tourism is relevant (115 interviewed and totally 47 respondents from all over Italy), asking them to attribute a 0 to 5 score to each of the questions for each of the two sections, concerning which they considered the more apt to measure the satisfaction of their administered population about their cultural and socio-economic conditions. We selected and included in the questionnaire (Table 5) the questions which received the highest percentage of preference.

**Table 4:** Questionnaire

<p><u>Cultural satisfaction</u></p> <p>Are traditions preserved by the municipal authority in your town?</p> <p>Are cultural events arranged in your town by the municipality adequate to satisfy your entertainment needs?</p> <p>Are events much more frequent in the high tourist season than during the whole year?</p> <p>Are the cultural offerings arranged by the municipal authority easily accessible (e.g., is it easy to find tickets or to find seats at concerts)?</p> <p>Are there tourist areas arranged by the municipality also available to residents (e.g., baby parks, picnic areas, parking spaces, etc.)?</p> <p>Are the opening times of naturalistic areas and parks adequate?</p> <p>Are the opening times of civic museums and libraries adequate?</p> <p>Does local government operate for the conservation of local heritage?</p> <p>Does local government help to reinforce culture in residents?</p> <p>Are you satisfied with the overall quality of cultural life in your town?</p>
<p><u>Socio-economic satisfaction</u></p> <p>Are local utilities (e.g., water supply, local police, public areas cleaning and municipal waste collection) efficient in high season?</p> <p>Are local utilities (e.g., water supply, local police, public areas cleaning and municipal waste collection) efficient out of the season?</p> <p>Are consumer goods (e.g., food and clothing) too expensive in high season?</p> <p>Are consumer goods (e.g., food and clothing) too expensive out of the season?</p> <p>Are you worried about the frequency of acts of vandalism?</p> <p>Does local government act to reduce the unemployment rate in your town?</p> <p>Does local government act to reduce the crime rate in your town?</p> <p>Does local government stimulate the creation of small and medium enterprises?</p> <p>Is the municipal urban planning adequate to the needs of resident population?</p> <p>Are you satisfied with the overall quality of municipal services?</p>

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