Water supply regulation in France from 1848 to 2001: a jurisprudence based analysis

Working paper:

In France, municipalities are in charge of supplying drinking water to their own populations. They own the local water supply facilities and choose the regime under which water supply is organised.

Three distinctive regimes have successively dominated the French water supply industry since 1848:

- The Concession, in which investment and operation are realised by a private entrepreneur, the Concessionaire,

- The Régie, in which investment and operation are realised by a public body, the Municipality,

- The Affermage, in which investment costs are borne by the Municipality, operation being taken over by a private entrepreneur, the Operator.

Three periods can be distinguished from 1848 to 2001:

- Period A (1848-1900): the connection rate (the percentage of the total population supplied with drinking water) remained very low (from 0% or so in 1848 to 2% in 1900). The Concession was the exclusive regime;

- Period B (1900-1970): the connection rate grew up from 2% in 1900 to 65% in 1950 and 90% in 1970. During the whole period, the Régie had been the dominant regime and experienced the highest growth rate up to 1950. After 1950, the Affermage started to grow faster but the Régie carried on supplying drinking water to a majority of the population;

- Period C (1970-2001): the Affermage became the dominant regime and the Régie lost momentum. The population supplied by the Régies decreased from the very beginning of Period C and at an accelerated rate after 1985, when very large cities started switching from the Régie to the Affermage.

Two main regulatory frameworks have applied to the water supply industry over the period, regardless the regime: a price cap regulation, where the entrepreneur is residual claimant, a cost-of-service regulation, where the municipality is residual claimant and is granted with residual rights of control.

The evolution of the water supply industry structure in France is quite peculiar, in particular compared with what happened in the United States of America, the United Kingdom and Germany. In those countries, private entrepreneurs, once fully involved in the development of the water supply industry, were progressively eliminated in favour of municipalities. In France, private entrepreneurs survived the turning point of 1900 and the elimination of the Concession regime, and started promoting the Affermage, gaining progressively momentum.

The institutional framework of the French water supply industry is also peculiar compared with the institutional framework adopted by other industries (Electricity, Gas, Rail transportation) where national Champions (EDF, Gaz de France, SNCF) progressively emerged.

We consider that the jurisprudence of the Conseil d’Etat is one relevant approach for understanding the regulation of the water supply industry and assessing the way the regulation has developed over the period.

**The Conseil d’Etat competence**

The Conseil d’Etat (CE) is the last appeal court which settles conflicts involving a public body. Since a water service can not be privately owned, it is a public body regardless the way it is operated. The conflicts involving a publicly operated water service are either conducted by or against subcontractors (civil engineering firm, project manager), third parties, and, to some extent, consumers. The conflicts involving a privately operated water
service are either conducted by or against the owner, the municipality, third parties and, to some extent, consumers.

From 1848 to 2001, the CE settled 473 conflicts among which 189 involved privately operated water services. Analyzing these conflicts helps to define the successive regulation frameworks and the main drivers of change. Each judgement contains the preamble, the position defended by each opposing, and the justified judgement of the CE as well as the contractual clause and / or the rules on which the judge founds his settlement. Each judgement testifies the way rules are and should be implemented, and provides municipalities and private entrepreneurs with information regarding what is possible or forbidden.

Methodology

We assume that shifts in conflicts settlement mirror regulatory changes. Therefore, we use “pivotal judgements” as markers for regulatory changes. Within a series of similar conflicts, a pivotal judgement is the first judgement that breaks the way in which conflicts used to be previously settled and is the first one that introduces a new way of settlement.

Besides, the jurisprudence of the CE enables us to assess the consistency of the institutional framework (the three regimes: Concession, Affermage, Régie) with the regulatory framework (price cap, cost-of-service), and the ability of parties to fix their difficulties without appealing to the CE.

For a given regulatory framework and a given institutional framework, the higher the number of conflicts, the lower the consistency between the concerned regime and the concerned regulatory arrangements, and / or the lower ability of parties to fix their difficulties internally.

This paper aims at studying the regulation of privately operated water services over the period. More precisely, we will try, using the CE’s jurisprudence, to:

- Characterise the regulation framework (price cap, cost-of-service),
- Assess the degree of completeness of the contract between the municipality and the entrepreneur.

A. THE PRICE CAP REGULATION PERIOD: 1848 – 1922

1. The conflicts settled by the CE

From 1848 to 1922 the CE settled 84 judgments involving a privately operated water service:
- 78 were conducted by or against the owner, the municipality;
- 4 were conducted by or against consumers;
- 1 was conducted by a third party ii and 1 by the administration regarding a water pipe that supplied a military building.

The 1848-1922 period is the most conflicting period between water services owners and private entrepreneurs. Among the 78 judgments:

- 29 originate in municipalities claiming to extend their concessionaires’ contractual obligations (network extension, water quality improvement, water quantity increase);
- 21 originate in municipalities claiming to lower the rate applied to consumers;
- 18 originate in municipalities claiming to terminate the Concession contract before the end of the contractual period.

2. The CE decisions

In the nineteenth century, a Concession contract is a contract signed between a municipality and an entrepreneur, the concessionaire, by which the concessionaire is committed to finance, build and operate a “public” water network to deliver water at predefined “public” points (fountains, municipal buildings). The design of the facility
and the corresponding capital cost are agreed upon during the negotiation stage, and set once for all at contract signature. The contract specifies the quantity of water that must be supplied daily at each delivery points during the contractual period. The contract specifies also the quality of the water supplied: origin of water, pressure, treatment process.

\[ t = 0 \quad \text{T C} \ [50, 99] \ \text{years} \]

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I (investment), Vt (quantity and quality of water), r (rate), and T (length of the contract) are defined *ex ante*, during the negotiation stage.

- The rate, r, is such that: \( r \times \frac{Vt}{I} = 4 \text{ to } 5\% \) during the first 20 to 30 years of the contract. After 30 years onwards, “public” water is delivered free of charge to the municipality.

- Vt, I and r are supposed to remain unchanged whatever the contingencies. There is no renegotiation clause. In particular:
  1. cost overruns (I realised > I *ex ante*) do not entitle the concessionaire to obtain a rate increase;
  2. The concessionaire is fully committed to supply the expected quantity and quality of water (agreed upon *ex ante*). Should he fall short of his obligations, the contract may be terminated.

As compensation, the concessionaire is granted with the exclusive right to supply tap water (“private” water) to the municipality’s population. The Concession contract sets forth:

- The rate, \( r' \), at which water is being sold to end users;
- The subscription period, including take-or-pay clause;
- The quality of the water supplied;
- The scope of the “obligation to supply” (the concessionaire may refuse to undertake network extension if the number of people to be connected is too small);
- The rate charged to supply “private” water is set at a higher level than the rate applying to “public” water. \( r' \) is such that: \( r' \times \frac{V'}{I'} = 10\% \), over the remaining contractual period.

A thorough analysis of the CE’s jurisprudence over the period 1848-1922 sheds light on the following:

1. The CE considers Concession contracts as complete contracts\(^{iii} \)

The CE systematically considers that there are no limits to the parties’ rationality during the negotiation stage. No unforeseen contingencies may be invoked to justify a renegotiation *ex post*, the allocation of residual rights of control or a CE’s step in right.

- The rate, the quantity, and the quality of the water supplied are set once for all;
- None of the parties may invoke unforeseen contingencies to curb the contractual clauses;
- There is no revision clause, no hardship clause;
- The price cap can not be amended either upward or downward;
- The concessionaire may pay liquidated damages should he not comply with his contractual obligations.

2. Amendments to the initial contracts should be negotiated by the Parties\(^{iv} \)
The CE systematically invites the Parties to negotiate any amendment to the contracts. The CE has never allocated any residual rights of control to any Party to extend the scope of the initial contract. This applies in particular to municipalities which frequently asked the CE to enforce extra-contractual obligations (network extension, water quality improvement, lowering rates for “private” water).

3. The initial contract serves as a status quo point for any renegotiation stage

None of the Parties should be forced to accept an extension to the contract which a stand-alone profitability lower than the profitability of the initial contract. In that respect, the municipalities claiming extension of the concessionaires’ duties (network extension, water quality improvement) have been invited by the CE to provide the concessionaires with a compensation scheme on line with the initial one, implicitly denying any economies of scale or of scope.

4. The CE sets restrictions to contract transfer and termination

The CE has always denied to the concessionaire the right to sell his contractual rights and obligations to a third party without the municipality approving the deal. This is a consequence of the “intuitu personae” characteristic of the Concession contract where the concessionaire is selected by the municipality through a “beauty contest” (gré à gré) procedure.

Only the judge may formally decide to terminate a Concession contract, based on consideration and evidence that the concessionaire had stopped fulfilling his contractual duties (stopped to operate). It should be noticed that the municipality is not entitled to terminate the Concession contract on its own, even though it has become obvious, that the concessionaire has lost the ability to operate the contract. One the termination is decided, the concessionaire is not guaranteed to recover the amount invested in the Concession, even partially.

The municipality may decide:

- To build a new facility. In that case, the concessionaire will lose all his initial investment;
- To buy the facility back. The concessionaire will get the proceed of the sale, after negotiating with the municipality;
- To auction the facility. The concessionaire will then get the proceeds of the auction.

5. The CE gives the concessionaires the right to charge consumers for extra contractual services

Consumers often asked to be supplied with a higher quantity of water or to pay a metered consumption when the Concession contract has only foreseen to provide them with a fixed quantity of water at a fixed rate, whatever their effective consumption.

It should be noticed that:

- The CE recognizes to concessionaires the capacity to sale additional services (metered consumption, variable quantity) at higher rates than contractual rates;
- Most of the Concession contracts involve a profit sharing scheme by which the concessionaire shares with the municipality the profit realised beyond a certain level of sales;
- The CE prevents the municipalities to undertake legal actions in behalf of “private” water consumers;
- Commercial conflicts between the concessionaire and “private” water consumers are considered by the CE as out of its competence.

3. The reaction of municipalities

Following the CE settlements that concessionaires were not obliged to finance water service extension beyond what was stated in the original Concession agreement, the reaction of the municipalities has been threefold.
Those committed in Concession contracts either bought their concessionaires’ operating rights back or started financing extension of water supply facilities by themselves, turning progressively the Concession contract into an Affermage contract, in which the entrepreneur is mainly concerned by providing operating services.

Those, which were engaged in the process of creating a new water service, opted for the Régie, in which the municipality keeps the responsibility for investment and operation.

Only 5 cities decided to buy their concessionaires’ operation rights back, through a very lengthy and conflicting process (11 judgements, 13 to 25 years of procedure). The position of the CE concerning the financial settlement and conditions of operating rights buyback, clearly in favour of concessionaires, prevented most municipalities from engaging a buyback action.

The majority started to finance water supply facilities on their own funds, broadening “private” water availability without charging consumers.


1. The conflicts settled by the CE

After 1922 onwards, the CE has settled 104 judgements involving a privately operated water services, compared with 84 judgements in the previous period:

- 55 were conducted by or against a municipality;
- 31 were conducted by or against third parties;
- 9 were conducted by or against the administration;
- 9 were conducted by or against consumers.

Three elements should be noticed carefully:

- If we take into account the development in size of the water supply industry over time, we may have expected the second period to be, ceteri paribus, much more conflicting. We may argue that the relative diminution in the number of conflicts settled by the CE in the second period be caused by the existence of a clear jurisprudence developed during the first period, allowing administrative justice to clear conflicts without the intervention of the CE. We consider however that it is the change in the regulation of the water supply industry (from price cap to cost-of-service) and the shift from the Concession regime to alternative ones (Régie and Affermage) that mainly explain the substantial decrease in the number of CE’s interventions;

- The 104 judgements are not homogeneously distributed over the period: if we set aside the conflicts involving third parties, the nature of which is specific and independent from either the regulation or the ongoing regime, 66% of the judgements occurred between 1923 and 1951 against 12% between 1952 and 1986, and 22% between 1986 and 2001;

- Until 1951, the CE settled as many conflicts as before but the origin of the conflicts changed: whereas before 1923, municipalities were in most cases at the origin of the CE’s intervention, operators are those who conducted the greatest number of cases. From 1952 to 1985, the CE settled very few conflicts and none of its judgement was a pivotal decision. In recent years, the number of CE decisions has highly increased and the nature of conflicts is so new that almost each decision could be considered as pivotal.

2. The CE decisions over the period 1923 - 1951

In the beginning of the period, the Concession contract lost main of its substance, and most of the municipalities started to finance water supply facilities on their own. The Concession contract slipped progressively into an Affermage (lease) contract in which the operator responsibility is limited to the operation of the facility erected by the municipality.
The price cap regulation continues however to dominate the water supply industry and operators’ services were still remunerated through a fixed price scheme agreed upon *ex ante* and deemed to be valid until the end of the contractual period. At a time of significant changes and increased volatility in price, the price cap regulation made the operators bear significant risks and pushed them to claim a revision of their compensation scheme in an attempt to preserve the profitability of their contracts.

Over the period, the decisions of the CE paved the way to a significant change in the regulation of the water supply industry.

1. The CE recognises the incompleteness of service contracts\(^3\)

The cost inflation affecting among others commodity price and labour cost after the First World War threatened the economics of the water supply contracts. Aware of the increased volatility of costs, the CE modified its position and began to accept that operators be compensated for unforeseen events affecting their profit and loss statement. The CE practically ordered price cap revision for taking into account labour cost and/or coal price increase.

This new jurisprudential wave is known as the *théorie de l’imprévision* (theory of unforeseen events). An operator who can bring evidence that unforeseen contingencies (1) have raised input prices above what was reasonably predictable and (2) that these contingencies constitute a serious threat on the contract economics may obtain from the CE a compensation. This compensation may take in practice two forms, either a subsidy from the municipality or a rate increase.

2. A cost-of-service regulation generalises\(^{\text{xi}}\)

Following the theory of unforeseen events, the CE has progressively recognised the right for an operator to obtain a fair rate of return from its operating activity. Municipalities were therefore invited to adapt rate periodically based on a fair assessment of the entrepreneurs operating costs. A cost-of-service regulation took progressively the place of the old price cap regulatory framework. The obligation for the municipality to enable the operator to balance its budget also prevails when the operator undertakes useful improvement works even if those works were not stipulated in the contract.

3. The CE may modify contracts substantially (step in right)\(^{\text{xiii}}\)

Whereas in the past, the CE invited systematically the Parties to negotiate any amendment to the contracts, it started to curb and modify certain contractual clauses in the name of general and, to a certain extent, transcendent principles (*principes généraux du service public*) such as:

- the obligation for the municipality to provide, on an equal and non discriminating basis, a general and permanent access to drinking water to end-users (*principe d’égalité de traitement des usagers*);
- the obligation for the municipality to guarantee the continuity (in the sense of non-interruption) of access (*principe de continuité du service public*);
- The obligation for the municipality to improve water access continuously and in particular to adapt to technical progress (*principe d’adaptabilité du service public*).

4. The CE sees the “private” water service as an extension of the “public” water service\(^{\text{xiii}}\)

Water supply started to be considered by the CE as an essential facility (un service public). Therefore, the distinction between “private” water and “public” water lost progressively most of its meaning. The same general conception inspired the settlement of conflicts regarding “private” water affairs and the settlement of conflicts regarding “public” water affairs.

3. The CE decisions over the period 1952 – 1985

The sub-period 1952 – 1985 is a period of rapid expansion of the Affermage regime. In 1951, the administration issued a standard contract both for the Concession and the Affermage contracts.\(^{\text{xiv}}\) As far as the Affermage contract is concerned, the standard contract states that:
• The operator is selected on an intitut personae basis. No formal bidding process is required;
• The operator operates the water facilities in behalf of the municipality;
• The operator acts as the municipality’s engineer for the design of any erection or extension of water facilities;
• The operator also acts as general contractor for the construction of water facilities. He may select subcontractors without organising any bidding contest;
• The construction and extension of the water facilities are financed by the municipality. The municipality is free to recover its investment costs through charging consumers or using municipal proceeds;
• Rates are periodically renegotiated on a bilateral basis between the municipality and the operator.

Surprisingly, the CE has not been seized to settle any conflict opposing a municipality and an operator committed in an Affermage contract.

We might expect that the Affermage regime, which splits responsibilities and allocate investment decisions to one party (the municipality) and operating decisions to another one (the operator), be a quite conflicting arrangement.

When decisions regarding investment and operations are being split, it is pretty obvious that optimality will not be reached. The investing party tries to minimise its investment with a risk of inflating operating costs and, conversely, the operating party tries to obtain equipment redundancy in order to minimise its subsequent effort and costs. Therefore, we should expect to see plenty of conflicts and subsequent CE’s decisions.

We believe that these potential conflicts which might have arisen were pre-empted by the provisions of the standard Affermage contracts, which gives the operator a substantial role in the design and the construction of the facility he is committed to operate. The fact that the burden of the investment laid on the municipalities’ shoulders, another major cause of potential conflicts, did not play due to municipalities’ soft budget constraint in that period. Municipalities benefited during that period of cheap financing from the State and/or stated own financial institutions and had no outstanding debt at that time. They were therefore in a position to finance without any limit water supply facility extension and play their role of service public providers without even charging end-users.

These different elements allowed the deployment of a rent sharing scheme favourable to any parties: municipalities were in their role of developing local infrastructures; operators were in a position to sell construction and operation services at quite attractive rates; consumers got drinking water at very low rates (those ones covering only the operating costs of water services).

4. The CE decisions over the period 1986 - 2001

At the beginning of this last sub-period, very large cities shifted from the Régie to the Affermage. In 5 years, the privately operated water services supply 8 millions new consumers. The Régie survives: 10,000 out of 15,000 water services are publicly operated but they only supply 20% of the population.

This significant shift comes with substantial water rate increase and happens in a context characterised by:

• The suppression of standard contracts (Concession and Affermage);
• The end of the administrative control that was backing up the municipal control over the privately operated water services rates;
• The end of the retail price control that capped inter alias the water rates to the inflation rate growth from 1978 to 1985;
• Important financial needs to renew the cities networks;
• The end of the dedicated allocation regime of State funding: the municipalities are free to allocate the State funding according to their local priority;
• A municipal financial crisis.
This trend is followed by many conflicts that reflect the confusion of consumers and outline the lack of privately operated water services regulation.

For the first time ever, the consumers prosecute the water service owners and operators. They suspect the municipalities and the operators to collude and agree on rate increase. Consumers also claim from the CE to break Affermage contracts that were not awarded following a formal bidding process.

It should be noticed that before 1993, the CE considered that:\(^\text{xv}\):

- Operators should not be selected according to a bidding process;
- When a municipality shifts from a Régie to an Affermage, it is entitled to negotiate an up-front fee with the operator;
- The municipality is also entitled to receive an annual fee from the operator. That fee may be included in the costs on which water rates are based;
- Conversely, water rates should not be used to cross-subsidize other municipal services;

After 1993, the CE settles this kind of conflicts in a very different way. It founds its judgments on a series of laws voted in 1993 and 1995 which aim at introducing a competitive process for the award of water service contracts and the construction of privately operated water service’s facilities.

From 1993, the CE has considered that:\(^\text{xvi}\):

- Municipalities should not receive any up-front fee from operators when signing a contract
- The annual fee should be proportionate to the size of the water service;
- A consumer and/or an unsuccessful bidder is entitled to sue a municipality that did not comply with the bidding procedure for contracting out the operation of its water service;
- A subcontractor is entitled to sue an operator that did not comply with the bidding procedure or did curb competition in favour of one of its affiliates.

Finally, the 1995 laws entrust the administration the duty to support municipalities in their control of their contracted out services. In 1998, the CE settled a conflict between an operator and one of the 21 chambres régionales des comptes (regional entities in charge of auditing the financial statements of public bodies) and set that:\(^\text{xvii}\):

- A chambre régionale des comptes is entitled to audit the financial statements of a privately operated water service;
- In that respect, the privately operated water service is deemed to be a party of the municipal administration;
- The chambre régionale des comptes has not to justify its decision to launch an investigation to anyone.

**Conclusion**

The CE jurisprudence reveals that the water supply has been successively regulated through a price cap and a cost-of-service frameworks. The CE jurisprudence also reveals that the CE is the only one whose decisions lead to shift from a regulatory framework to another one.

The State has never undertaken to reform the water supply industry regulation. It has rather focused on the institutional framework whether it standardised it or improved it by introducing a competitive process for the award of water service contracts.

The development of water companies in France comes from:

- the position of the CE that constantly consists in protecting the entrepreneurs’ rights against the public field which is inclined to expand unlimitedly;
the position of the State that never prevents the municipalities from contracting-out their water services, in particular after the Second World War, when it became obvious that the municipalities were not reluctant to cooperate in order to operate their Régies on a larger scale than the municipal territory.

Over the whole period, the municipalities have selected different regimes that mirror their vision of what should be a water service.

In the nineteenth century, "private" water was a luxury whereas "public" water was the best way to improve public health. The municipalities chose to concede their water services: they gave the concessionaires the exclusive right to supply end users as a compensation to finance and build public water networks. From 1900 to the late seventies, the municipalities envisioned "private" water as a service that everybody must be provided with. They chose the Régie and the Affermage, both of which entitled the municipalities not to charge consumers with investment costs. Since thirty years, the time of building new water networks is over. Time is now to renew them. The municipalities have decided that these investments would be financed by consumers through their water bills. Most of municipalities gave up the Régie in order to share with the operators the responsibility for increasing rate. Hence, the improvement of the cost-of-service regulation has become the new target. The question is no longer how to connect everybody as fast as possible but how to ensure the municipalities are able to regulate their operators properly.

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1 These 189 judgements are listed in annex A.
2 By third party, we mean individuals or corporations who claims after their goods or properties has been damaged by a water supply facility while its erection or during its operation.
3 The judgements which underline the completeness of the Concession contract are listed in annex B.
4 The judgements in which the CE invites the Parties to negotiate amendments are listed in annex C.
5 The judgements which outline that the initial terms of the contract serve as a status quo point are listed in annex D.
6 The judgements in which the CE sets these restrictions over this period are listed in annex E.
7 The judgements that underline the concessionaires' authority upon the "private" service rate and the profit sharing scheme are listed in annex F.
8 The judgements in which the CE settled the conditions of premature ending contracts are listed in annex G.
9 The judgements that provide us with evidence on the municipalities' funding position during this period are listed in annex H.
10 The judgements in which the CE recognises the incompleteness of the contracts are listed in annex I.
11 The judgements in which the CE recognises the right for an operator to obtain a fair rate of return are listed in annex J.
12 The judgements in which the CE modifies contractual clauses in the name of the service public principles are listed in annex K.
13 The first decision in which the public water service is defined as including the former private water service is the decision # 115, in 1934.
Décret n°47-1554 du 13 août 1947 pour le cahier des charges type pour la concession d'une distribution publique d'eau et décret n°51-259 du 6 juillet 1951 pour le cahier des charges type pour l'affermage d'une distribution publique d'eau.

The concerned decisions are listed in annex L.

The concerned decisions are listed in annex M.

Decision #184.