

**SUSTAINABILITY MANAGEMENT IN ITALIAN LOCAL
GOVERNMENTS: SOME CONSIDERATIONS ON THE
RELATIONSHIP BETWEEN STRATEGY AND FINANCIAL
EFFORT FROM AN EMPIRICAL ANALYSIS ¹**

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***Abstract:** Is there a relationship between sustainability strategies and the financial efforts for their realization? This is a particularly complex question considering that sustainability has generated an intense academic and political debate. In order to contribute to the debate, the Authors investigate the*

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existence of a relationship between the strategies of local authorities in terms of sustainability and their translation into financial commitments. To this end, firstly, the paper shows the results of research that explores the sustainability strategies of a sample of the 20 Italian regional capital cities, through the content analysis of their Performance Plans. Secondly, the Authors present their elaboration of financial data related to the main dimensions of sustainability (environment and territory management, welfare area, economic development). Finally, they discuss the relationship between the two aspects surveyed (strategies and expenditures committed to sustainability) highlighting critical perspectives also for future research.

Keywords: *sustainability, local government, accounting.*

1. INTRODUCTION

Terms like "Sustainability" and "Sustainable Development" are not easy to define. There are many papers in which different definitions have been proposed (Pezzey, 1992; Murcott, 1997). In fact, as stated by Homann (1996), there is not an exhaustive definition of sustainability, and trying to find one is a mistake in itself. They are very broad concepts, which have become the subject of a heated theoretical and political debate and the object of studies and research.

In the Brundtland Report of the United Nations World Commission on Environment and Development (WCED, 1987), sustainable development is defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

Moreover, sustainable development "is not a fixed state of harmony, but rather a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are made consistent with future as well as present needs".

Sustainability becomes, therefore, a precondition for the conservation of sustainable development - that promotes social equity - both inside and outside of each local community - and intergenerational equity.

Considering these spatial and temporal aspects, in order to ensure sustainable development it is necessary to adopt a long-term plan that also takes into account the impact that it will have on future generations and, above all, that is the result of an integrated approach adopted to solve any problems that had previously been treated independently.

The concept of sustainable development was made official at the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro in June 1992. During this event more than 170 governments signed a large document - called Agenda 21 - containing intentions and programmed objectives related to the environment, economy and society.

As part of the definition of Agenda 21, it was agreed that environmental goals should be combined with social, economic and institutional ones, thus giving rise to the three dimensions (pillars) in which the concept of sustainability is articulated:

- environmental, meaning the ability to preserve the quality and reproducibility of natural resources, while conserving biodiversity and ensuring the integrity of ecosystems;

- economic, as the ability to produce long term income and durable work in conditions of eco-efficiency, that is, with a rational use of available resources and an efficient exploitation of a non-renewable resources;
- social, understood as the ability to provide access to all the essential services (i.e. safety, health, education) and the conditions of well-being (entertainment, serenity, sociality), that should be equally shared between current and future generations.

A fourth dimension can be added to the above: the institutional dimension. This is the capacity to ensure stability, democracy, participation, information, education and justice in the community. This definition shows that institutional sustainability can be considered a part of the other three dimensions and therefore is contained in them and comes from them. Hence the choice to dwell on the three traditional areas of sustainability.

These dimensions are closely interrelated through multiple connections and imply radical changes in individual behavior and in the choices of policy makers operating at different levels of government. Regarding this last aspect, which is the most important for this paper, Agenda 21 assigns a central role and specific powers to local governments (Local Agenda 21). Because so many of the problems and solutions addressed by Agenda 21 have their roots in local activities, the participation and cooperation of local authorities is a determining factor in fulfilling its objectives.

Local authorities construct, operate and maintain economic, social and environmental infrastructure, oversee planning processes, establish local environmental policies and regulations, and assist in implementing national and subnational environmental policies.

Local authorities, as the level of governance closest to the people, play a vital role in educating, mobilizing and responding to the public to promote sustainable development.

Each local authority should enter into a dialogue with its citizens, local organizations and private enterprises and adopt "a local Agenda 21". Through consultation and consensus-building, local authorities could learn from citizens and from local, civic, community, business and industrial organizations and acquire the information needed for formulating the best strategies. The process of consultation could increase household awareness of sustainable development issues.

Therefore, we cannot talk about sustainability and try to give a systematic theoretical and practical innovated development mode if it does not pay attention to the role played by a key actor of the process in question: public administration.

Public institutions, in fact, are particularly involved not only at the central level - where there are defined and approved plans and national and international programs on sustainability (Carter et al., 2011; Andrew et al., 2010; Rahaman et al., 2004) – but, especially at local level, where, by virtue of administrative decentralization and the autonomy principle (Borgonovi, 1996), municipalities, sometimes even of small or very small dimensions, govern the territory with their own rules and regulations.

The role of local government is essential: it is the institutional reference closest to the citizens and to economic and social organizations; it has the task of promoting a culture of sustainable development:

- a) developing a comprehensive strategy that should be articulated on different levels;
- b) leading, by its example, the behavior of the community.

Local public companies, on the one hand, must make available and share their experience, and on the other, must take an active and collaborative role in spreading the culture of sustainability and the implementation thereof.

The following considerations result from the need to reflect on an important aspect highlighted in literature that is to consider sustainability in the decision-making process in order to encourage the management of companies to have a sustainable behavior. If this consideration refers to the entire corporate world, we can say that, even at a local government level, the presence of so-called sustainable management is essential.

It can be argued that it is essential, within the local entities, that people in management have the necessary skills and are able to integrate into their guidelines and policy documents the principles of sustainable development that have inspired the acts signed during international summits.

In this perspective, this paper empirically examines whether, within the strategic planning documents of the Italian regional capital cities, (no.20), the objectives of sustainability have a place or not. Besides this, it investigates the level of financial commitment of local governments through the analysis of data in the financial report of 2011-2013. Finally, some considerations are made regarding the correlation between programming of sustainability and level of financial commitment of the same.

We believe that the analysis of the programmatic aspects is essential.

In order that political leaders and management in local government begin to act responsibly in terms of sustainability, urging them to question themselves about their institutional function, how to carry out their mandate and their ability to make decisions for the community that also look towards the future. That is, they must make choices which take into consideration the value and importance of sustainability, also from a strategic point of view (Tolba, 1997; Economic and Social Commission for Asia and the Pacific, 2004), and which are attributed to sustainability.

Choices, then, that should no longer sacrifice, as in the past, a medium to long term vision in favor of those aimed at achieving immediate political results.

Similarly, we believe that the focus on sustainability can be useful to rationalize the use of financial resources: plan sustainably to spend sustainably. For this reason, an analysis on the costs related to sustainability in local government was carried out.

The development of a concrete relationship between planning and spending for sustainable development requires a profound cultural and organizational change in the way we manage the public administration through an innovative, shared, planned and sustainable model (Bruff, Wood, 2000).

The desire is to have local governments that are more open to dialogue, more transparent and able to integrate the criteria of efficiency, effectiveness and economy – consolidated in the business management doctrine – with that of sustainability (Hood, 1995; Behn, 1998; Parker and Gould, 1999; Barzelay, 2001; Pollitt and Bouckaert, 2002). In this sense, Ball warns about the possibility that management of local authorities might make the mistake of focusing attention on short term actions - designed to achieve an

adequate level of efficiency - to the detriment of long term goals, such as those related to sustainability (Ball, 2002).

The remainder of the paper is organized as follows. The next section defines the conceptual framework based on the literature on sustainability and presents our research questions. Section 3 outlines the adopted research methods. Sections 4 and 5 present the results of the analysis. Finally, Section 6 provides the conclusions and raises a number of critical issues for future research.

2. CONCEPTUAL FRAMEWORK

Since 1987, the academic and institutional worlds have raised the level of awareness on issues relating to sustainability, which, as evidenced by Bebbington and Gray (2001), was awarded a special place in the political agenda of many countries. Policy makers, as reflected in the work of Rogers, Jalal and Boyd (2008), were invited to combine, in the preparation of their agenda, the protection of the natural environment with the economic and social needs of the community. However, according to Strange and Bayley (2008), to achieve a concrete result in terms of sustainability, it is fundamental that the sustainability criteria in policy making is adopted at the different governmental levels, from international to local. Otherwise, achieving this goal remains a mere utopia.

The lack in the literature of specific research related to sustainable guidelines of public institutions was noted in the works of Ball (2002, 2004) and Ball and Grubnic (2007), which, however, highlighted the importance that studies on sustainability principles and practices can have in this area. Moreover, Gray (2006) shows the disparity in the number of jobs promoted in the public sector versus private (Andrew and Cortese, 2013; Spence et al., 2013; Cho and Patten, 2013; Michelin, 2014).

All this seems to contrast the consideration given in the Introduction, related to the contribution of the public sector in sustainable development by virtue of its nature and, thus, the execution of its functions through a sustainable approach (Brugmann, 1996; Kelly et al., 2004).

Public sector organizations, by definition, should generate value for society through their political choices. Therefore, their great responsibility is evident not only in adopting sustainable choices, but also in terms of promotion and support of policies that encourage sustainability. In this regard, as shown in the work of Ball and Grubnic mentioned above, an example of a tool used in the public sector to support sustainability is represented by the practice of Green Public Procurement (GPP), through which public administration takes into account environmental aspects in the purchasing process.

Research on sustainability strategy planning is still limited. Williams (2002) proposes the integration of sustainable development in the strategic planning process, as well as in the other processes that follow it.

With regard to Italian literature, we can point out the work of Mazzara et al. (2010a, 2010b). They analyzed the practices used in local authorities considering sustainable development in a strategic point of view and presented a first analysis

regarding the consideration of sustainable development in the strategic plans of local authorities.

In general, it could be argued that the implementation of a planned activity should be supported by the elaboration of a strategy that specifies:

- the objectives and the explicit purposes of policies;
- the responsibility of all parties involved;
- the human and financial resources to be used;
- the appropriate control mechanisms to monitor the results achieved and any deviations from the planned objectives.

Based on the conceptual framework and debate discussed above, we pose the following research question:

RQ1: do the Italian local governments include sustainability strategies in their planning documents?

In comparison to the strategic aspect, the reporting aspect is more widely treated by Authors, both Italian and international (Broadbent and Laughlin, 2003; Dumay et al., 2010; Williams et al., 2011; Farneti, 2012). In fact, both national and local Public administration, having to follow different recommendations and to submit to numerous controls, appear to be more facilitated in and focused on reporting action undertaken and, consequently, on the performance achieved in terms of sustainability. But there are several Authors who show the existence of other factors that have contributed to the proliferation of writings on sustainability reporting in local authorities. For example, in the study by Kaur and Lodhia (2014) stakeholder engagement is considered an essential motivation for the development of sustainability reporting. The same approach is evident in the work by Farneti and Guthrie (2009) in which, with reference to the Australian public sector, it was found that sustainability reporting is justified by the need to inform the parties interested in organization activities.

Moreover, according to Ball and Bebbington (2008), for public organizations, sustainability transparency is an essential variable due to their nature. For the same Authors, in general terms, the performance of public organizations is often related to the achievement of their objectives that are socially sustainable. Through sustainability reporting public organizations have, at their disposal, a tool to monitor their strategies and guide future actions.

Hence the need for greater attention and diffusion of the control that closes the programming cycle and allows public organizations to have data related to management choices and their evolution with particular reference to:

- incurred expenditures;
- achieved results;
- deviations from planned objectives (identifying causes of these deviations).

The specific attention paid to financial dynamics - especially on sustainability expenditures - requires a reference to the role, the potential and the critical issues arising from the implementation of an environmental and social accounting system (Sargiacomo, 2014; Baker, 2014; Robert and Wallace, 2015).

Given the debate over the reporting on sustainability, we pose the following research question:

RQ2: How is sustainability strategies of local governments translated into their financial reports?

These assessments are complex, but important to check the decision-making process, because they imply the ex post re-examination of the targets identified in the programming documents, defining their continuation, elimination or reformulation according to the criteria of efficiency, effectiveness, and sustainability.

Research method

To answer the above-mentioned research questions, we did an exploratory study of a sample represented by 20 Italian regional capital cities, selected in order to:

- identify the most populous local governments;
- ensure a homogenous geographic distribution of the sample throughout the entire Italian territory.

Table 1: Sample

n.	Cities	Population
1	Aosta	34.901
2	Campobasso	49.392
3	Potenza	67.403
4	L'Aquila	70.967
5	Catanzaro	91.028
6	Ancona	101.742
7	Trento	117.285
8	Cagliari	154.019
9	Perugia	166.030
10	Trieste	204.849
11	Venezia	264.534
12	Bari	322.751
13	Firenze	377.207
14	Bologna	384.202
15	Genova	596.958
16	Palermo	678.492
17	Torino	902.137
18	Napoli	989.111
19	Milano	1.324.169
20	Roma	2.863.322

Regarding the first research question, we used the methodology of content analysis applied to the documents designated to represent the strategies of the local governments of the sample (three-year Performance Plan), in order to detect the degree of attention paid to sustainability strategies. We used - as part of the methodology of content analysis - the frequency analysis technique according to Krippendorff (1980).

Therefore, for each municipality of the sample, in the Transparency Area of the Institutional website, we accessed the section "Performance Plan" to download the document relating to the years 2011-2012-2013.

With reference to the second research question of this study, we used the document analysis procedure on the reporting documents that include the expenses related to sustainability.

In particular, we considered the financial report of the investigated local governments and, specifically, the functions related to the environment and territory management, welfare and economic development, because these represent the three dimensions of sustainability considered in this paper (environmental, social and economic). From a temporal point of view, the years investigated are 2011-2012-2013.

4. PERFORMANCE PLAN AND SUSTAINABLE STRATEGIES

The first step for making a content analysis is the acquiring of the documents on which to carry out the analysis. It was verified whether local government websites host a section dedicated to performance in which the Performance plan is found.

With regard to this first step, we found that, although public entities are obliged to have this section on their websites, some administrations have not complied with this formality. In fact, we did not find any reports for the municipality of Potenza and, consequently, the sample was reduced to 19 units.

This situation highlights a first critical aspect related to the existence of an information gap still to be filled in relation to some content that, instead, is necessary for the complete realization of the principle of transparency according to the criteria of easy accessibility, completeness and ease of consultation imposed by law (art. 1, paragraph 15 of Law 190/2012).

Given research question #1, for each institution we downloaded the Performance plan with the objective of verifying whether public administrators have included sustainability and the sustainable development among the main objectives to be achieved in the planning policy document of the city.

In the section of the municipal website dedicated to performance, we noted that the documents of interest for our survey are not similar to each other. This outcome is due to the autonomy that the law recognized to local authorities regarding the definition of the structure and content of the three-year performance plan report. In addition, the most recent legislation (Decree Law no.174 of 2012) gives local governments the choice to merge the performance plan with the Management Executive Plan. This alternative creates further confusion, especially when considering that the two documents have different purposes.

The analysis shows that in the performance area various documents, related to the following categories, are inserted:

- Performance Plan (2 entities);
- Goal Plan (5 entities);
- Management Executive Plan (6 entities),

- integrated document including the performance plan and the Management Executive Plan (3 entities);
- joint document including the Management Executive Plan and the Goal Plan (1 entity);
- document that correlates the performance plan to the Forecasting and Planning Report (2 entities).

This initial evidence highlights the need to reflect on critical issues, both formal (the number of documents used to illustrate the Institution's strategies) and substantial (heterogeneous data and information contained in the documents).

We have also noted heterogeneity in relation to another element: the period to which the documents refer which is fixed by law in three years.

It should be noted, in this regard, that the three-year performance plan should include both the strategic and operational objectives, specifying the objectives assigned to each of the three years.

The analysis revealed that:

- no.2 entities indicate in the title a three-year period, while the contents of the report refer to a single year (2013);
- no.14 entities explicitly indicate a single year reference period (2013).
- no.3 entities indicate instead a three-year period subdivided into a single years, as specified by law.

This consequently, invalidates the pluriannual nature of the programming that is particularly important in terms of sustainable development, whose essence is taking care of the intergenerational impact of the activity carried out and realization requires a period of medium / long term.

It is clear, therefore, that the choice is based on the least complicated and faster achieved goals, without considering the long-term sustainability of the same.

As provided by law (art.5 of Legislative Decree no.150/2009) the goals indicated in the Performance Plan must be scheduled every three years, must be defined at the beginning of the first year of the three year period, and are set out by the political and administrative bodies, after consulting the managers of the public organizational units. The same goals, however, must be defined considering the financial resources resulting from the approved budget.

A further reflection takes into consideration the date of approval of the strategies' programming documents. This date is often postponed to the last months of the year simultaneously with the approval of the annual budget.

It is obvious that this issue raises concerns about - especially when the documents only refer to the 2013 - the real programmatic capacity of the performance plans that are approved in a later date than the year to which the plan refers.

The implications arising from this fact cannot but have a negative impact on the overall activities of the entity which is essentially driven by the contingencies of a short or very short time.

For the content analysis, we used the more traditional technique of the analysis of frequencies, namely we counted how many times the terms "sustainability" and "sustainable development" occur in the documents.

The analysis of the text showed that:

- 1) Only six local government have adopted the term "sustainable development" their documents;
- 2) the expression "sustainable development" is always used in the introduction of the documents as a guiding principle of action of the Administration, but it is not indicated as a specific goal;
- 3) the adjective "sustainable" is associated with: a) construction (public housing) (no.4) characterizing, in fact, social policies in this area; b) tourism and economic activities envisaged in this area, considered a driving force for the economy of certain cities (no.3); c) mobility (no.7), in order to make choices to reduce traffic and facilitate the movement of citizens without resorting to cars;
- 4) considering the dimensions of "sustainable development", particular emphasis is given to environmental sustainability in 10 reports, where actions are explicit about:
 - a) the restoration and preservation of the environment indicating, mainly, reclamation activities, the incentive of recycling and proper waste management, and those aimed at the reduction of pollutants;
 - b) the energy qualification of municipal buildings and structures used for public lighting.

These findings lead us to make some general reflections.

The first is that the concept of sustainable development has not yet been absorbed in the strategic objectives of the local authorities.

As aforesaid, the term appears with a very low frequency and, in any case, where it is found it is not considered for purposes of the actual programming.

A second consideration is the increased attention given to the environmental dimension rather than the others (social and economic dimensions). This circumstance is probably the most immediate consequence of the different legal obligations that bind the municipalities to implement specific practices, also in regard to the European commitment taken by the Italian government.

Finally, the analyzed planning documents, in their diversity, have been the main limitation of this analysis.

The absence of a single format of the report, as well as the autonomy left to the entities in the selection of the programming document to be drawn up, does not allow us to perform a precise comparison between entities, nor easily detect the number of the environmental / social / economic objectives out of the total number of targets formalized in the investigated documents.

This deeply undermines the transparency of the documents in which it is not clear whether or how individual institutions have actually formalized their strategies in terms of "sustainable development".

5. FINANCIAL ANALYSIS

The analysis considers the financial commitments contained in the three financial report sections related to the main dimensions of sustainability (environment and territory

management, welfare and economic development). Please note that the sample is made up of 19 organizations because of the unavailability of financial data of the city of Aosta. For each of the three sections, the impact of expenditure commitments on the total current expenditure amount is assessed, in order to highlight the financial "weight" of each sustainability dimension and, therefore, to speculate the response to research question no.2 (the financial impact of the sustainability strategies). In the following tables, the increasing order of data is driven by the impact value of the most recent year available (2013).

The impact of expenditure commitments for environment and territory management on the total current expenditure amount is shown below.

Table 2: Impact of expenditure commitments for environment and territory management

			Environment and territory management (financial commitments)			Expenditure commitments for environment and territory management/total current expenditure		
	City	Population 2013	2011	2012	2013	2011	2012	2013
1	TRENTO	117.285	17.664.218	18.765.462	16.897.648	10%	11%	10%
2	L'AQUILA	70.967	116.986.765	67.066.456	26.806.266	46%	38%	12%
3	TRIESTE	204.849	39.797.253	40.003.874	44.211.518	14%	14%	14%
4	MILANO	1.324.169	380.125.311	429.672.482	427.938.987	16%	17%	16%
5	BOLOGNA	384.202	85.350.318	83.223.743	88.443.688	19%	18%	19%
6	ROMA	2.863.322	928.610.892	1.212.778.603	912.169.854	21%	25%	19%
7	TORINO	902.137	225.296.491	224.988.827	223.584.073	19%	19%	19%
8	FIRENZE	377.207	32.210.299	124.753.856	120.650.385	7%	22%	21%
9	VENEZIA	264.534	33.406.966	33.157.840	128.331.911	7%	7%	22%
10	ANCONA	101.742	23.948.408	24.964.312	24.401.236	22%	22%	22%
11	POTENZA	67.403	17.307.012	19.222.137	19.083.593	21%	24%	23%
12	GENOVA	596.958	150.310.673	164.513.342	164.535.720	21%	22%	24%
13	BARI	322.751	85.542.811	82.305.471	83.468.249	27%	26%	25%
14	PALERMO	678.492	174.782.867	174.093.823	186.553.371	22%	25%	26%
15	NAPOLI	989.111	231.232.330	236.817.140	324.281.085	19%	20%	26%
16	CAGLIARI	154.019	51.717.683	53.064.952	54.330.268	26%	29%	27%
17	PERUGIA	166.030	43.222.057	45.392.332	52.079.500	25%	27%	29%
18	CAMPOBASSO	49.392	14.701.730	14.986.061	14.733.410	32%	32%	32%
19	CATANZARO	91.028	26.547.142	26.751.605	25.238.867	33%	37%	34%

The data in the table show:

- very high values of expenditure commitments in the environmental field (eg., in 2013, from a minimum of 16 million euro for Trento, to 912 million euro for Rome);
- a marked variability of the impact on total current expenditure that, for example, in 2013 shows a gap of over 20 percentage points between the city with the minimum incidence (Trento, 10%) and the one with the highest impact (Catanzaro, 34%);

- a consistent level of the impact on total current expenditure (in more than half of the cities of the sample it exceeds the 20%), indicating a significant financial commitment of these organizations to issues relating to environment and territory management;
- a variability of the impact for each city in the three years considered, that, in many cases, is relatively limited (eg.: Trento, Milano, Bari), but in others is more consistent (Firenze, L'Aquila, Venezia).

The table below shows the impact of expenditure commitments in welfare on the total current expenditure amount, focusing, therefore, on the financial weight of the social dimension of sustainability.

Table 3: Impact of expenditure commitments in welfare

			Welfare (financial commitments)			Expenditure commitments in Welfare/total current expenditure		
	Comune	Population 2013	2011	2012	2013	2011	2012	2013
1	POTENZA	67.403	6.082.973	3.822.909	5.254.620	7%	5%	6%
2	CATANZARO	91.028	8.813.973	4.099.949	5.018.037	11%	6%	7%
3	NAPOLI	989.111	95.578.160	96.899.622	96.899.290	8%	8%	8%
4	PALERMO	678.492	66.653.378	62.180.336	62.388.413	9%	9%	9%
5	CAMPOBASSO	49.392	4.973.871	4.185.924	4.526.945	11%	9%	10%
6	GENOVA	596.958	81.027.865	79.769.446	78.894.687	11%	11%	11%
7	PERUGIA	166.030	22.136.095	21.251.479	21.479.344	13%	13%	12%
8	ROMA	2.863.322	690.664.330	693.703.018	660.020.124	15%	14%	14%
9	VENEZIA	264.534	89.212.118	84.114.306	84.569.141	18%	17%	14%
10	MILANO	1.324.169	397.789.451	388.324.555	391.160.416	17%	16%	15%
11	BARI	322.751	51.202.989	49.336.050	51.687.917	16%	15%	16%
12	ANCONA	101.742	17.868.916	17.324.204	17.083.678	16%	15%	16%
13	FIRENZE	377.207	99.666.663	97.572.899	98.446.280	21%	17%	17%
14	TORINO	902.137	267.077.516	249.695.638	243.962.944	22%	21%	21%
15	BOLOGNA	384.202	103.218.709	100.318.296	101.594.630	23%	22%	22%
16	CAGLIARI	154.019	44.390.843	40.225.563	45.743.084	22%	22%	23%
17	TRENTO	117.285	56.918.920	52.712.896	51.026.802	31%	30%	29%
18	TRIESTE	204.849	89.983.410	92.350.324	92.562.589	32%	32%	30%
19	L'AQUILA	70.967	86.060.301	59.782.385	122.727.650	34%	34%	57%

The analysis of data denotes that:

- the absolute value of current spending commitments for welfare ranges from about 5 million euro (Catanzaro) to over 660 million euro (Rome);
- the impact of welfare expenditure on total current expenditure (in 2013) oscillates from a minimum of 6% (Potenza) to a maximum of 57% (L'Aquila). Among the lower impact values there is the City of Potenza (as in the analysis of the absolute values, together with Catanzaro and Campobasso). On the contrary, the highest impact occurs in the city of L'Aquila while, in absolute terms, the municipality with the highest value of financial commitment is Rome.

Finally, the next table highlights the impact of expenditure commitments in economic development on the total current expenditure amount, investigating the third dimension of sustainability.

Table 4: Impact of expenditure commitments in economic development

	City	Population 2013	Economic Development (financial commitments)			Expenditure commitments in Economic Development / Total current expenditures		
			2011	2012	2013	2011	2012	2013
1	L'AQUILA	70.967	51.181	46.440	63.408	0%	0%	0%
2	NAPOLI	989.111	2.855.164	2.296.510	2.276.098	0%	0%	0%
3	POTENZA	67.403	293.123	266.903	223.474	0%	0%	0%
4	BOLOGNA	384.202	1.607.256	1.253.034	2.340.269	0%	0%	0%
5	PERUGIA	166.030	1.421.735	936.369	973.317	1%	1%	1%
6	MILANO	1.324.169	12.417.885	21.759.559	14.831.679	1%	1%	1%
7	PALERMO	678.492	4.238.518	4.415.546	4.103.670	1%	1%	1%
8	ROMA	2.863.322	35.421.028	32.810.788	30.209.922	1%	1%	1%
9	VENEZIA	264.534	4.369.726	3.477.264	3.776.312	1%	1%	1%
10	BARI	322.751	3.183.723	2.851.635	2.693.214	1%	1%	1%
11	TORINO	902.137	11.521.241	11.710.148	11.752.373	1%	1%	1%
12	TRIESTE	204.849	4.085.799	3.688.869	3.247.598	1%	1%	1%
13	CAMPOBASSO	49.392	559.957	644.204	496.953	1%	1%	1%
14	ANCONA	101.742	1.369.831	958.026	1.272.998	1%	1%	1%
15	FIRENZE	377.207	7.404.289	6.702.303	7.519.978	2%	1%	1%
16	GENOVA	596.958	9.650.786	8.782.552	8.936.633	1%	1%	1%
17	TRENTO	117.285	1.140.097	1.107.410	2.535.526	1%	1%	1%
18	CATANZARO	91.028	1.460.753	1.372.288	1.331.745	2%	2%	2%
19	CAGLIARI	154.019	5.720.474	4.969.509	5.107.931	3%	3%	3%

The analysis of financial values highlights that:

- the absolute values of financial commitments in the area of economic development are lower than those seen for environment and welfare;
- the impact of expenditure commitments for the economic development on the total current expenditure is at low level (within 3%);
- the impacts in question are fairly homogeneous among all the cities of the sample showing a low gap between the minimum and the maximum value.

5.1 FINANCIAL INDEX OF SUSTAINABILITY STRATEGY IMPLEMENTATION

In this paragraph, again to clarify the possible answer to research question no.2, financial analysis focuses on an indicator which highlights the degree of implementation of sustainability strategies (here defined as financial index of strategy implementation). It is calculated as the ratio between payments for the period (for each of the three dimensions considered) and the related financial commitments.

The following table contains the implementation index related to Environment and territory management.

Table 5: Implementation index - Environment and territory management

Environment and territory management (payments / financial commitments)				
	City	2011	2012	2013
1	NAPOLI	23%	20%	20%
2	POTENZA	36%	35%	43%
3	TORINO	34%	42%	43%
4	CATANZARO	44%	45%	48%
5	FIRENZE	51%	51%	51%
6	TRENTO	58%	56%	51%
7	CAMPOBASSO	61%	56%	58%
8	MILANO	69%	66%	68%
9	L'AQUILA	87%	79%	71%
10	PERUGIA	85%	65%	73%
11	ANCONA	77%	76%	77%
12	ROMA	72%	65%	79%
13	PALERMO	86%	86%	79%
14	CAGLIARI	75%	82%	80%
15	VENEZIA	90%	86%	80%
16	BARI	81%	84%	82%
17	BOLOGNA	83%	88%	89%
18	TRIESTE	87%	78%	90%
19	GENOVA	91%	90%	94%

As evidenced in the previous table, there is a large gap between the minimum value of the financial index of environment strategy implementation (20%, Naples for 2013) and the maximum (94%, Genova for 2013).

The following table sets out the financial index of welfare strategy implementation.

Table 6: Implementation index - Welfare

Welfare (payments / financial commitments)				
	City	2011	2012	2013
1	NAPOLI	35%	21%	22%
2	L'AQUILA	86%	69%	34%
3	POTENZA	30%	38%	49%
4	PALERMO	54%	47%	49%
5	BARI	60%	56%	53%
6	CAMPOBASSO	53%	48%	53%
7	TORINO	73%	63%	55%
8	ROMA	59%	58%	58%
9	PERUGIA	59%	59%	62%
10	ANCONA	65%	66%	65%

11	BOLOGNA	66%	76%	67%
12	CATANZARO	56%	69%	70%
13	FIRENZE	66%	71%	71%
14	MILANO	68%	69%	71%
15	CAGLIARI	66%	72%	76%
16	TRIESTE	78%	78%	79%
17	GENOVA	82%	82%	83%
18	TRENTO	84%	83%	85%
19	VENEZIA	78%	87%	87%

The empirical evidence shows that the implementation of social strategies (from a financial point of view) assumes percentages that are rather consistent with a wide oscillation that goes from 21% for Napoli in 2012 to 87% for Venezia in the same year. Finally, the financial index of implementation of the economic development strategy is determined.

Table 7: Implementation index – Economic development

	City	Economic development (payments / financial commitments)		
		2011	2012	2013
1	TORINO	68%	73%	61%
2	BOLOGNA	77%	100%	61%
3	CAMPOBASSO	54%	41%	62%
4	L'AQUILA	57%	59%	67%
5	MILANO	84%	65%	68%
6	CATANZARO	84%	88%	68%
7	ANCONA	63%	91%	69%
8	BARI	69%	75%	72%
9	POTENZA	76%	97%	72%
10	CAGLIARI	67%	79%	73%
11	GENOVA	76%	78%	76%
12	NAPOLI	78%	80%	76%
13	FIRENZE	72%	79%	80%
14	ROMA	66%	72%	81%
15	TRIESTE	81%	82%	82%
16	PALERMO	92%	82%	88%
17	TRENTO	69%	67%	91%
18	PERUGIA	80%	91%	94%
19	VENEZIA	81%	96%	94%

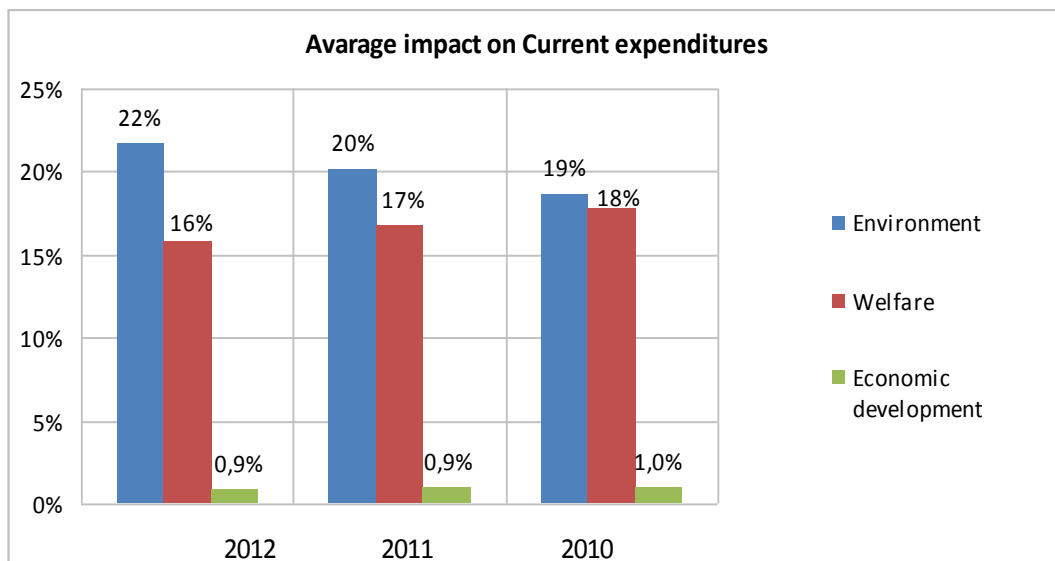
What seems evident from the data shown above is that the value of the financial index of economic strategy implementation takes on particularly large values (i.e., greater than 61% in 2013, 41% in 2012 and 54% in 2011).

5.2 The sustainability dimensions in comparison

This section analyzes the financial ratios resulting from the two preceding paragraphs in their average value for the sample considered, in order to compare, synthetically and jointly, the three dimensions in which sustainability can be divided.

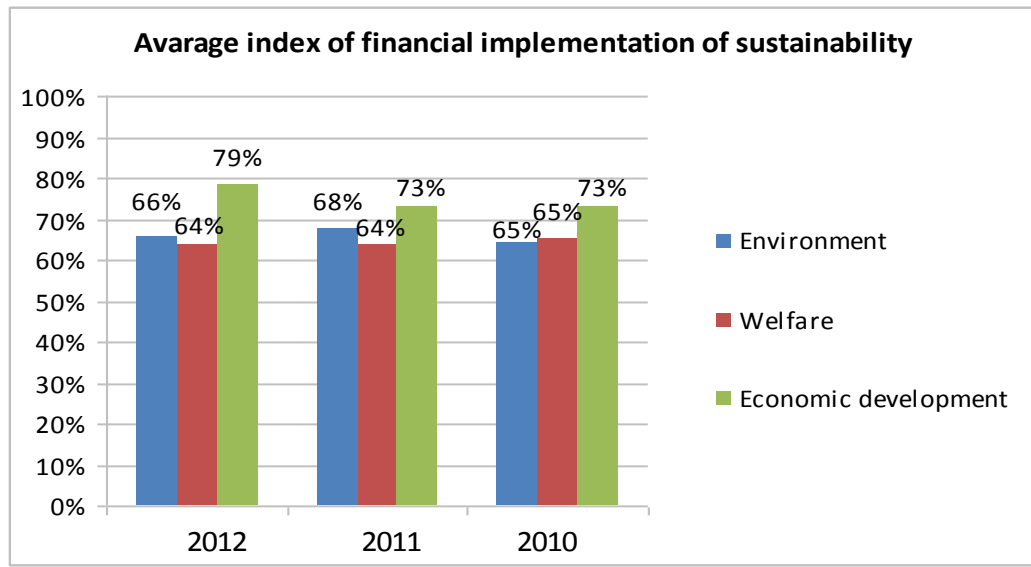
It seems clear that the expenditures for the environmental and welfare dimensions have an average impact on total current expenditures that is far greater than the impact of economic development expenditure. Financially, this shows a greater attention of analyzed local governments on environmental and social issues, while only a marginal commitment is dedicated to the support of economic activity. This situation is almost constant in the period considered.

Figure 1 – Average impact on current expenditures



The graph below shows that the average index of financial implementation of sustainability is quite high for the three dimensions that make up the same. Moreover, there is a greater level of implementation of the economic development aspects of sustainability for which, in the period considered, the implementation index goes from 73 % in 2011, to 79 % in 2012 and reaches 75% for 2013. While, the implementation index, for the welfare and environmental dimensions - during the three years considered - assumes values comprised between 60% and 68%.

Figure 2 – Average index of financial implementation of sustainability



6. CONCLUSION, DISCUSSION AND WAYS FORWARD

From the joint examination of the results of the two empirical analyses carried out previously, some observations arise. In particular, the content analysis on the strategic documents of the local governments in the sample and the examination of their accounting data, provide information for evaluating whether and what kind of consistency there is between sustainability strategies and financial commitments in sustainability dimensions.

Thus, there is:

1. great autonomy in formulating strategies, highlighted by the different programming documents found analyzing the sample. The positive aspect of this autonomy is to possibility to select the content (and so also in terms of sustainability) and the mode of representation of the strategies that is most suited to the specific situation of the local government. The critical aspect comes from the strong bureaucratic culture that still persists in public organizations. So, if there is not an imposed model for the strategy representation - which, in turn, enforces the formalism – the definition of strategy itself is undervalued. This emerges from the analysis of the Performance Plans which, in effect, consist of other documents (Management Executive Plan, Goal Plan, etc.). Besides, these documents, considering a single year, lose the strategic approach and, in particular, heavily penalize the focus on sustainability which involves a multiannual view;
2. little attention to sustainability in the documents analyzed. In fact, a first examination of the contents of these documents highlights that the main terms related to sustainability are rarely used;
3. particular importance, from a financial point of view, given to the environmental and welfare sustainability dimensions, both in relation to the total current expenditure committed (on average between 18% and 22% in 2013), and in terms of financial

implementation (on average between 63% and 67%). The expenditure impact for economic development is much lower, while the average level of financial implementation of the same is higher;

4. a discrepancy between the limited strategic consideration of the sustainability dimensions and their financial implications that, as empirically shown, are considerable. This shows how large sums of public money intended for environmental, social and economic aspects are spent without a prior strategic vision and without the necessary management knowledge of these issues, risking financial waste and inefficiency.

In brief, the statement points to the need for a greater sustainability culture and a deeper attention to the same, through its inclusion in the strategic and operational objectives of local authorities. Therefore, a closer coherence between these objectives and the financial dynamics related to sustainability is necessary, so that the attention paid to sustainability in the planning phase does not remain purely formal and disconnected from the local government financial commitments.

In order to provide additional contributions to the scientific debate, as well as support to those in local public organizations involved in sustainability management, the optimization of the analysis needs to expand the research conducted examining the following items:

- per capital expenditure values, relating the expenditures for the sustainability dimensions to the resident population and making the comparisons between local governments more objective;
- capital expenditures related to the sustainability dimensions. In addition to the current expenditures already considered, the examination of capital expenditures would allow us to discuss public investment in sustainability;
- the contents of the programming documents already considered through an in-depth analysis of the same in order to better understand their focus towards sustainable development (e.g. by comparing the number of targets relating to the sustainability to the total number of planned objectives).

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