

Caruso, Immacolata; Vitolo, Tiziana; Cocchis, Livia

**Conference Paper**

## The innovative role of public utilities: a strategy for local development

43rd Congress of the European Regional Science Association: "Peripheries, Centres, and Spatial Development in the New Europe", 27th - 30th August 2003, Jyväskylä, Finland

**Provided in Cooperation with:**

European Regional Science Association (ERSA)

*Suggested Citation:* Caruso, Immacolata; Vitolo, Tiziana; Cocchis, Livia (2003) : The innovative role of public utilities: a strategy for local development, 43rd Congress of the European Regional Science Association: "Peripheries, Centres, and Spatial Development in the New Europe", 27th - 30th August 2003, Jyväskylä, Finland, European Regional Science Association (ERSA), Louvain-la-Neuve

This Version is available at:

<https://hdl.handle.net/10419/116108>

**Standard-Nutzungsbedingungen:**

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

**Terms of use:**

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*

# ERSA 2003 CONFERENCE

Jyväskylä

## **The innovative role of public utilities: a strategy for local development**

### **Authors:**

*Tiziana Vitolo*, ISSM/CNR Researcher

[vitolo@irem.na.cnr.it](mailto:vitolo@irem.na.cnr.it);

[tizianavitolo@issm.cnr.it](mailto:tizianavitolo@issm.cnr.it)

*Immacolata Caruso*, ISSM/CNR Researcher

[caruso@irem.na.cnr.it](mailto:caruso@irem.na.cnr.it);

[immacaruso@issm.cnr.it](mailto:immacaruso@issm.cnr.it)

*Livia Cocchis*, ISSM/CNR Researcher with a temporary contract

[cocchis@irem.na.cnr.it](mailto:cocchis@irem.na.cnr.it);

**Topic:**

- Re-organisation of local and regional public utilities

**Approach:**

- Theoretical-practical approach

**Key words:**

- Public utilities
- Reorganisation of public utilities
- Economic sustainability

**List of contents****Preface**

- 1. Governance and local development: institutional context and forms of management for public utilities**
- 2. Public utilities as a catalyst of the economic development: the case of the water supply services**
- 3. Transformation of the water supply service in Campania: a case of multiutility**
- 4. The Regional Operational Plan in Campania**
- 5. Final remarks**

**References**

## Preface

The enforcement of the water supply reform started with the "Galli" Law (36/94) can be viewed as an interesting example of how to test new local development strategies by enhancing the role played by *public utilities*.

The crucial point of the reform lies in the delicate balance between the public sector - which has to stimulate and perform a strategic control - and the private sector - which has to perform investment and management functions. From this perspective it can be stated that the re-launching of the local private sector through the implementation of the Integrated Water Supply Service and the development of *multi-utility systems*, is one of the objectives set out by the reform following the issue of the "Galli" Law.

The analysis of the Piano Operativo Regionale (POR) Campania 2000-2006 (Regional Operational Plan for Campania), including the measure 1.2 of the Strategic Axis "Natural Resources" specifically devoted to the "integrated water cycle", confirms the approach selected to enforce the reform. In fact the measure provides for the public sector to allocate half of the funds required to enforce the "integrated water cycle" reform (European, national or local funds), while the remainder funds have to be allocated by the public sector which is thus playing a crucial role.

This requires an innovative approach based upon effective management (which goes beyond the "political price" and introduces tariffs viewed as amounts to be paid for the service provided) and *project financing* (to implement the renewal, innovation and investment programs required to make the reform fully operational, above all with respect to the creation of *multiutility* companies). Adopting innovative management methods in the water supply sector is functional to an overall local development strategy as they stimulate local *utilities* to increase their competitiveness and to enhance the managerial/strategic skills of the whole local system. Furthermore, increasing the competitiveness of the local *utilities* also means increasing the attractiveness and the competitiveness of the local system vis-à-vis the foreign markets, a crucial factor in the current globalisation process.

A priority issue within the water supply reform is the mitigation of the environmental impact resulting from the increasing demand for water resources and, consequently, the implementation of effective policies to manage demand and improve supply.

Despite the advances made over the past years thanks to the introduction of models for the environmental management of urban water resources, many problems still have to be solved. In the past five years local administrations and companies have started testing growth models for the sector aimed at cutting water, energy and raw material consumption.

However, a proper planning of the measures to be implemented in southern Italy has to be supported by a radical rationalisation of the sector management aimed at its self-financing.

With respect to management, the picture is quite fragmented. In fact there are 5.500 independent management bodies supplying drinkable water, 7000 independent management bodies providing sewage services and 2000 independent bodies providing water conditioning services. Quite obviously, this management fragmentation prevents from developing a targeted and effective planning of the measures to be implemented.

Above all in southern regions there are some problems with the supply of the service; the management fragmentation exacerbates them, making the development of more integrated and locally-oriented management models a must.

It is worth stressing that the development of infrastructures and water supply systems has become one of the major points included in the scientific debate on the growth opportunities of the Mediterranean regions. Along with the need to counteract the increasingly heavy threats of deterioration of water resources and environment, it is also necessary to implement more cost-effective management systems, i.e. capable of managing water supply services based on the following criteria: cost-effectiveness, profitability and creation of jobs requiring qualified personnel.

It must be taken into account that as water is a *basic need*, protection of users has to be a priority as well.

The issues mentioned above relate to the whole sector of *public utilities*, characterised by a strong evolutionary trend and the need to develop new management models capable of combining economic effectiveness and public welfare.

Given the wide scope of the sector and the complexity of the issue, the reform of the Italian water supply service is a real test of a new model to manage public assets and utilities. This model has the aim to protect the community and the environment but also to increase the economic viability of the management activities going beyond the traditional models based on deficit systems and "political" prices.

It is thus interesting to analyse the different solutions suggested by the reform of the water supply service in Campania in order to highlight a possible reference model for the future trend of urban public utilities. The approach outlined by this might be a tool to stimulate an economic growth achieved by protecting public welfare from a Keynesian perspective of "good governance" of the public economy.

This paper is sub-divided into two main sections: a theoretical section on the institutional context and the forms of management of public utilities and an application section which illustrates the concrete case of the reform of the water supply service in Campania.

## 1. **Governance and local development: institutional context and forms of management of the public utilities**

The latest global trends have substantially changed the territorial and economic policies, in particular in the most economically advanced democracies. By reducing the distance barriers and enabling co-ordination between production and trade at global level, the technological evolution of information, communication and transportation have facilitated production and distribution transnationalisation, conferring to international economic institutions the power once held by states-nations only (Pace, 2000). The erosion of the economic sovereignty of the states-nations has also (Ohmae 1995) contributed to increasing the inter-dependence between economic globalisation and local development. These trends led to re-thinking the role of the national governments and their economic development policies. The hierarchic model of the State, based on the principle of authority, has been superseded by the increasing number of actors and intermediaries acting in the international, national and local negotiations. This has resulted in a *governance model* based on organisational structures including partnerships and/or open markets which increasingly characterise the local societies (Perulli 2000).

The English term *governance* gained a new momentum in the '90s when it was used by British economists and political scientists and by international organisations ( UNO, World Bank and IMF) to denote the “ art or way to govern”, highlighting the difference with the term *government* as institution, and promoting a new way to manage public affairs founded on the involvement of all actors of the civil society. From an economic policy point of view, as suggested by neo-institutionalists, the *governance* of economic relationships requires the State, the regional and local governments, as well the various public-private intermediate institutions to define the system of norms, procedures and relationships which can facilitate interactions amongst economic operators guided not by individualist principles but rather by co-operative principles, thus promoting the involvement of various subjects in the development and co-existence of different interests in the name of the general welfare.

The evolutionary trend of the notion of State and of its role within the society started with the creation of the modern States. Over the years this trend had progressively generated a change in the definition, strategies and functions of the State. Shifting from the so called “constitutional State”<sup>1</sup> to the *welfare state*<sup>2</sup>, its role has currently been defined as “State of the quality of life”. This definition includes the “State of public utilities” and the “Regulatory State”, whose central functions are direct or mediated supply of basic utilities capable of favouring the social-economic development of the community.

---

<sup>1</sup> In this case the State function is to introduce into the society a formal system of rights and obligations to regulate the community life.

<sup>2</sup> The role of the State is to participate actively in the economic system above for a fair wealth distribution.

With respect to public utilities (utilities crucial to the community<sup>3</sup>), merely institutional issues, political issues and business approach are strictly correlated<sup>4</sup>. In fact, along with the institutional evolutionary trend, the subsidiarity principle has progressively become established. According to this principle a higher level of independence of the public administrations is linked on the one hand to the notion of effectiveness (social, quantitative and qualitative effectiveness) and responsibility of ensuring quality services meeting the needs of the local communities; on the other hand, with respect to the modes through which these services are produced, it is linked to the notion of economic efficiency by pursuing criteria which are typical of the business world. Analysing the evolutionary stages of the characteristics of the local public companies in relationship to the institutional dynamics in the different periods, it is possible to understand their impact on organisation and management. In fact over time, through a transformation process<sup>5</sup> and a number of reforms, the “municipal corporations” typical of the *welfare state*, which operated based on technical efficiency mainly, have become “special” companies with legal personality. These special companies, thanks to a higher level of independence and organisational flexibility, had to achieve not only objectives related to qualitative and quantitative effectiveness, but also economic efficiency objectives. However, in the past decade, the constant annual deficits of these companies, along with the perception of the citizens' dissatisfaction for the quality level of the services provided, led to formal and radical privatisation processes. As result of these processes the special companies were transformed into joint stock companies, and the local authority has divested capital shares to the private sector.

These strategies, which are the foundations of the reforms regulating the public utilities system, have generated substantial innovations not only as to the form of management, but also as to the operational mechanisms of the system itself. Specifically, the major points of the recent reform of public utilities, i.e. art. 35 of the law n.448/2001 relate to the separation between ownership/management of the networks and service management. The reform also introduces the notion of service contracting out through competitive tendering (only joint-stock companies may qualify for these tenders). This means that local authorities cannot divest the ownership of the installations, networks and other equipment required for the operation of the public utilities, although they can transfer this ownership to a joint stock company in which the local authority holds the majority stake which cannot be alienated. Service management is assigned through competitive tendering for which only public, private or joint-stock companies or joint ventures may qualify. The contract is

---

<sup>3</sup>Their importance results from objective aspects related to their inherent attributes (the so called pure public goods), to aspects associated with the implementation of public economic policies and to evaluations on the market functioning.

<sup>4</sup>Cf. Beni O., Bracci E., Donato F., *Gli enti locali verso logiche di public governance: elementi di management pubblico*, Quaderni del Dipartimento di Economia, Istituzioni, Territorio, University of Ferrara, n.6/2002.

<sup>5</sup>As result of constant economic losses which had a strong impact on public deficit, in the early '80s a number of legislative measures were issued which introduced economic accounting and planning tools in these companies, such as the plans and the multi-year budgets, as well auditing boards.

awarded to the company which has submitted the best bid in terms of quality and safety standards, costs and service, investment plans and technological innovation levels. After this stage the service contract is entered into; it regulates the relationships between the local authority, charged with the public institutional function of the service, and the contractor, charged with the service management from a business point of view. The basic elements to allow for in these contracts are: the service levels which have to be guaranteed by the contractor (in particular tariff caps) and the tools for supervision. Actually the role of the local authority as "corporation", characterised by a direct management "on a time and materials basis"<sup>6</sup>, has been replaced with a new role, i.e. *holding* of the company (controlled by the local authority) which will manage the public utility. The local authority can thus intervene and participate in the economic-financial trends of the managing company. This is done not only through the supervision tools provided for in the service contract, but also through the members of the board of directors of the company appointed by the local authority in relationship to the number of shares held by it. If the contractor is instead a not controlled corporation, such as a private company, the local authority shall act as an *authority* with guidance and monitoring tasks performed through the supervision, sanction and intervention tools laid down in the service contract. In this case it is very important for the local authority to develop the technical and relational skills required for a proper definition of the service contracts. For an optimal management of the relationships between the local authority and the company in which it is a shareholder is important to develop a *corporate governance system*. By this we mean both the rules associated with the corporate structure and its operation, and the whole set of principles, rules and tools for guidance and supervision which enable the local authority-*holding* to govern the group as a whole from the managerial point of view. As to the latter point, the entrepreneurial strategies of the local authority designed to guide the actions of the controlled corporations and to represent the group itself, generate different management models related to the territorial context and to the institutional regulation of the system of local public utilities. In particular, the basic choices which result in the development of different models are linked to two main factors; one factor is related to the creation of a single governance centre or, vice-versa, of multiple governance centres; the other factor is related to the area where the group performs its activity (local or extra-local areas). Based on these choices four reference models can be identified:

1. *Multiutility company* (single governance centre and local activities);
2. *Inter-municipal company* (single governance centre and extra local activities);
3. *Integrated system of companies* (multiple governance centres and mainly local activities);
4. *Independent entrepreneurial poles* (multiple governance centres extra local activities).

---

<sup>6</sup> Usually direct management is not viewed as the most suitable way to achieve economic effectiveness and efficiency. This is due to the financial constraints which sometimes prevent from making the most proper decisions, and to possible interferences of the political body in the management function.



The multi-utility company model should be adopted when there is a high interdependence between productive and supply processes. In this case the aim is to exploit infrastructure and market synergies, while the difficulties are related to a higher management complexity due to the specific needs of the different public utilities managed. The inter-municipal company should instead be selected for areas with similar morphological attributes and it is particular suitable to areas with a low population density. The integrated system of companies enables to combine the need for independence and specialisation and the need for co-ordination and interdependence. The model of the independent entrepreneurial poles is the model which fully enforces the reform aimed at managing highly complex situations, specialisation of processes and partnerships with the private sector.

In conclusion, to implement a *corporate governance* system it is very important to define the roles and the tasks of the various stakeholders (local authority, board of directors and executives of the corporations, associations of consumers, lobbying groups, trade unions, suppliers, citizens-clients of the service) and to develop tools and mechanisms aimed at promoting integration between the local authority and the controlled corporations.

Many studies on public *governance* have emphasised, in line with the theory of the relationship systems partially drawn from business economics<sup>7</sup>, the need to develop networked managerial systems according to a *network approach* (particularly adequate for public utilities characterised by high effective and efficiency levels) based on external and internal relationships.

This study - reiterating the crucial role for development and growth played by the territory and by the establishment of trust relationships based on shared values amongst firms, economic and institutional actors, local authorities - with respect to the management of public utilities also highlights the importance of external relationships with all subjects involved in the co-production processes of the services, as well as the importance of internal expertise and ability to produce innovative services.

## **2. Public utilities as catalyst of the economic development: the case of the water supply service**

Within the scientific debate on the opportunities for economic growth of the Mediterranean regions the development of water infrastructures and supply services is becoming increasingly crucial.

In Italy the evolution process, or to better say the divesting process of the public *assets* started in 1993 and still in progress has involved many sectors being one of the widest divesting processes in Europe. However the Italian privatisation of public utilities has entered a crucial stage from the

---

<sup>7</sup> Cf. Caruso I, *I sistemi relazionali nel Mediterraneo tra globale e locale*, Cycle of workshops IREM 2002: Regional differences in the Mediterranean area, University Federico II di Napoli.

second half of the '90s. In particular, in the supply of public utilities, promotion of competition has been viewed as a necessary tool to guarantee improvement of productivity levels and create better conditions for the economic development of the water supply sector which has undergone a deep re-organisation process. However, assuming that competition is the most effective tool to generate more profitable supply levels, with a low level of market control by the firms, and assuming that the “in the water supply sector the opportunities to open up to free competition are very low, it can be stated that the lower the opportunities the higher the role of regulation”.<sup>8</sup> Consequently, the principle is recognised that, although the responsibility of the management lies within the competence of the local authorities, allowance must be made of the characteristics of the water supply services, namely:

- Water supply services  $\Rightarrow$  poor environmental resource;
- Water supply services  $\Rightarrow$  complex industrial organisation;
- Water supply services  $\Rightarrow$  economic regulation of prices.

Based on these guidelines, management of local environmental services, traditionally funded by the public sector, has experienced an evolution aimed at achieving production efficiency and industrial re-organisation.

This has resulted in a re-definition of the economic profile of the services which, through a number of regulatory and organisational measures on an industrial scale, has completely changed the sector and has led to the adoption of new strategies focused on two crucial points:

1. Industrial cost;
2. Social cost.

Industrial costs are a strategic component of the public utilities as they include coverage of the costs to maintain and renew infrastructures with the associated problems of investment depreciation. It is worth stressing the complexity of the system of public utilities in water supply services as network services in regimen of natural monopoly.

In this context the possible operational guidelines for *policy makers* are:

1. Selling the *public utility* as a whole and guarantee high returns;
2. Re-organising and then selling the different segments; an operation that, unlike the previous one, does not guarantee high returns.

In relationship to these options, the economic theory suggests a number of solutions, which have the aim:

1. To separate the network vertically from the other stages of the productive cycle which can be carried out in a competitive regime;
2. To break down the segment horizontally amongst the various competitors;
3. To separate the ownership and the management of the network.

---

<sup>8</sup>[8] Caselli R., Peruzzi P., *Servizi idrici tra regolazione e mercato*, Rome July 1998.

This separation is aimed at :

1. Preventing the network owner from taking advantage from the integration keeping a dominant position to the detriment of other competitors;
2. Facilitating regulation keeping the network ownership and management separated.

Another point to take into account is the high share of fixed costs of the water supply service, equal to round 60-75% of the total costs. This share changes as a function of the characteristics of the water supply system, of the technology used and of the extension of the area served.

Social costs relate to the external costs, namely to the costs paid by the community for giving up alternative uses in case of water shortage.

Synthetically, the Italian water supply services have been strongly influenced by their high fragmentation due to:

- A low vertical integration as the companies cover certain phases of the water cycle subdivided by segments ;
- A low horizontal integration due to the high number of operators and to the geographical extension of the water supply network.

From the operational point of view, the fragmentation of the water supply services has hindered the enforcement of the reform, thus calling for the definition of the institutional roles and of the political and managerial tasks. In this context, opening to the private capital, re-organisation of services to favour market competition, resort to scale economies and dissemination of multi-utilities, management systems meeting market needs, expansion of entrepreneurial local public utilities were the necessary stages to be implemented in the reform process. The law has introduced the principle of the separation between ownership and management of public utilities and has created the conditions for a higher involvement of the local and private sectors which have to play an active role in the water management market. In its turn, the industrialisation process has been characterised by complex economic, political and institutional implications as it has involved a sector including 23.500 operators of waterworks, sewage systems and water conditioning systems. Due to the diversification of the managerial roles, only apparently separated, and to the high number of operators it was necessary to shift to an entrepreneurial approach to the services and to specify roles and competencies to avoid monopolist behaviours.

With respect to public utilities it must be said that from the economic point of view they are private assets as they are based on the notion of excludability and rivalry; vice-versa, as they are subject to congestion phenomena they are considered as public assets. .

As services to the persons, they are consumer goods; when they are inputs for the production processes they are *essential facilities*.

In relationship to the local scale and to the users who change according to the area served, there are many problems associated with the production scale and to the supply size. Actually the

productive process goes through two stages: the first stage relates to the transformation of the productive factors into a supply; the second stage relates to the shift of the process from the supply level to the service provision. Consequently, an effective process of reorganisation of the water supply services implies a shift of the service from performance unit to object of positive reply for users pursuing purposes of fair distribution universality and equality in the access.

In the Law 36/94 (Galli Law), there are two points related to local public utilities: the first point relates to the operational modes of the local public utilities (both industrial and not industrial); the other point relates to competitive tendering (franchising) as a procedure to grant an industrial multiutility concession, in compliance with the norms and the business plan. The law highlights that industrial or entrepreneurial public utilities (waterworks, sewage systems and water conditioning systems) are constantly growing business segments provided that they follow the technological evolution (which enables to lower costs), and the demand trend (Boitani e Petretto 2001).

The process in progress implies the transformation and amalgamation of municipality-owned companies into new joint-stock companies, listed on the stock exchange, performing on the international market, following technological innovation and complying with what provided for in the law.

The companies incorporated are much more linked to the local context and they tend to get well established in the area in which they perform their activity. The transformation process started in the years following the issue of the "Galli" Law, gained a new momentum thanks to the budget law 2002 which fostered opening of the local public utilities to the market.

Clearly enough the development of management models based on competition requires industrial policies focused on the *governance* of the local development and designed to improve the efficiency of water supply services exploiting the potentials of the competitive markets. Unlike other sectors, fully liberalised, opening of the water supply sector to competitive market is taking place more cautiously and is mainly focused on the operators repositioning on the market.

In fact, as laid down in sub-par. 7 of the new art.113 (Consolidation Text) potential contractors are awarded the management service contract “based on the best level of quality and safety, on the best economic terms and service performance, on the best investment plans for development, improvement, up-grading and maintenance of the networks and systems, as well as for technological and managerial innovation”<sup>9</sup>.

In conclusion, the final re-organisation of the industrial local public utilities is aimed at providing a solution to the deficiencies reported in the late '90s mainly related to:

---

<sup>9</sup> The reform of local public utilities ratified with the bill 7040, provides for the management of industrial local utilities (i.e. energy, water, waste collection and disposal) to be assigned to third parties through competitive tendering. .

The text of the law, amended and supplemented on different occasions, outlines the general principles as to opening to competition. According to the law inspirers, this is sufficient to confirm the basic elements for the opening of a new market.

- A total absence of competition with a resulting productive inefficiency, given the low level of productivity and cost control;
- High inefficiency of the industrial sectors involved due to the small size of the firms and to the low expertise of the management;
- A strong territorial unbalance in the infrastructure distribution;
- An insufficient tariff structure to cope with the production costs of the service;
- A low propensity to invest in Research and Development and technological innovation;
- A confusion at institutional level which is in conflict with the objectives of local *governance*, returns increase, cost reduction and consumer protection..

Given the need to implement the reform of the sector as the local governance processes cannot work without efficient services on the territory, once the stage of a management of the industrial services founded on a time and materials basis has been overcome, it is necessary to implement a system of tax concessions, and start a privatisation process of the companies.

The reform of the local public utilities will increasingly have to be based on the principle of the separation of the guideline, planning and management functions, assigning to these utilities an economic and social value which cannot be fully guaranteed by the public production (Petretto e Boitani 2001). On the other hand, pursuing social welfare and utilities efficiency does not prevent a local authority from adopting tools (such as public and social policies) useful to achieve management effectiveness.

To confirm this point the economic theory has already analysed the benefits generated by the institutional separation of utilities companies and public bodies charged with their supervision<sup>10</sup>.

Consequently, sometimes it may be economically efficient to have institutional separation and contracting out of public utilities both in terms of institutional-accounting separation and in terms of privatisation strictly meant, i.e. when the ownership and the company control is transferred to private shareholders.

Clearly enough the *cost-benefit* resulting from this institutional separation has to be analysed from time to time, allowing for the general contexts. However it can be stated that separation of service regulation can be effective when there is a clear-cut assignment of the functions to subjects external to the public administration. In fact privatisation generates an unquestionable effect: the company has a single counterpart (the shareholder) and the public companies, transformed into joint-stock companies, are driven to search for new market opportunities in higher profitable sectors.

---

<sup>10</sup> Reference is made to the literature which draws from the theory of the multitask agencies (Holtrom e Milgrom 1991, Dixit 1996, 1997, Dewatripont, Jewitt e Tirole 2000) and from the theory of the separation and regulation of the powers. (Laffont 1999, 2000).

Thus the companies which have to provide basic public utilities, have to become *multi-utility companies*, capable of distributing and selling gas and electricity, managing the complete cycle of the waters, carrying out waste collection and disposal and providing not strictly industrial services.

The resulting company structure can then combine scale economies with extension of the productive and organisational structure, multi-product economies and cost complementarities made possible by the technology.

Thus, in the case of multi-product companies, the economic theory maintains the principles of indissolubility of the *multi-utility* organisation and of natural monopoly conditions.

Furthermore the principle of a unique management of the users is also reiterated through the use of the same infrastructure or the same networks, although they provide different services (Bulckaen e Cambini, 2000). Thanks to the technology, which makes it possible to have cost complementarities, *multi-utility* companies become efficient from the industrial and productive point of view, a pre-requirement to become competitive at international level.

It is now worth illustrating the examples of a number of European countries<sup>11</sup>.

In the '60s France adopted the mixed system which allowed the community (which had created consortia on a volunteer basis), to choose between public management systems and contracting-out to specialised companies, thus achieving a management concentration in the hands of few groups of companies.

In Italy, instead, the lack of a well-organised water supply industry generated a service mainly managed by the public authority.

England is an excellent example of service privatisation as in 1989 the Government (not the supervision authority) created an economic regulatory system based on pre-set price cap.

In this way the companies are provided with higher incentives to promote efficiency and innovation, thus driving the sector to create large public companies, Water Authorities, which, operating at regional level, take on the characteristics of private law companies.

No European country has then adopted the competitive bidding criterion as the economic theory enables to introduce competitive mechanisms in the supply of public utilities.

The model of competition for the market, maintained by the theory on the reform of public utilities suggested by Demsetz in 1968, is based on the assumption that the State not necessarily has to be the subject providing public goods and services. It is sufficient for the State to assign their production to the market through a competitive bidding, once the attributes of the public goods and services have been specified.

A quite widespread model increasingly adopted by the European countries is *project financing*, namely a financing for specific projects which may also require substantial amounts of money. This

---

<sup>11</sup> The term free-rider stems from the English terminology which provides for the intervention of a public subject, which takes on the responsibility to identify and specify the demand for a given good, expressing on behalf of the community the propensity of the society to pay for this good.

model, adopted in Argentina, Australia, Scotland, Spain, Ireland and Portugal, is based on the creation of an ad hoc company established by the sponsors, which has to design, build, finance and manage the project. The economic principle underlying *project financing* is that the reimbursement of the money allocated basically depends on the returns generated by the project itself. The public or private subject undertakes the role of director of the project, and it may also be entitled not to draw on its financial resources. Thus *project financing* can be defined as a delegation of the public utility; the applicants for the franchising must have the proper technical expertise and the sufficient financial means so as to take on the risk associated with the building and management stage.

However, to implement these systems it is necessary to have a stable and proper regulatory, legal, fiscal framework. In fact it is not a chance that only strong and financially sound municipalities can implement these projects. In developing countries, instead, basic utilities are supplied through *project financing* in order to implement specific projects aimed at creating targeted infrastructures.

Another possibility to organise local public utilities (LPU) is based on the notion of complexification and globalisation of the filiere. In fact if, as maintained by Kraemer (Kraemer 1995), it is increasingly difficult to find the inputs necessary to the services locally, if and these inputs increasingly require innovative technologies, specialisation economies and international division of labour, an effective solution might be a vertical arrangement of the filiere.

However, there might be the risk that, like in France, filieres turn into new oligopolistic structures or, like in Germany, that a local public monopoly of management is created based on an aggressive competition on the supply of the various inputs. In England, instead, water supply companies) are integrated upstream and act as *procurement companies*.

Then the *multi-utility* system is developed to integrate a system focused on the demand management. It takes over the new managerial cultural adopting an approach based on the linkage between infrastructures and territory, viewing them as a whole including ecological networks and territorial systems.

### **3. The transformation of the water supply service in Campania: a *multi-utility* case.**

The project to create a multiutility company in Naples was started in January 2000 with the partial split of the special company “Azienda Risorse Idriche di Napoli – ARIN” into a new company “A.R.I.N.- Azienda Risorse Idriche di Napoli S.p.A.”.

In compliance with what provided for in the law 142/90, a joint stock company in which the public sector is the majority shareholder can run a public utility; moreover, in compliance with the law 127/97, the Municipalities can transform, through a unilateral act, the special companies into

joint stock companies remaining the sole shareholders for a period no longer than two years since the date of the transformation. The transformation can take place by splitting the Special Company.

The Azienda Risorse Idriche Napoli S.p.A. (ARIN) is the special company of the Municipality, which has the responsibility to manage the water supply service for the Municipality of Naples pursuant to a service contract which will expire on December 31<sup>st</sup>, 2028.

The measures provided for in the law led to the development of multi-utility companies (joint stock companies) located in mainly industrial areas and focused on:

- Productive diversification and specialisation policies;
- Integration and enhancement of public utilities;
- Expansion in optimal territorial areas and internalisation programs;
- Corporate capitalisation through listing on the stock exchange and selling of shares to the employees as well.

The public-private company was supposed to be one of the first multi-utility companies in Italy; the Municipality had to play a guidance and supervision role while the private partner had to manage the service.

The company has to manage also other municipalities of Campania and is charged with water collection and distribution for civil purposes, collection, conditioning and disposal of waste water and sewage service.

The markets involved in the operation are the natural gas distribution and selling market and the market for the supply of the activities which constitute the "integrated water supply service".

Arin's capital stock is fully held by the Municipality of Naples and in 2000 its total sales were round 175 billion lira (round 90,7 million Euros).

The operation started to re-organise the local service based on an entrepreneurial approach, envisages the establishment of a joint venture (NEWCO), to which 100% of the stocks held in ARIN by the Municipality of Naples and 51% of the stocks held by the company Napoletanagas were transferred. The remainder 49% stocks of the Napoletanagas' capital stock are still held by ITALGAS.

55.4% of NEWCO's capital stock is held by the Municipality of Naples while the remainder 44.6% is held by ITALGAS.

The establishment of the new joint-venture complies with the provisions laid down in the legislative decree n.267/00, a Consolidation of the Laws on the regulation of the local authorities with respect to the typologies of the corporations through which networked public utilities can be managed.

NEWCO carries out commercial, administrative, organisational, technical, logistic, legal and corporate functions.



Pursuant to the protocol of agreement which actually settles and supersedes the pre-existing case between the Municipality of Naples and ITALGAS, ARIN and NAPOLETANAGAS shall manage their activities based on NEWCO strategic guidelines (which represents the Municipality of Naples and ITALGAS) extending NEWCO's licence to manage the distribution system.

The company deals with the management of gas and integrated water cycle in its different stages: water collection, purifying and distribution, collection and conditioning of waste water. Thus the protocol of agreement has ratified the shift from a fragmentation in the management of the water cycle stages, to a vertical integration of the various operators which guarantees a higher economic efficiency in compliance with the law. In fact the law provides for a vertical management unification of the various segments of the integrated water supply service and the identification of Optimal Territorial Areas which makes it possible to exploit scale economies and manage the service based on efficiency and cost-effectiveness criteria.

The general guidelines for the water supply service are set out by the State and the Regions (also charged with planning). Territorial governance, organisation and supervision lies instead within the competence of the individual local authorities grouped together in Authorities for Territorial Areas for each Optimal Territorial Area managed by public and/or private operators

Pursuant to the law, the reference geographical area must have a local dimension coinciding with the number of users served by the network managed by the company to which the service contract was awarded, in each territorial area (one province area or multi-province area).

In Campania, ARIN's and NAPOLETANAGAS' reference market corresponds to the areas of Naples and Caserta.

Based on the current situation, ARIN and NAPOLETANAGAS manage the water-gas integrated service leaving the situation of legal monopoly unchanged, as the Municipality of Naples and ITALGAS still keep market control.

Since January 2003, the current residential users of NAPOLETANAGAS in the municipality of Naples will be free to get gas on the market from the best supplier.

Given the current situation it is clear that users will be bound to NAPOLETANAGAS until December 31<sup>st</sup> 2002 S for gas supply and to ARIN until December 31<sup>st</sup> 2028 for water supply.

The analysis made by the Authority for Competition highlighted that this operation has not generated a dominant position in the market of supply of natural gas and integrated water services which could have a negative impact on competition.

Following what illustrated above, a petition to the Regional Administrative Court was filed and then allowed which has blocked the creation of the multi-utility company in Naples.

However it should be stressed that the development potential of the water supply service in Naples is also affected by the geomorphologic differences of the area which require quite complex waterworks and distribution facilities.

The distribution network is quite differentiated because of the different altimetric belts while there are few large collectors as primary supply sources. This situation requires to plan proper and timely measures to improve the network aimed at minimising the service deficiencies.

It is necessary to promote strategies aimed at using innovative systems and monitoring the whole distribution network constantly, rather than improving supply patterns.

One of the difficulties encountered after the issue of the framework Law 36/94 (Galli Law) lies in the very nature of the actions to be undertaken which provide for the definition of parameters and procedures to implement the Integrated Water Supply Service.

In fact, if the water supply system has to be adjusted to the different territorial areas, a higher flexibility would be a crucial factor to provide a service capable of meeting different needs.

Additionally, the attractiveness of the sector for the private companies has to be supported and promoted through a better definition of the roles and a clear-cut distinction of the responsibilities held by those who set out the *policy guidelines* and by the companies entrusted with the management of the service.

The confusion originated by the Law - which is a positive law as it stresses the need for re-organising the services based on business criteria - ends up slowing down or even blocking the process (as it was the case with the multi-utility company in Naples) in absence of a clear definition of the political-economic responsibilities for water governance .

Operators have to be stimulated but also provided with certainties if we want them to be interested in a constantly growing market with *business* areas which, as said by the operators themselves, are stimulating but not always attractive.

The identification of the new company strategies and of the business areas generates a reduction in the market shares of the former monopolists and starts competitive processes in the public utility supply systems.

Based on these remarks, it is interesting to illustrate what led to the appeal against the deliberation of the City Council of Naples which provided for the incorporation of the joint-venture.

The appeal lodged to the Regional Administrative Court by ITALCOGIM S.p.A. and ECOBONIFICA asked for the voiding of the agreement entered into between ARIN and NAPOLETANAGAS due to patent inconsistency defects.

The appeal referred to the presupposition that the Municipality of Naples - given its equity in the corporation's - is not allowed to make independent choices as to the annual or pluri-annual planning of the corporation as these choices have to be approved by a 60% quorum at least.

Consequently, for the resolutions of the company to be valid, the aye of the minority shareholder is necessary; furthermore, transfer of the equities of a public body to a joint stock company has to be done through public offering.

Basically, municipalities are allowed to extend the service management activities to the territory of other local authorities provided that the deliberation is approved by the City Council with the aye of the majority of the city councillors in office and subject to the agreement with the Municipalities involved. In fact, pursuant to art. 8 of the Law 36/94, it is not possible to start new management forms until the ones provided for within the Optimal Territorial Areas are not operational

It is thus necessary to analyse the well-established experience and the technical expertise of the companies involved. If the incorporation of a new company is aimed at optimising the supply of water and gas, the procedure for the extension of the service licence cannot be accepted.

Basically, as the aim of the law is to ensure economic stability to bodies and companies in which the public sector holds the majority stakes, the advantage positions already acquired by the subjects which are incorporating the new company have to be removed. These advantage positions have to disappear when the privatisation is formalised and the activity of the new company is started.

Based on what highlighted during the proceeding following the appeal to the Regional Administrative Court, licence renewal is allowed when a law provision explicitly authorises it. As this was not the case, the establishment of the multi-utility company cannot take place under a private negotiation regime, but in compliance with the general rule of the competitive bidding.

Therefore, in compliance with the principles<sup>12</sup> “of good administration and transparency of the administrative action as well as with the principle of competition - to be deemed as inherent to the regulation - anytime an operator has to be chosen to carry out activities on behalf and in the interest of the Public Administration, public procedures must be followed. In fact it is necessary to identify – through a comparative evaluation based on objective criteria (technical expertise, experiences in the field, financial soundness, etc.) - the most suitable subject who can act as partner-entrepreneur and co-manage the service, through the new company, in the public interest”.

The judgement of June 7<sup>th</sup> 2002, which as already mentioned has blocked the incorporation of the multi-utility company in Naples, highlights the doubts raised above as to the adequacy of a law which seems to be scarcely flexible as it does not allow for the different territorial areas and political-economic contexts which can hardly be represented in a homogeneous regulatory framework.

The implementation of a multi-utility project requires a strict correlation between the level of opening to the markets and the opportunities for economic growth, as business organisation choices can optimise the economies generated by a joint production of different services and favour the technological innovation process.

---

<sup>12</sup> Judgement of the Regional Administrative Court on the appeal lodged by ITALCOGIM S.p.A. and ECOBONIFICA s.r.l., June 7<sup>th</sup> 2002.

In an overall strategy for economic development, public utilities are a precious stimulus as they enable to improve the managerial skills and identify strategies useful to enhance the local productive sector, making it attractive for external investors.

Another point which is crucial when analysing the development of local utilities, relates to the function of the Regional Operational Plan (Piano Operativo Regionale - POR Campania 2000-2006) which is the link between institutions and operators and a source of financing to implement projects and start technological innovation processes.

#### **4. The Regional Operational Plan in Campania**

In the new management model outlined for the water resource sector, the role of private companies is promoted also within the POR strategies.

The POR Campania 2000-2006 is focused on the need for a full enforcement of the reform started with the "Galli" Law, through the creation of the Optimal Territorial Areas (Aree Territoriali Ottimali - ATO) and the Integrated Water Supply Service.

With respect to the enforcement of the "Galli" Law, the most important measure of the POR Campania is the measure 1.2. ("Integrated water cycle").

The objectives are the following:

- to guarantee a proper water availability (in terms of quantity, quality and costs) for the population and the productive activities;
- to favour entry of firms and capital into the sector and a higher role of the market mechanisms;
- to fully enforce the "Gally" Law and the Legislative Decree 152/99.
- To improve the conditions of the supply infrastructures encouraging saving and re-use of water, introducing and developing appropriate technologies and improving the management techniques in the sector.
- To promote protection and reclamation of sea and brackish waters.

Measure 1.2 of the POR Campania is then an exhaustive initiative aimed at improving infrastructures and technical service but also at providing staff training.

Opening of the market of water supply services to private operators is not only included the general objectives of the action line, but it is also mentioned as one of the activities to be promoted.

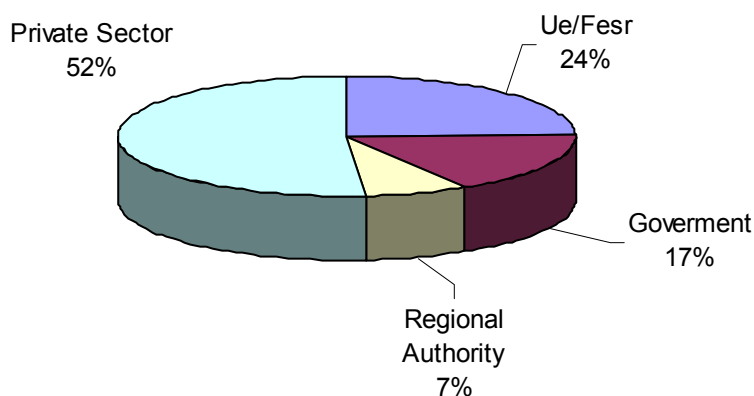
In particular, for the implementation of the actions aimed at improving water collection, sewage and water conditioning systems, the measure 1.2 of the POR Campania provides for the involvement of private operators and the promotion of project financing.

The financial plan attached to the Supplement of POR Planning (Cdp) provides for a total amount of 544.878.544 Euro for the measure 1.2, "Integrated water cycle".

Comparing the total cost of the measure 1.2 with the allocations to other measures, we can see that the "Integrated water cycle" ranks as third, after the measure 4.2<sup>13</sup> and the measure 6.1<sup>14</sup>. This highlights the importance of this measure within the development strategy of the region of Campania. However, if we make a comparison including both the total costs and the shares of public funding (Community, State, Regional Funds) we see that the measure "Integrated water cycle" ranks as 6<sup>th</sup>.

This is due to the fact that, unlike other measures where public funding covers most of the expected costs, with respect to the measure 1.2., the Cdp provides for over 50 % of the costs (52%) to be funded by the private sector.

#### Origin of funding for 1.2 measure of POR Campania



The public expenditure provided for in the POR has been broken down into the four ATOs of the region of Campania, based on territorial criteria and on the expected requirements in terms of necessary investments.

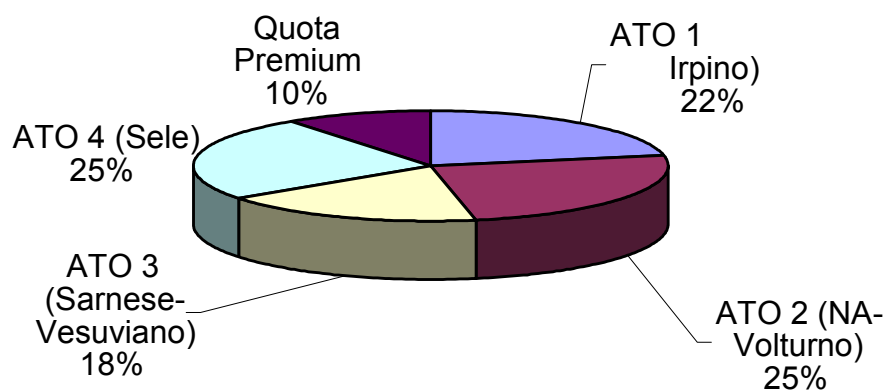
As result of this breaking down, most percentage of public funds, namely 25%, are allocated to ATO n. 2 (Naples-Volturno) and ATO n. 4 (Sele).

---

<sup>13</sup> Measure 4.2: "Support to the productive development of the regional enterprises"

<sup>14</sup> Measure 6.1: "Regional integrated system of transport"

## Public Funding for ATO



It is worth stressing that, based on the data included in the POR Campania and in the Cdp, it is clear that the private sector support is crucial to implement the reform of the water supply services in Campania. In particular, the substantial investment plan required for infrastructure improvement and technological innovation of the sector highly depends on the involvement of the private sector.

As to the role of the private sector two additional important points should be stressed related to the full application of the reform of the water supply services and, consequently, to the new management strategies for public utilities.

- The liberalisation of the water supply services in Italy (and the evolution towards a *multiutility management*) should increase the competitiveness of the Italian firms performing in the utilities sector. This would make it possible for them to enter the international markets with a higher level of experience and higher opportunities to be successful.
- The higher business competitiveness, the need for investments in infrastructures, technological innovation and quality improvement, should guarantee an increase in the demand for labour in the sector above all for highly skilled labour.

Based on these remarks it can be stated that the approach outlined by the reform of the water supply services in Italy is a tool which could stimulate the economic growth of the local productive systems, by pursuing social welfare in line with a "good governance" approach.

In particular, the strategy outlined by the "Galli" Law and finalised by the POR suggests a model where public funds act as a leverage for private investments.

## 5. Final remarks

Management of water resources is usually viewed by economic analysts as an issue strictly linked to an useful and efficient allocation of a scarce resource such as water. Dealing with this issue also within the public economy framework has made it possible to probe into a number of specific topics in a typical field where a "market failure" takes place and simply resorting to the private sector is not sufficient to ensure a good management of the resource.

This analysis, although in a synthetic manner due to the complexity of the issues covered, focused on the identification of the tools and objectives linked to the management of public utilities in order to evaluate their consistency in terms of cost-benefits and cost-opportunity.. The survey was mainly conducted by developing two points. One point was focused on the definition of proper *governance* strategies, aimed at setting the rules of the game, the organisational forms of the institutional structures and the extent of the managerial actions. The second point referred to the analysis of the specific nature of the water resource as productive factor in a market highly affected by high transaction costs. The study was conducted being aware of the importance of a resource-based approach within which the local systems play a role as growth factors and as factors crucial to develop original interpretation and intervention models. Within the current context, characterised by a rapid flow of men, ideas and technologies which inevitably drives to removing traditional borders and going beyond the national borders, there is an increasing perception of the importance of a local matrix in the competitive edge. The ability to enhance the know-how, the resources and the institutions of specific sites has often given rise to the production of goods and services in relatively small areas. Many authors have also proven that the absence of traditional structural resources (infrastructures) cannot be the only reason why a number of geographical areas are still lagging behind. There are other intangible resources, which are crucial to favour economic development and entrepreneurial success. These intangible resources are trust-based relationships and knowledge and they give rise to different economic performances and competitive edges for the local systems where the firms are located. The development process favours those areas capable of embedding substantial human and social resources and efficient networks for access and use of information flows. The economic growth becomes thus a process, which can be interpreted only by analysing the complex network of relationships between the private and the public sector, the territory and its resources. In economic terms this translates into production of culture and information, externality and agglomeration economies, efficient urban systems, interconnected productive systems functioning as a whole and acting as a drive for development<sup>15</sup>. The case of the water supply services represents a typical example where specialistic and/or sector planning

---

<sup>15</sup> Latella F., *Regioni arretrate e qualità dello sviluppo*, Franco Angeli, Milano 1990.

was added to a general territorial planning, often without any useful interaction. In most cases the existence of many decision-making centres, many administrative and supervision procedures, many fund allocations, inconsistently overlapped, has generated conflicts between administrations, uncertainty amongst operators, but above all a negative impact on the territory and on the local communities thus creating a gap between service requirements and customer satisfaction. The reform of the water supply services in Italy is very important. In fact it has a major impact on the public utilities management policies, above all as it separates public responsibility and private management and no longer views citizens as users but as consumers. In the light of what illustrated above and of the analysis made, it is then important to focus on the following strategic lines:

- Importance of the demand management in order to avoid wastes and enhance possible synergies with respect to the use of the water resource;
- Improvement of the supply in terms of quality and safety, through efficient and effective management practices, re-use, demand monitoring, technological innovation etc.
- Enhancement of public utilities as catalysts for local development as they improve the managerial skills of the local actors, the relationship networks between private and public sector, the territorial market, the competitiveness of the local economic operators.