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# The Highway Concession System in Italy

History, Regulation and Politics

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## Abstract

This paper contains a critical discussion of the opening of the highway concession to the private sector in Italy over the past 20 years. It describes the political context, legal mechanisms and regulatory settings; offers an analysis of the changes in the equity composition of concessionaires after the introduction of public-private partnerships, quality standards, and tariff dynamics; and provides

some examples. The Italian experience reflects the typical problems of the “build-now-regulate-later” approach recognized in the highway public-private partnership literature. The Italian model is also characterized by the existence of an overly complex regulatory framework, as well as the lack of a single agent in charge of contract enforcement and independent data collection.

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**The Highway Concession System in Italy:  
History, Regulation and Politics**

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[nlimodio@worldbank.org](mailto:nlimodio@worldbank.org) I thank Eduardo Engel, who provided encouragement and intellectual guidance for this research. My thanks are also due to Marco Ponti, Jean-Jacques Dethier and Guido M. Rey for comments and ideas. All errors are my own.

## Introduction

In 1992 the Italian Parliament passed a reform that allows the Inter-ministerial Committee for Economic Programming (*CIPE-Comitato Interministeriale di Programmazione Economica*) to revise fully the highway concession system and broadly the transport related programs. The reasons can be clarified by the name of this law: “Urgent intervention on public finance.”<sup>2</sup> In fact, both the 1992 Italian financial crisis and the signing of the Maastricht Treaty had put the government under severe stress to cut public debt and privatize its companies.

However, by itself this law did not grant the possibility for private companies to run highways as concessionaires. Between 1992 and 1997, the agent in charge of highway creation and management was still the government: either through the National Street Enterprise, ANAS (*Azienda Nazionale Autonoma delle Strade*), which is 100 percent owned by the Ministry of Economy and Finance (*MEF*), or through Autostrade, which was owned by the Italian Reconstruction Institute (*IRI*), a gigantic public holding, which was itself controlled by the MEF.

In addition to the need to cut public debt, in the mid-1990s the government had to react against a 20-year ban<sup>3</sup> on highway construction, which had moved Italy away from its innovative transport policy stance of the 1970s and caused a dramatic infrastructure constraint. Figure 1 reports the evolution of the highway network of four large European countries (Germany, Italy, France and Spain).<sup>4</sup> We can see that although in 1970 Italy had the second largest network in kilometers, its infrastructure capacity stagnated from 1978 onward, while the other European countries achieved impressive gains. Therefore, the necessity to cut public expenditure and the need for new investments were the two fundamental reasons behind the opening up of concessions to private companies in the highway sector. As Carlo Azeglio Ciampi, Treasury Minister between 1996 and 1998 and President of the Republic from 1999, reported in a meeting at the Italian Parliament in 1997: “*the fundamental objectives of our privatization program are two (...) first of all, (...) to enlarge, reinforce and modernize the Italian market (...) secondly, the privatization program is aimed at reducing public expenditure and the stock of national debt.*”<sup>5</sup>

For this reason, in 1999 the largest highway concessionaire, Autostrade, managing more than 40 percent of the total national network, was sold for 7 billion euros (2.5 from a private group, Atlantia, and 4.5 from the share market) with a 40 year concession<sup>6</sup> and opened the way to further initiatives. In fact, between 1999 and 2006 more than 64 percent of the existing Italian highway network was auctioned to private companies, with two main private groups dominating the market, as Figure 2 shows.

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<sup>2</sup> Law 498/92 available in Italian only at <http://pa.leggiditalia.it/>

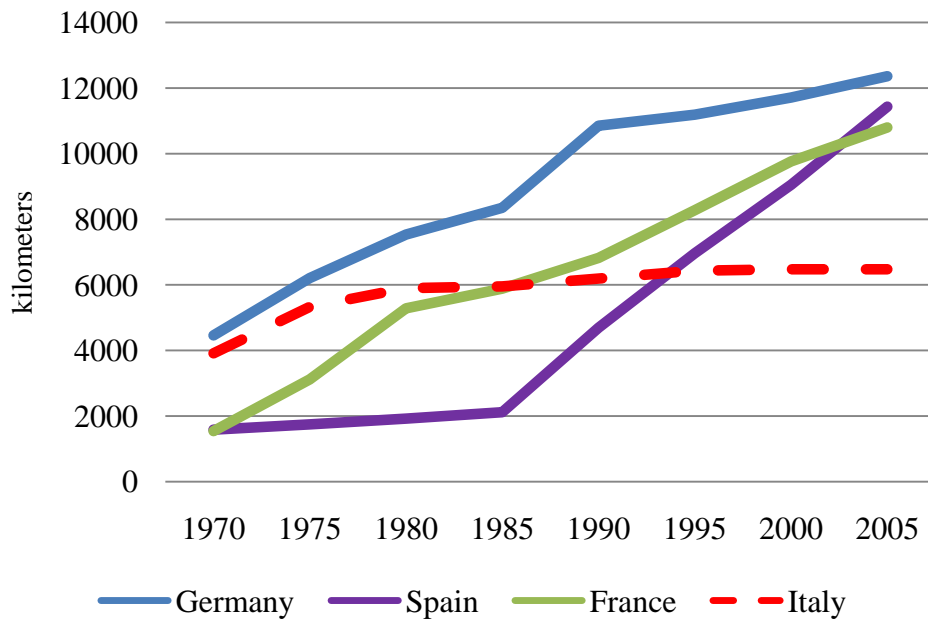
<sup>3</sup> Article 18bis of Law 492/75 which states that: “*it is also suspended the construction of new highways or part of them or tunnel for which a tender has not been issued yet*”(...è altresì sospesa la costruzione di nuove autostrade o tratte autostradali e di trafori di cui non sia stato effettuato l'appalto).

<sup>4</sup> Transport section on the online European statistical database, Eurostat, [http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search\\_database](http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database)

<sup>5</sup> Source: Audizione sulle privatizzazioni alle Commissioni riunite Bilancio Finanze Attivi” available on the Treasury Ministry website <http://www.tesoro.it/documenti/documento.asp?idd=3718#> . The reported quotation is the following: “l’attività di dismissione del patrimonio pubblico rappresenta uno dei passaggi fondamentali nello sforzo del Governo per l’ampliamento, il rafforzamento, e la modernizzazione dei mercati (...) in secondo luogo il programma di dismissioni è legato all’obiettivo del contenimento del fabbisogno pubblico e dello stock di debito”.

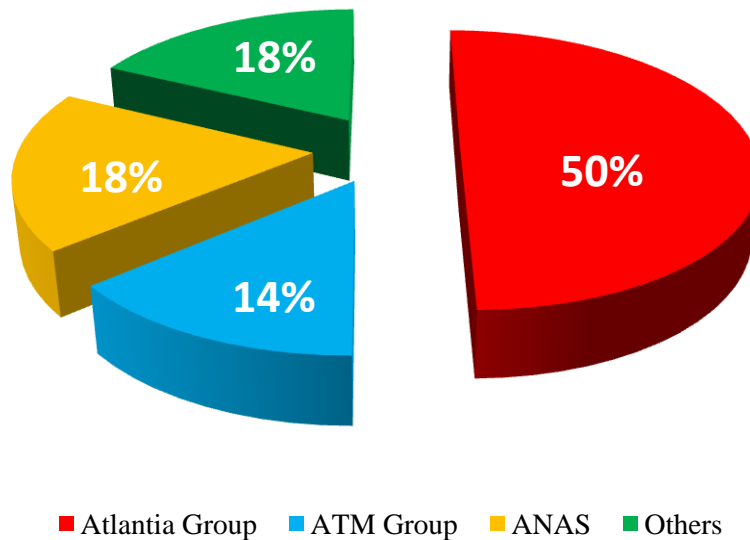
<sup>6</sup> See <http://ricerca.repubblica.it/repubblica/archivio/repubblica/1999/10/21/privatizzazione-autostrade-volata-solitaria-di-benetton.html>

Figure 1: Highway Network Size, by Country



Source: Transport section of the online European statistical database, Eurostat.

Figure 2: Highway Sector Market Structure



Source: Benfratello et al. (2006): others refer to highways managed directly by public authorities at the national or regional level.

## How Does the Highway Concession System Work?

The Italian legal public-private partnership (*PPP*) framework has evolved erratically over the years. Several laws have attempted to find a balanced position regarding the regulation and incentives between the parts (concessionaires and the state), but without much success. Only in 2006 were the legal principles regarding the infrastructure concessions grouped in Law 163/2006, which gave birth to a definitive act. The creation of a highway concession requires four steps. The first step involves adjudicating the concession via a competitive auction called by a region or ministry.<sup>7</sup> The second step involves an evaluation of the call by the technical body of the CIPE (*NARS - Nucleo di consulenza per l'attuazione delle linee guida sulla regolazione dei servizi di pubblica utilità*). Third, the CIPE and the Parliament need to approve it. And fourth, the highway concession is ready to start.<sup>8</sup> ANAS is required to supervise the respect of the concessionaires' contract and pass important information to the Ministry of Infrastructure and Transportation (MIT). In case the concession is not respected, the law imposes to ANAS the contract enforcement, either with formal warnings or with fines ranging between 25.000 and 150 million euro. Such fines are deliberated by a committee appointed by the President of ANAS, which has to inform the MIT of any decision and develop a detailed report which is due to the concession provider and franchiser. In addition to these, ANAS can propose to the MIT to suspend or stop the concession should the franchise holder fail to meet its obligations and temporarily replace the concessionaire by managing directly that particular highway.

**Box 1. A one million euro fine.** In December 2005, ANAS fined the concessionaires of the highways "A6" (Torino-Savona), "A26" (Voltri-Gravellona – Toce) and "A 7" (Milano-Genova) a total amount of one million euro.<sup>9</sup> The reason for the most important fine ever issued by ANAS was the break of the concession contract: at the beginning of December a remarkable snowfall had blocked the three highways, and the franchise holders were unable to implement an effective recovery plan. In fact, despite a “highway blockage” issued by ANAS, not only had these groups not placed any significant restriction against trucks (the most sensitive and potentially dangerous means of transportation involved), but they had also allowed cars to enter the highways, although they were impossible to navigate, and did not provide an alternative route. In addition to these problems, most of the concessionaires were incapable of offering assistance to passengers, many of whom were stranded in their cars and surrounded by snow. For all of these reasons, ANAS pledged to avoid such poor service in the future.

By law, the highway concession is assigned via an open, competitive auction in which the competitors are guaranteed with a *fidejussione*, which is a bond stating the financial responsibilities of the concessionaire and generally covering 2 percent of the contract.<sup>10</sup> There are also other requirements, such as registration for building companies (*iscrizione all'ordine professionale*), quality certificates (*UNI EN ISO 9000* etc.) and other technical criteria (experience, previous contracts, number and qualification of its labor force). The auction selection principle is either that of the lower price or the most convenient offer criterion (*criterio dell'offerta economicamente più vantaggiosa*) established through an index of different parameters (price, quality, technical implementation, aesthetic and functional characteristics, environmental impact, etc.). The variables and weights in this index are specific in each auction and can change according to the preferences of the concession provider. However, in each auction, there must be a broad classification between

<sup>7</sup> The public authority responsible for the concession varies according to the relative importance of the infrastructure. In fact, the Italian Constitution regards infrastructures as a matter of joint responsibility and as a result the so-called strategic national infrastructure (*Grandi Opere*) is managed at the national level, while infrastructure important at the regional level is managed by decentralized authorities (or ANAS), as are the concessions.

<sup>8</sup> This procedure is explained in articles 82, 83 and 84 of the Italian Law D.L. 262/2006.

<sup>9</sup> <http://ricerca.repubblica.it/repubblica/archivio/repubblica/2005/12/28/autostade-multa-milionaria.html>

<sup>10</sup> By law, if a company presents quality certificates, such as UNI EN ISO 9000, it can be allowed to participate in the auction with a 1 percent fideiussione.

qualitative and quantitative elements; each can contain specific sub-criteria, but their sum must be 100 and each must be weighted between 40 and 60 percent.

**Box 2. Bidding variables in different auctions.** Most general principles but only few rigid criteria of the auction mechanism are defined by law. For this reason, regional authorities are empowered to shape the *bando di gara* (call for concession) according to their own specific requirements. We will compare two calls and show the differences in the criteria introduced and the relative weights given to each. The two calls are for the same type of contract (build-operate-transfer, *BOT*) in two close regions (Lombardy and Veneto) and at similar times (2007 and 2006 respectively). Although the total investment considered by the concession is high in both cases, there is a substantial difference in degree (780 million and 2.5 billion euros) and an even more surprising difference in the bidding variables and their weights.

Table 1: Bidding variables and relative weights in the two auctions<sup>11</sup>

Lombardy BOT	Sub-criteria	Points	Veneto BOT	Sub-criteria	Points
	<b>Qualitative elements</b>	40		<b>Qualitative elements</b>	40
	<b>Quantitative elements</b>	60		Quality of raw material and material duration	(15)
	Price	(35)		Environmental and aesthetic characteristics	(10)
	Building time	(15)		Project management	(10)
	Amount of initial private financing	(10)		User safety characteristics	(5)
				<b>Quantitative elements</b>	60
				Duration of free-of-charge access for residents in the local area	(10)
				Building time	(8)
				Amount of public subsidy in the capital account	(21)
				Amount of public subsidy in the current account	(21)

<sup>11</sup> The two auctions are classified as 2007/S 137-168844 for Lombardy and 2006/S 205-218224 for Veneto. The calls are available at the TED (Tenders electronic daily) supplement of the Official Journal of the European Union at the following webpage <http://ted.europa.eu/>

*Source: TED (Tenders electronic daily). Supplement of the Official Journal of the European Union.*

In these two auctions, we can perceive how much freedom the law provides regional administrations and at the same time how general or strict their auction requirements can be. In fact, although in both projects the quantitative and qualitative weights are assigned equally, the sub-criteria are very specific and binding for the competitors in Veneto, while the same sub-criteria are fairly general in the case of Lombardy, in which only the main variables are cited and the competitors are free to elaborate on different projects. In this case, we can clearly distinguish between a highly regulatory and a more operational approach to the concession call.

## Highway Concessions

Fifteen highways were concessioned after 1999 and currently 4,359.4 km of the 6,825.3 km national network are under concession to two private groups. These are Atlantia, headed by the Benetton family and grouping several Italian banks and entrepreneurs, and the Atm holding, headed by the Gavio family and grouping other private companies. These two manage, respectively, seven and eight highways each, although Atlantia is by far the largest company, as it has been controlling the whole Autostrade group since 1999 (which by itself includes concessions on 2,854.6 kilometers) and automatically obtained a dominant position in the market.

Each highway concession is managed by a specific on-purpose-created company. This is part of the larger group, either totally or partially because other private or public companies own its shares. Table 2 reports the average equity composition of the companies managing the highway concession and distinguishes between the shares possessed by the main group (the group column), those possessed by the regions or other national authorities (ministries or sub-regional ones), by ANAS or by public or private agents that own some shares but do not enjoy any decision-making power. The figures in Table 2 are reported both for the year 1992 (before the concession, when every highway was publically managed) and for 2005 (when 64 percent of the network was concessioned).

Table 2: Average equity composition and concessionaire network.

Concessionaire (concessions)	Network in km	Average % ownership in 2005				Average % ownership in 1992			
		Group	Regions	ANAS	Other	Group	Regions	ANAS	Other
<b>Atlantia Group (7)</b>	3402.3	74.3	6.7	0	0.8	67.7	6.9	14	3.9
<b>Atm Group (8)</b>	957.1	74.5	14.9	4.5	0.3	12.7	37.6	5	2.52
<b>Direct Public Control (7)</b>	1252.8	0	81.8	0	14.3	0	82.7	0	3.3
<b>ANAS</b>	1213.1	0	0	100	0	0	0	100	0

*Source: Benfratello et al. (2006). Group refers to the concession holder; regions refer to regional and other local public authorities involved in the highway ownership; ANAS is the public company managing highways and other public streets owned 100 percent by the Ministry of Economy and Finance; and other refers to*



*share ownership by a private group, a region or ANAS, which does not involve control over the management. The remaining percentage of ownership is on the share market.*

It is surprising, yet not unexpected, that since 2005 there have been average equity composition changes only for auctioned highways. The private groups have reinforced their control and significantly dismantled the presence of the public authority at the regional/direct public level, and especially have phased out ANAS. The reasons for this move are to be found in the private concession mechanism, but also and mostly in the new power of ANAS. It is still a fully public company, yet ranges from highway management to control, tariff regulation and contract enforcement. In fact, up to 1999, ANAS was mostly managing highways. But after the beginning of the concession system, it also acquired the role of regulatory agency under the total share control of the MEF and the technical and operational control of MIT.

**Box 3. The Auction of Autostrade, the Italian Mass Concession.** Autostrade was a group held by a gigantic public holding, IRI, enjoying a traditional concession on more than 40 percent of the national highway network. The so-called “privatization” of Autostrade occurred in several steps. First the Parliament passed a law creating a 40-year concession to Autostrade.<sup>12</sup> Then IRI issued a call to sell Autostrade. And finally, after the sale, IRI was dismantled and its resources were transferred to the MEF. The call to sell Autostrade was structured as follows: 70 percent of its shares would be sold on the public stock market to individuals and 30 percent to an individual group (*nocciolo duro*) through a private negotiation. Ten groups participated in the auction of Autostrade: Edizione Holding, owned by the Benetton family and some Italian banks (who later became Atlantia group), the Spanish highway private company Acesa, the Portuguese highway company Brisa, the Gavio group (which controlled the ATM group previously cited), the Australian bank Macquarie, the McDonald’s group, two English private equity funds and three other individual companies.<sup>13</sup> The MEF selected Macquarie Bank and the Benetton group and allowed them the due diligence,<sup>14</sup> choosing the Italian group because of the comparatively more convenient last offer. The plan of government regulators forecasted a large private group listed and traded on the market, with broad control over its investments and a massive dividend-redistribution scheme to numerous small shareholders. This failed in a few years, as in 2003 the Benetton group launched a tender offer on the remaining 70 percent of traded shares, quickly passing from 30 to 50.1 percent and establishing total control over the company.

Has the concession to private groups increased highway quality? Although it may be difficult to fully measure this claim, there are some proxies that can be studied and seem to confirm a significant rise in quality and safety standards. If we refer to maintenance expenditure, Figure 3 seems to suggest that the highway management has improved, as between 1999 and 2004 both mean and median expenditure on the whole network was much higher than before 1999.

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<sup>12</sup> This law and its application have created problems because the independent public authorities dealing with National Accounts (Corte dei Conti) and competition (Antitrust) rejected it and were forced by the Parliament to accept a prolonged concession. For reference refer to:

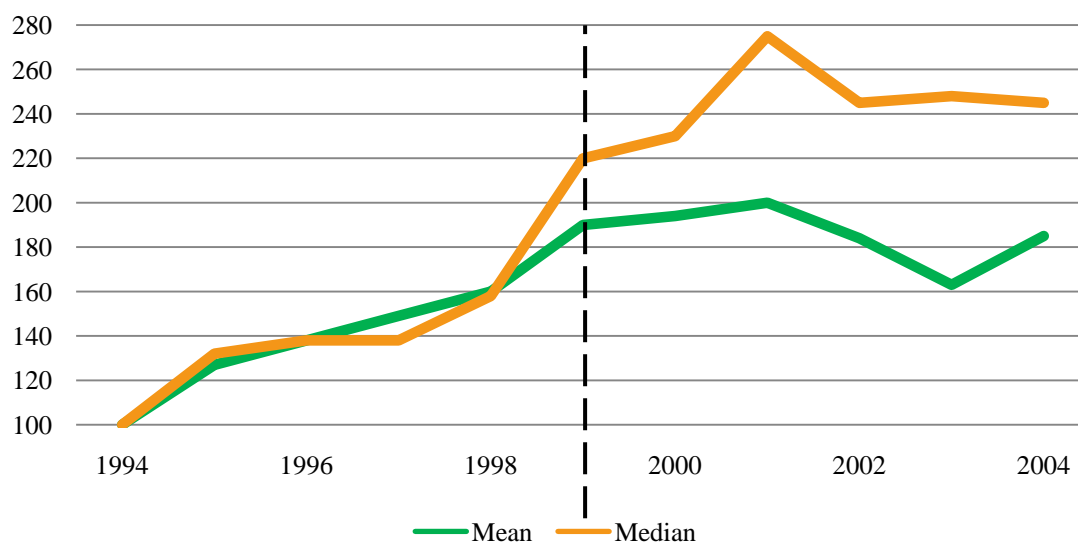
[http://archiviostorico.corriere.it/1998/giugno/02/Autostrade\\_Antitrust\\_campo\\_co\\_0\\_98060211313.shtml](http://archiviostorico.corriere.it/1998/giugno/02/Autostrade_Antitrust_campo_co_0_98060211313.shtml)

[http://archiviostorico.corriere.it/1998/febbraio/18/Autostrade\\_vendita\\_accelera\\_co\\_0\\_9802185056.shtml](http://archiviostorico.corriere.it/1998/febbraio/18/Autostrade_vendita_accelera_co_0_9802185056.shtml)

<sup>13</sup> <http://ricerca.repubblica.it/repubblica/archivio/repubblica/1999/07/30/corsa-dieci-per-autostrade.html>

<sup>14</sup> <http://ricerca.repubblica.it/repubblica/archivio/repubblica/1999/10/19/autostrade-domani-la-scelta-dell-iri.html>

Figure 3: Maintenance Expenditure<sup>15</sup>



Source: Benfratello et al. (2006). The base year for the two series is 1994=100.

In 2007, Autostrade released a report in which several quality and safety indicators were analyzed, in order to quantify the private concession's effect on the service improvement. With the sole exception of the mortality rate, which refers to the whole highway system, the other variables are specific for the Autostrade concessionaire. We can generally affirm that the quality of infrastructure has increased, because all variables included show a remarkable variation between 1999 and 2005. However, because there is no independent report measuring the same variables or including quality-oriented indexes, final judgment on the matter must be suspended.

Table 3: Quality and Safety Indicators for Autostrade Group<sup>16</sup>

Variable	Unit	1999	2005	2006
<b>Mortality rate</b>	Death/100 Mln km	1.1	0.60	0.60
<b>Draining paving</b>	Mln m <sup>2</sup>	2.6	9.4	13.5
<b>Network cover with draining asphalt</b>	% total km	16%	55%	69%
<b>Median strip (annual substitution)</b>	km	0	76	300
<b>Network cover with qualified median strip</b>	% network	55%	66%	76%
<b>Electronic information panel at entrance</b>	Number of total panels	102	323	401
<b>Electronic information panel on</b>	Number of total panels	151	326	355
<b>Call-center mobility dedicated line</b>	Number of lines	12	120	120

Source: Autostrade, 2007, page 21.

<sup>15</sup> Source: Benfratello and al, (2006), the base year for the two series is 1994=100.

<sup>16</sup> Autostrade, 2007, page 21.

But assuming some quality improvements in the system, at what cost did they occur? There are different views about this claim. On the one hand, a large number of customers complain of the steady tariff increase and attack the concession system as a way to extract a rent from a natural monopoly: many consumer associations claim an “unacceptable tariff explosion.”<sup>17</sup> According to Marco Ponti, former member of NARS, “there has been clamorous abnormal profits” and in an interview in the newspaper “La Repubblica” in 2003, he claimed that customers have been “shorn like flocks of sheep”<sup>18</sup> (alluding to the fact that the Benetton family is mostly involved in textiles). Because of this statement, Ponti was sued by Autostrade for 10 million euros and forced to resign; public opinion paid a lot of attention to this event. This happened also because it reflected a struggle in the government:<sup>19</sup> on the one hand, the MEF was softly supporting Ponti’s view and asking for a tariff system reform; on the other hand, the MIT favored Autostrade and a softer mechanism. In the end, the MIT won and especially its Minister, Pietro Lunardi. (Box 4 explains why this might not be negligible).

**Box 4. A Minister, a Tunnel and a Company.** In 2002 the former Minister of Infrastructure and Transportation, Pietro Lunardi, was involved in an investigation for tender manipulation (*turbativa d’asta*) in a concession for the reorganization of Monte Bianco tunnel.<sup>20</sup> This route was considered to be particularly dangerous because of fragile safety standards. For this reason, the contract aimed to prevent further accidents and effectively restructure the tunnel. The tender had attracted two companies: Scetauroute-SPEA, part of the Autostrade group, and Rocksoil, owned and managed by Lunardi, through its family. SPEA won the tender but sub-contracted the largest part of the design and implementation to Rocksoil. The CEO and technical chief of the local concessionaire RAV (*Raccordo Valle d’Aosta*), Vincenzo Pozzi, supervised the project and agreed on its operational execution, including the cost explosion (+50 percent with respect to the original contract), which was supported by Lunardi himself (as Minister and President of the technical commission on the disasters in the tunnel). As four MPs declared in a parliamentary session in 2001,<sup>21</sup> the cost increase was largely responsible for an enormous increase in the remuneration of SPEA and especially Rocksoil. What is more, after two years, Mr. Pozzi was nominated by the Ministry of Infrastructure and Transportation Lunardi (in agreement with the MEF) Emergency Commissar of ANAS,<sup>22</sup> who replaced the previous president and took his responsibilities in supervising concession contracts, their implementation and execution until a new president was designated. This generated multiple conflicts of interest: Pozzi was head of the institution (ANAS) that was supposed to direct and control the private company he was managing (RAV); Lunardi had appointed the president-in-chief (Pozzi) of the institution (ANAS) that should have supervised and eventually denounced his own company (Rocksoil) for the inexplicable relations with SPEA; and, last but not least, Autostrade directly participated in the business of the Minister (Lunardi), who had the most important role in choosing between alternative highway tariff systems, which would directly involve Autostrade. Although Lunardi was neither investigated nor sentenced for any crime, this event shows the

<sup>17</sup> [http://www.tuttoconsumatori.it/archivio/2009/12/autostrade\\_adus\\_1.shtml](http://www.tuttoconsumatori.it/archivio/2009/12/autostrade_adus_1.shtml)

<sup>18</sup> <http://ricerca.repubblica.it/repubblica/archivio/repubblica/2003/10/22/ai-caselli-delle-autostrade-utenti-tosati-come.html>

<sup>19</sup> <http://ricerca.repubblica.it/repubblica/archivio/repubblica/2003/01/25/autostrade-il-cipe-si-spacca-sulla-revisione.html>

<sup>20</sup> <http://ricerca.repubblica.it/repubblica/archivio/repubblica/2002/02/13/sottinchiesta-il-ministro-lunardi-per-gli-appalti.html>

<sup>21</sup> Minutes of the Italian Parliament meeting number 059 on the 05/11/2001,

[http://www.parlamento.it/japp/bgt/showdoc/frame.jsp?tipodoc=Resaula&leg=14&id=00008977&part=doc\\_dc-allegatob\\_ab-sezionetit\\_icdrds&parse=no&stampa=si&toc=no](http://www.parlamento.it/japp/bgt/showdoc/frame.jsp?tipodoc=Resaula&leg=14&id=00008977&part=doc_dc-allegatob_ab-sezionetit_icdrds&parse=no&stampa=si&toc=no)

<sup>22</sup> Mr. Pozzi was appointed Commissar of ANAS, because in so doing the Parliament would not vote on its nominee (newspapers report that the Parliament was against this candidate also because of the pressure Lunardi had placed on the previous President to resign). In fact, the Law imposes that the President of ANAS to be chosen between the MEF and MIT, in accordance with the Parliament.

[http://archivistorico.corriere.it/2001/ottobre/19/All\\_Anas\\_commissario\\_Lunardi\\_rivolta\\_co\\_0\\_011019652.shtml](http://archivistorico.corriere.it/2001/ottobre/19/All_Anas_commissario_Lunardi_rivolta_co_0_011019652.shtml)

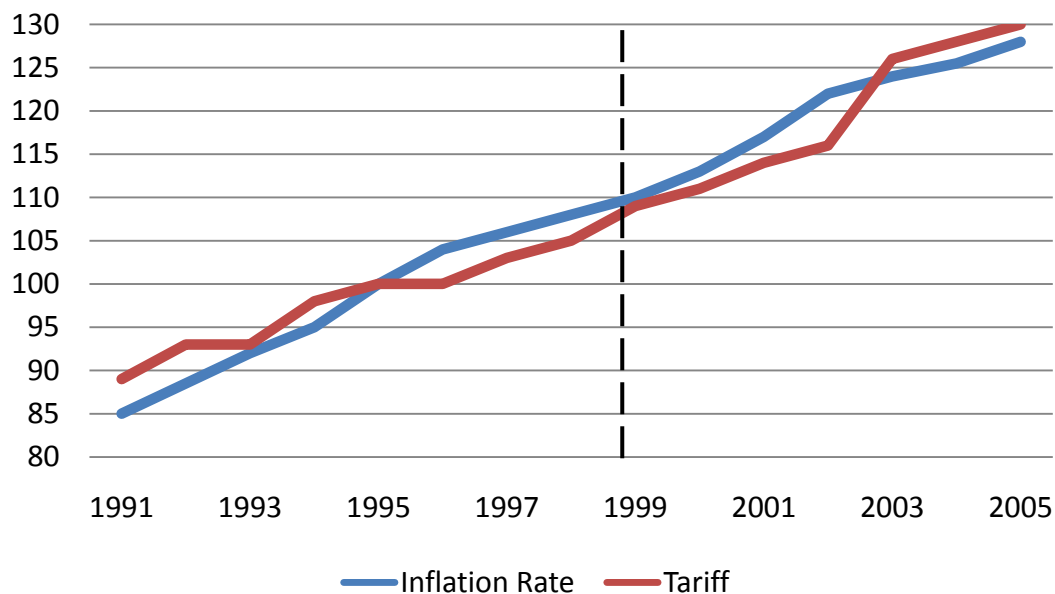
fragility of the mechanisms governing public sector works and the difficulty in controlling for multiple conflict of interests.

Concessionaires led by the Autostrade group try to block any government intervention aimed at the introduction of a more harmonious tariff system. In 2006 Autostrade provocatively threatened to sue the government and ask for compensation in case a new tariff law would be enacted.<sup>23</sup>

Nevertheless, statistical data on this subject are less univocal. As Figure 4 shows, the evolution of the tariff before and after 1999 (the dotted line) does not seem to show a significantly different trend, although from 2003 onward tariffs seem to be growing more than inflation.

However one possible explanation may be given for the “tariff rage” of both concessionaires and users. Before 1999, tariffs were linked to the highest one imposed by Autostrade, so the whole network would have a nationally-fixed tariff system, either directly or through shadow-tolls. After 1999, a new system was introduced, which linked the tariff applied on each highway both to general aggregates (inflation) and to concession-specific variables (quality and productivity). For this reason, the geography of the highway tariff has evolved unevenly since 1999. This may also explain consumer aversion and the haste against the new concession system.

Figure 4: Tariff and Inflation Rate Evolution<sup>24</sup>



Source: Italian Statistical Institute, ISTAT. Inflation refers to variation in the consumer price index (CPI); the base year for the two series is 1995=100.

Other transport economists, such as Marco Ponti (Ragazzi and Werner : 2005), argue that highway tariffs should reflect the initial lump sum and maintenance costs, plus a minor remuneration for the operating company. In his opinion, the construction costs have been largely covered over the years and the current maintenance costs do not justify the current tariff level. Therefore, he supports the argument that tariffs should be significantly reduced.

<sup>23</sup> [http://archiviostorico.corriere.it/2006/ottobre/08/Autostrade\\_soci\\_rivolta\\_governo\\_ora\\_co\\_9\\_061008023.shtml](http://archiviostorico.corriere.it/2006/ottobre/08/Autostrade_soci_rivolta_governo_ora_co_9_061008023.shtml)

<sup>24</sup> Source: Italian statistical institute, Istat. The base year for the two series is 1995=100.

However, as Gian Maria Gros Pietro, President of Autostrade, reported in 2005, the average eurocent per kilometer tariff in Italy is the lowest both for trucks and cars among large European countries, and among the Italian highway concessionaires, Autostrade presents an average tariff well below the national level.<sup>25</sup>

### The Tariff System and the Price Cap

Each year the concessionaire can draw a proposal on its required tariff variation, which is communicated to the MEF and MIT, and discussed in the Inter-ministerial Committee for Economic Programming (CIPE) in which both the ministries sit. This body decides on the pricing system according to the following price-cap method:

$$\Delta T = \Delta P - X + \beta \Delta Q$$

which states that the percentage increase in that specific highway tariff ( $\Delta T$ ) is equal to the government planned inflation rate ( $\Delta P$ ) minus a productivity index ( $X$ ) to which is added a quality index ( $\beta \Delta Q$ ). The productivity index is determined specifically for each concessionaire every five years according to the expected productivity variation (linked to investments) and in order to guarantee the financial capability of the enterprise. The  $X$  determination is based on the following concessionaire-specific variables: a congruous capital remuneration based on the weighted average capital cost (WACC), future investment projects, productivity goals and expected demand (traffic). The quality index is determined weighing the average paving quality and an accident rate. These two variables are difficult to deal with: the former can only be evaluated holistically (defining quality with the material composition) and the latter is dependent on country-wide effects (number of police controls, alcohol sales, and speed regulation) not imputable to the concessionaire. Measurement of most of these variables is the responsibility of ANAS and other public institutions (MIT and police).

However, the taxonomy of highway tariff regulation is more complex. For example, the independent authority on market and competition (*Autorità garante della concorrenza e del mercato - Antitrust*) can intervene and has done so over the years. The same is true for the authority that oversees public contracts (*Autorità per la vigilanza sui contratti pubblici di lavori, servizi e forniture*). Other judicial bodies responsible for public expenditure control have been called in (*Consiglio di Stato* and *Corte dei Conti*) and even the European Commission Directorate on Competition had a say on the general tariff mechanism.

**Box 5. The Complicated Plan to Sell Autostrade.** The government plan to sell Autostrade started in the mid-1990s because of public finance constraints, but moved very slowly toward realization because of many legal incidents caused by the sophisticated regulatory system. The first stop occurred in 1996, when the MEF was forced by Law to ask the Administrative Supreme Council (*Consiglio di Stato*) whether for the Autostrade privatization to occur, a new independent authority was needed.<sup>26</sup> The *Consiglio di Stato* stated that there was no need for an independent authority or a golden share held by the government, if both MIT and MEF implemented regulation procedures and a hard-core of private shareholders stepped in. The *Consiglio di Stato* indication of a limited shareholder hard-core was aimed at the introduction of a large public shareholder group, which would have created external public control of the company; as the former President of ANAS, Giancarlo Valori, stated “*the introduction of a hard-core will prevent the sale to privates only keen on the financial convenience of the company.*”<sup>27</sup> Notwithstanding this, such a constraint

<sup>25</sup> For the discussion between Gros Pietro and Marco Ponti, refer to <http://www.lavoce.info/articoli/pagina1854.html>

<sup>26</sup> [http://archiviostorico.corriere.it/1996/settembre/06/ora\\_Iri\\_avvia\\_cessione\\_Seat\\_co\\_0\\_96090610973.shtml](http://archiviostorico.corriere.it/1996/settembre/06/ora_Iri_avvia_cessione_Seat_co_0_96090610973.shtml)

<sup>27</sup> <http://ricerca.repubblica.it/repubblica/archivio/repubblica/1999/07/02/autostrade-necessario-il-nocciolo-duro.html>

was not be respected, because prominent political figures agreed (or were willing not to create any judicial problem) in order to secure the Autostrade's largest shareholders. So in 2003 the initial hard-core shareholders expanded from 30 to 50.1 percent, eluding the fundamental mechanism meant by the *Consiglio di Stato* for its opening to privates. The second stop occurred in 1997 and was due to *Corte dei Conti*, which blocked the privatization for two reasons: the first was that by contract Autostrade (publicly managed) had a concession until 2018, but the ministerial measure under attack was both extending it to 2038 and implementing the privatization. The main point was that the expansion of the concession had to occur through a tender (at the end of 2018) and could not be imposed by a ministerial act (which in the Italian legal system is much less important than a law of parliament, which could have made it possible). The second point, which warned the *Corte*, was the introduction of a vast investment plan, for which no financial coverage was identified in the law and as a public finance judiciary, it could not avoid stopping the law.<sup>28</sup> The government passed this block after a complicated technical and judicial confrontation with the *Corte dei Conti*, which ended up signing the measure in the financial registers of the state with reservation. However, in 1998 a new stop to the sale occurred because both the Italian Antitrust<sup>29</sup> and the European Commission Directorate on Competition<sup>30</sup> asked for the revision of the 2038 concession extension. Because of the European Treaties on the Economic Community, the government was forced to intervene and solve this conflict, reacting the following deal: the privatized part of Autostrade would only be responsible for the management and maintenance of the highway and some of its technical services would be the responsibility of a different public company.<sup>31</sup> In the same year, this "infinite story" seemed to be experiencing a new stop because Consob (the stock surveillance authority) noticed some suspicious pre-privatization fluctuations of Autostrade shares,<sup>32</sup> especially linked with the "privatization breaks" caused by Consiglio di Stato, Corte dei Conti, Antitrust and EU DG on competition. This caused a new slowdown and an investigation for insider trading, which alarmed the markets and the public authorities.

## Final Considerations

The Italian highway PPP experience is very complex and contains some positive elements amid several concerning points. Inevitably the new cycle of investments favored some remarkable quality gains and sparked a needed expansion of infrastructure. However, many issues need to be critically analyzed. The first is the "privatize now and regulate later" approach, which has proven to be detrimental to public welfare, as most of the public organizations have argued in their collective request for a stricter reform on tariff regulation and concession provision.

Table 4 reports the formidable rise in the profitability of Autostrade between 2004 and 2008. The NARS (a technical body of CIPE) is very critical regarding the behaviors of this large group and has asked for a profound revision of the tariff mechanism and a tougher regulation process. In its 2007 report, it argued that more than 80 percent of the concessionaires have implemented only a small percentage of the scheduled investments and have gained impressive profits by obtaining public subsidies while delaying the investments that these should have financed.<sup>33</sup> In its 2008 report, ANAS states that "by analyzing the December 31, 2008 concessionaire balance sheet, aggregate investment was 1,676 million euros, against a contractually planned

<sup>28</sup> <http://ricerca.repubblica.it/repubblica/archivio/repubblica/1997/10/28/stop-della-corte-dei-conti-alla-vendita.html>

<sup>29</sup> [http://archiviodistorico.corriere.it/1998/giugno/02/Autostrade\\_Antitrust\\_campo\\_co\\_0\\_98060211313.shtml](http://archiviodistorico.corriere.it/1998/giugno/02/Autostrade_Antitrust_campo_co_0_98060211313.shtml)

<sup>30</sup> [http://archiviodistorico.corriere.it/1998/giugno/09/Bruxelles\\_pronta\\_intervenire\\_sulla\\_vendita\\_co\\_0\\_98060910243.shtml](http://archiviodistorico.corriere.it/1998/giugno/09/Bruxelles_pronta_intervenire_sulla_vendita_co_0_98060910243.shtml)

<sup>31</sup> <http://ricerca.repubblica.it/repubblica/archivio/repubblica/1998/05/23/autostrade-si-ue-alla-concessione-soltanto-se.html>

<sup>32</sup> [http://archiviodistorico.corriere.it/1998/febbraio/24/Insider\\_Autostrade\\_magistratura\\_indaga\\_co\\_0\\_9802245722.shtml](http://archiviodistorico.corriere.it/1998/febbraio/24/Insider_Autostrade_magistratura_indaga_co_0_9802245722.shtml)

<sup>33</sup> Relazione al Cipe sull'Attività svolta dal NARS nel 2007, pages 16 to 24.

figure of 1,977 million.”<sup>34</sup> In the same report, ANAS states that all of the concessionaires guaranteed to fill this gap, by allocating “investment reserves” (*reserve vincolate di capitale*) to the missing part and implementing such investments in the next fiscal year. Although this is a soft, constructive and fine-free solution, it allows concessionaires to speculate on this permanent one-year delay and can provide them with a fictional financial capacity given by the non-synchronized movement between investment and proceeds.

Table 4: Autostrade Ebit<sup>35</sup>

Year	Million euro	% of stock capitalization
2004	1,454	0.1290
2005	1,536	0.1326
2006	1,606	0.1248
2007	1,643	0.1108
2008	1,616	0.2157

Source: Autostrade and Atlantia balance sheets between 2004 and 2008.

A further aspect that may hinder competition is the concession renewal mechanism. In fact, the current state of the art makes it sufficient for the current concession holder to agree with ANAS on a future investment plan, in order to secure the renewal of the concession for the duration of the current concession. This risks petrifying the market and avoiding the entrance of more competitive concessionaires.

Another major problem in the highway regulation is the overlap of too many independent and political authorities, which by themselves are neither specifically designed for this complex process nor to collect sufficient independent information. This ends up creating a confusing and dissuasive business environment. It is enough to think that before Autostrade was given the right to obtain a tariff adjustment for the difference between the expected and realized inflation rate, two years and some six authorities were involved in the decision process (ANAS, Consiglio di Stato<sup>36</sup>, Autorità per la vigilanza sui contratti pubblici di lavori, servizi e forniture, NARS, MEF and MIT<sup>37</sup>) before a decisive statement by the Consiglio di Stato solved the situation.

<sup>34</sup> The reports states, in Italian, that “La spesa per investimenti, nelle more delle approvazioni dei progetti di bilancio per l’anno 2008, sostenuta dalle società concessionarie autostradali per investimenti, rilevata dai dati di contabilità analitica al 31 dicembre 2008, è risultata pari a 1.674 €/Milioni (escluso CAS), a fronte di una previsione di piano di 1.977 €/milioni corrispondente all’86percent,” refer to ANAS 2008 reports, available at [http://www.stradeanas.it/index.php?/content/index/arg/dati\\_di\\_bilancio](http://www.stradeanas.it/index.php?/content/index/arg/dati_di_bilancio)

<sup>35</sup> For these data, please refer to the section bilanci in the Atlantia website. Data for 2009 are not ready yet. <http://www.atlantia.it/it/bilanci/2006.html>

<sup>36</sup> <http://ricerca.repubblica.it/repubblica/archivio/repubblica/2002/11/21/autostrade-vince-la-partita-delle-tariffe-recuperera.html>

<sup>37</sup> Please refer to Autorità per la vigilanza sui contratti pubblici di lavori, servizi e forniture, Relazione 2007, Pag 172, 176, 177.

In addition to this, the fact that ANAS, the agency in charge of controls (over traffic, quality and other tariff-relevant variables), is itself a concessionaire, supervises contracts, participates in the concession provision and, most of all, is a shareholder in some of the private companies which itself regulates, casts significant doubts on the effectiveness of its regulation and control powers.

For this reason, in 2006, 40 MPs presented a proposal to create a national independent authority of highway and transport concessions, ANCAT (*Autorità nazionale delle concessioni autostradali e dei trasporti*), which would have acquired all the responsibilities on this matter, from concession provision, to supervision, control and enforcement. The proposal did not get sufficient backing in Parliament and was rejected; however, it is interesting to report that the same MPs recognized that *“public intervention in the highway sector has been characterized by deference toward concessionaires,”* at the point of *“ignoring – as claimed by the Corte dei Conti – the concessionaire’s contractual obligations regarding investments, ordinary and extraordinary maintenance, and continuing to pour large public grants and favorable tariff regulation.”*<sup>38</sup> Their argument in favor of a much more stringent regulation is very tough: *“this law proposal comes to secure the respect of the legality principle and to bring back fairness and transparency in a sector (...) progressively occupied by privates who operate without any substantial risk.”* In the same section of the proposal, they focus on a fundamental comparison: *“the absence of enterprise risk caused a progressive abandonment of entrepreneurs of other industrial and economic sectors, in order to embrace the so-called “utilities.” These entrepreneurs used to be the engine of Italian competitiveness, but have ceased to be because, attraction by this unregulated market, characterized by a low risk, a substantial monopolistic position and enormous advantages at the expense of the State and consumers.”* They state that this “sector displacement” was mainly caused by the *“enormous public resources to concessionaires (through tariffs, grants, other service monopolies, etc) quantifiable at 50 billion euro”* and that *“such investment would have allowed the state to build and operate a larger highway network with remarkable financial gains, as stated by Corte dei Conti.”*

Attention should also be paid to the highway concessionaire market structure: the establishment of a de facto duopoly of private groups in a sector with massive long-run investments and the exorbitant capital requirements is going to be detrimental when concessions will be renegotiated. In fact, unless concessions are broken into smaller pieces, few companies will dispose of sufficient financial capability to be competitive with Atlantia and Gavio group. This certainly requires an investigation regarding whether there exists increasing scale economies in highway concessions, and we hope that this will be done in the coming years.

In conclusion, because cuts in public debt have been the reason behind the opening of concessions to the private sector, the need to create a congruous and remunerative group (Autostrade) outstripped the issue of regulation and control. While this initial problem could be attributed to inexperience in independent regulation, the persistence of a politically-biased and strong lobby-influenced decision-making process has proven to be detrimental for competition in this sector. A related problem seems to be the excess of incentives and the unbalanced position favoring private groups, for example through large public grants, friendly controls and lately subsidies on interest rates.

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<sup>38</sup> <http://www.senato.it/service/PDF/PDFServer/BGT/00176812.pdf>



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