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Explaining the incomplete liberalization reform of the Italian energy markets¹

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1. Introduction

Italian policy-makers have been among the most enthusiastic supporters in Europe of the liberalisation of the energy sector. They implemented reforms inspired by the competition-based model offered by the United Kingdom (UK), often before the European Union (EU) made them compulsory. For instance, an independent sector specific regulator –the *Autorità per l'Energia Elettrica e il Gas* (AEEG)– was created in 1995, significantly before the French *Commission de Régulation de l'Electricité* (CRE) (2000) and the German cross-sectoral *Bundesnetzagentur* (2005).

Yet the privatisation of the two incumbents ENEL and ENI, albeit started in 1992, is not completed. The government still holds a 30 percent stake in both the power and the oil and gas giants, creating a problematic conflict of interest within a state that is both regulator and shareholder. There is strong evidence that elected politicians have been seeking to control the *Autorità* either by directly reducing its competencies or by taking decisions falling within them. These interferences have been coupled with decisions that, although within ministerial jurisdiction, had foreclosing effects on key ingredients of the reform, such as the liberalisation of production and import, the access to networks, and the regulation of tariffs, hence hindering the development of competition. As a result, the incoherent institutional reform seriously risks undermining the market reform ability of creating a 'level-playing field' able to attract the massive investments needed in the energy sector, and to fully deliver the benefits consumers expect from competitive markets.

The empirical puzzle is the following: why has the Italian government been so far unable or unwilling to complete the liberalisation reform of the energy markets, after formally adopting it with enthusiasm? The paper aims at addressing this question by testing the explanatory power of three distinct theoretical frameworks.

2. Case study: the Italian energy sector

Energy policy in Europe traditionally aimed to guarantee the national security of supply and to protect customers through direct public intervention. However, two major drivers for change intervened since the 1980s. First, security of supply started to be felt no longer as a problem to be tackled at national level, but rather at the European one. Second, public direct intervention started to be considered not the best mean to protect consumers: the solution to be preferred was, instead, a new mix of liberalisation and regulation (De Paoli, 2000). As illustrated by Nigel Lawson (1982), the energy Minister for the Thatcher government, the role of government is not to plan energy production and consumption or to manage the balance between demand and supply, but to create a framework that guarantees efficient energy production and consumption in market conditions with minimized distortions. In the power sector, for instance, competitive pressures would have forced producers to achieve dynamic efficiency through innovation, to use their resources in a more rational and efficient way (productive efficiency) and to offer better quality products at cheaper prices (allocative efficiency). This new paradigm was promoted through the effort of several economists and

¹ This article was originally written in 2010 and is based on data available at that time. Notably, the recently started process of ownership unbundling of ENI was then not yet foreseen. The author thanks Pippo Ranci and Davide Tabarelli for the priceless support, and remains responsible for both the opinions expressed and the errors contained.

based on the distinction between the segments of the value chain to be opened to competition and the natural monopolies to be strictly regulated (De Paoli, 2004). As a result, there was a shift from state as direct provider of services to state as regulator. Italy embraced such a new paradigm, based on the idea that competition should have been introduced wherever possible and that, when coupled with effective regulation of the segments characterised by natural monopoly, this would have brought reduced costs and prices.

Liberalisation and privatisation reinforced each other. Privatization without liberalisation would have created dangerous private monopolies, while liberalisation was used as a premise for privatization: to embrace the Thatcherian principle that '*Business government is not Government's business*' (De Paoli, 2004). The privatization of ENEL and ENI involved a change in ideological values, namely the perception that public ownership was no more needed to protect consumers (De Paoli, 2000), and the diffused belief that private management would have guaranteed significant efficiency gains, as opposed to the efficiency losses caused by the political contamination of companies' strategies with not-profit-oriented hidden goals, such as fund raising for parties or full employment (Bavagnoli, 2001; Corriere della Sera, 6.6.97; Il Sole 24 Ore, 10.5.97). Finally, the debt burden inherited from the 1980s certainly paved the way to a 'pragmatic privatization', whose primary objective was to make cash, making privatization of publicly owned monopolies part of a broader emergency programme for reducing public debt (Ranci, 2001). The need to urgently restore public finances, however, sowed the seeds of a conflict of interest. Government sought to protect the monopolistic profits of ENI and ENEL to maximise the revenues deriving from their privatization, whilst at the same time committed to foster market competition. The partial privatization of ENEL and ENI did not solve the conflict of interest. On the contrary, the state kept relative majority stakes (about thirty percent) both in ENI and ENEL – directly through the Treasury, now comprised within the 'Ministero dell'Economia e delle Finanze', and indirectly through the 'Cassa Depositi e Prestiti', a company largely owned by the government. This made the conflict of interest chronic.

The Italian state has not given up its traditional political power to influence ENI and ENEL and use them as the fundamental arms of the national energy policy (De Paoli, 2000), nor it seems willing to complete the privatisation of these 'national champions' that, despite the financial and economic crisis, in 2010 delivered to the state dividends equal to 1.95 billion euros, plus taxes (Repubblica, 30.04.10). The conflict of interest rooted within a state that is both shareholder and regulator –and therefore both wishes to promote competition and to safeguard the profits of ENI and ENEL by letting them keep some elements of monopoly power– constitutes a potential recipe for disaster for the liberalisation reform. Only a 'third force' strong enough to counterbalance the tensions within the government and to effectively regulate the industry by guaranteeing equal access to networks and fair play rules in the competitive arena could defuse this trap. Crucial drivers for the establishment of regulatory agencies through Europe have included the need of providing a new economic form of regulation and a credible commitment to investors (Stone Sweet and Thatcher 2002). The former implies the move from administered prices and 'cost-plus' criterion to 'price-cap' incentive regulation, considered far more efficient, and the gradual elimination of the cross-subsidies that heavily distorted the old tariff system, by aligning tariff levels with costs. These tasks were likely to be better implemented by formally independent regulatory bodies able to hold considerable technical expertise, rather than by ministries within government influenced by not-economic-efficiency goals. Similarly, the need to gain investors confidence and to make credible the transition from public monopoly to a multiplayer competitive arena required a third impartial power, constrained only by the law establishing it and by judicial review. In Italy, the need for an independent regulator was reinforced by the conflict of interest within the state, and made the Autorità a pillar of the liberalisation reform. The Law

481/1995 establishing the AEEG provided it with a number of prerogatives: firstly, defining and updating tariffs –which was previously entrusted to the Ministry of Industry; secondly, defining general service quality levels and the techno-economic conditions for access to networks; thirdly, issuing guidelines for unbundling of the different segments of the natural gas and electricity value chain. In addition, the AEEG puts forward observations and proposals to Parliament and government and signals potential abuses of dominant position and collusive agreements to the National Competition Authority (NCA). Its primary objective is to guarantee the promotion of competition and efficiency in the electricity and natural gas sectors, as well as to assure adequate levels of quality in the services, defining a tariff system which is certain, transparent and based on pre-defined criteria (Law 481/1995).

Given the strong bounds between ministries and incumbents, the less intrusive was government's attitude in the industry, the more effective the independent regulator would have been in providing a credible commitment and the transition towards a new form of economic regulation. Nevertheless, the government developed an allergy for a bureaucratic body not under its direct control. Forerunner institutional reforms based on the British model and often implemented before other Member States and without any imposition from EU law have been contaminated by ministerial interventions which, at decisive moments, have subverted the authority of the regulator and therefore the credibility of the entire reform process. These interventions have been coupled with decisions that, although comprised within the ministerial sphere of competence, constitute serious treats to competition and its development. To illustrate the paradox of a government that formally adopted a progressive institutional reform but then substantially undermined its effectiveness, –as well as to minimize the risk of bias when choosing whether to analyse or to ignore specific decisions– this paper will now concentrate on the aspects that are considered essential to liberalise energy markets, i.e. the access to the network infrastructure, the opening of the production and import to new players, and the economic regulation of tariffs.

3. Explaining the incomplete liberalization reform

The Italian energy sector offers an empirical puzzle: why has the government, after having enthusiastically embraced the liberalisation reform and having established an Independent Regulatory Agency (IRA) with strong regulatory powers, undermined the credibility of the entire reform process by either directly implementing measures hindering competition or reducing the ability of the Autorità to foster it? The conflict of interest arising from the thirty per cent public stakes in ENI and ENEL sets a trap to the liberalisation reform, while at the same time provides an excellent test-bed for regulatory capture theories, applied in this case to decisions by the government rather than by the regulatory agency. Three regulatory capture theories will be used to address the identified puzzle: the 'Theory of Economic Regulation' elaborated by Stigler; the 'More General Theory of Regulation' put forward by Peltzman; and the 'Politics of Regulation' as developed by Wilson. After a brief description of each theory, their explanatory power –intended as capacity of offering feasible explanations of the observed empirical evidence– will be tested by applying them to the case study.

3.1 The Theory of Economic Regulation and the Rational Calculus

The 'Theory of Economic Regulation' put forward by George Stigler (1971) identifies the state as a potential resource or threat for every sector and argues that, '*as a rule, regulation is acquired by the industry and is designed and operated primarily for its benefits*' (p.3). By analysing *inter alia* the oil import quota imposed by the US government in the 60s and whose effect was the increase of domestic oil-derived products of at least 5 billion dollars per year,

Stigler finds that normally regulation neither aims to protect the majority of society –as affirmed by the ‘public interest’ theory– nor is the result of a political process that escapes any rational calculation. Instead, his general hypothesis is that *‘every industry or occupation that has enough political power to utilize the state will seek to control entry [to the market]’* (p.5). Citizens’ interest in acquiring information on policies and in expressing their preferences within the political arena are determined, as it happens in markets, by the expected costs and benefits of doing so. Clearly, a number of policies will be of limited or none interest to many people. Hence, their interest in influencing the related policymaking processes will be scarce. However, given that participation to policymaking and legislative processes is not proportional to interests and knowledge, many relatively ‘ignorant’ people will vote and influence policy decisions. Through the lens of Stigler’s theory, policy-makers are self-interested maximisers. Therefore, *‘the industry which seeks regulation must be prepared to pay with the two things a party needs: votes and resources’* (p.12). Regulation will thus not promote the ‘public interest’, but will rather favour the interests of the groups better able to deliver money and votes, which in turn depends on their informational and organisational costs. The larger a group is, the less able it will be to demand and obtain ‘preferential regulation’, because of the ‘collective action problem’ (Olson 1955), the high organisational costs and the risk of ‘free-riding’. By contrast, the stronger a group’s economic interest is in a specific piece of regulation, the easier it will be to mobilise its members towards advocacy and lobbying activities. As a result, regulation will be largely shaped in favour of the interests of relatively cohesive and well-organized interest groups with high per capita gains, whereas the majority of people will bear small per capita costs. Applied to the case study, the theory predicts that government interventions will be largely shaped by the interests of powerful groups, first of all ENI and ENEL, to the detriment of competition and the more general –and less represented– interests of (household) consumers. Furthermore, the incomplete privatisation of the two incumbents provides a direct link between their economic interests and those of the government, thereby offering an excellent opportunity for testing this theory.

The regulatory capture theory holds considerable explanatory power. The clearest example is that relating to the ‘stranded costs’. These are defined as the ‘sunk costs’ deriving from investments made before February 1997 and that the adoption of the Directive 96/92/EC and the subsequent opening of electricity markets made non recoverable. The reimbursement of stranded costs is therefore justified either when the investment was made because of public service obligations or when the economic rationale of the investment faded out within the new competitive context. The Decreto Bersani established the stranded costs to be identified through specific ministerial decrees and as suggested by the AEEG, while the Ministerial Decree 26 January 2000 imposed the quantification of the stranded costs to be in line with what proposed by the AEEG and delegated to it their practical calculation. However, the increasing divergence of opinions between the Autorità and ENEL led to the transfer of competence on stranded costs quantification from the AEEG to the Industry Ministry through the Law Decree 25/2003, reducing the role of the Autorità to a consultative, non-binding one. The new quantification resulted in a more ‘accommodating’ recognition of the stranded costs to be reimbursed, equal to 2.315 billion euros. Moreover, this sum comprised the costs deriving from the ‘forced relocation’ of the regasification of the Liquefied Natural Gas (LNG) that ENEL bought from the joint venture Nigerian Liquefied Natural Gas through a twenty-years Take or Pay (TOP) contract signed in 1992 and starting in 1999. An unsuccessful environmental impact assessment and a popular referendum prevented ENEL from building a regasification terminal either in Montalto di Castro or in Monfalcone, whilst the TOP contract obliged it to pay the natural gas –whose value was thirteen billion dollars– regardless of its actual consumption (Corriere della Sera, 02.09.97; 02.01.98). The solution was eventually found by diverting the natural gas to the Montoir de Bretagne regasification terminal of Gaz

de France, which signed a gas swap contract with ENEL. However, this was certainly not for free. The extra costs of the Nigerian gas, which do not seem the result of the transformation of the regulatory framework, will bear on poorly informed citizens, making the stranded costs case consistent with the theory of economic regulation.

Other cases, however, highlight pitfalls in the theory of Stigler. First, the effects of the transfer of competence on the allocation of import capacity from the Autorità to the Industry Ministry through Law 290/2003, although favouring ENEL and the energy intensive industry and therefore theoretically supporting the economic theory of regulation, have in fact been irrelevant (Interview to Tullio Fanelli, member of the Autorità 2003-2011, 18.05.10). Second, the sale of the three Gen.Co delivered windfall revenues to both government and ENEL and allowed the latter to maintain its 'pivotal position', thereby supporting the theory of Stigler. However, from this perspective it is hard to explain why the government decided to break-up ENEL and to force it to divest 15000 MW of generating capacity without any EU legal requirement. The fact that after 'Tangentopoli' ENEL *'could no longer function as a financial source for the political parties as it had in the 1970s and 1980s'* and the fact that this weakened Parliament's defence of ENEL (Lorenzoni, 2003, p.316) seems to be only part of the story. Finally, the new criteria introduced by Law 290/2003 to calculate transport tariffs for the period 2004-2007 had the effect of increasing tariffs, as opposed to what repeatedly claimed by the Autorità (AEEG, 2003a; 2003b). Thus, this case apparently provides damning evidence supporting the theory of economic regulation, and might be identified as an authentic attempt of the government to expropriate the Autorità of its powers (Interview to Tullio Fanelli, member of the Autorità 2003-2011, 18.05.10), with the declaration of the Economics Ministry that it will *'undertake any action to safeguard ENEL and its shareholders'* (Press Release MEF, 19.11.2003) as a 'shooting gun'. However Professor Garribba, member of the Autorità 1997-2003, suggests that the debate between authority and government was concentrated on the technical modalities to link the price of electricity to the price of oil (i.e. with a delay of two or six months) and was not related to economic interests (Interview to Professor Sergio Garribba, member of the Autorità 1997-2003, 15.06.2010). The doubts emerging from the cases above suggest the need to find a more elaborated theory of regulation, able to explain regulations that do not necessarily favour the interests of producers.

3.2 A More General Theory of Regulation

The 'More General Theory of Regulation' developed by Sam Peltzman (1976) is based on Stigler's theory, but tries to overcome its limits. According to both theories *'the essential commodity transacted in the political market is a transfer of wealth, with constituents on the demand side and their political representatives on the supply side'*. As a consequence, regulation becomes the *'fulcrum upon which contending interests seek to exercise leverage in their pursuit of wealth'* (Peltzman, 1976, p.212). The stake in regulation is a transfer of wealth that will rarely be in cash, but rather in the form of regulated price, entry restriction and so forth. From Stigler's perspective, regulation translates into producer protection, intended as *'the dominance of a small group with a large per capita stake over the large group (consumers) with more diffused interests'* (Peltzman, 1976, p.212). However, the theory of Stigler is difficult to reconcile with cases where regulation acts contrary to the preferences of organized economic interests. This encouraged Peltzman to elaborate a more general theory of regulation, identifying regulation as a more complex exercise than the mere protection of producers. Peltzman posits that a rational regulator –who intends to maximize its utility function– will *'seek a structure of costs and benefits that maximizes political returns'* (Peltzman, 1976, p.231) and that this will not be limited to one economic interest only. Regulators will not always favour producers' interests and, even when this is the case, they will try to minimize the opposition from consumers' groups. Competing interests will make

politicians find a broad-based coalition, whose equilibrium will change in time and according to the regulated issues. For instance, regulation might tend to be more weighted toward producer protection during depressions and toward consumer protection in economic expansions. Moreover, within groups of producers and consumers there will be subgroups with different characteristics, so that for instance *'if one group of consumers has sufficiently large per capita demand, sufficiently low demand elasticity and tax responsiveness relative to the other group, the latter may become part of the winning group'* and analogously *'some producers may be taxed even if most are benefited'* (Peltzman, 1976, p.219). These dynamics are, in Peltzman's view, *'at the heart of the pervasive tendency of regulation to engage in cross-subsidization'*, i.e. tariff structures that ignore and in fact suppress differences in costs (p.231). In conclusion, the forces that push policymakers to find a broad-based supporting coalition are the same ones that influence the structure of tariffs. The possibility to favour the interest of producers is not ignored, *'but never fully exploited. To do this would narrow the consumer base of the coalition'* (p.239). As a result, these 'political processes' promote tariff structures that treat consumers in a more uniform manner compared to what would emerge from an exclusively market-based approach, and weaken the relation between prices, costs and market fundamentals.

The theory offers convincing explanations where the theory of Stigler, on the contrary, fails to do so. This is the case of the Law Decree 193/2002 ('Blocca tariffe'), through which the government blocked the increase in electricity tariffs scheduled by the Autorità on the basis of a technical updating mechanism linked to international oil prices. The governmental decision reduced the revenues of producers, certainly not favouring their interests, and its rationale was to fight the increasing inflation. It therefore provides a case where the regulator favoured the interests of consumers and the economy as a whole to the detriment of producers' profits. In addition, it is a further example of governmental interference in the technical mandate of the Autorità, driven by economic interests and weakening the credibility of the liberalisation reform. Consumers' reaction to the regulatory uncertainty created by these interferences and to the record profits of the partially publicly owned incumbents has been to organise themselves into interest groups aiming to access rents through *ad hoc* legislation, rather than to promote a more complete liberalisation (Cipolletta et Al, 2006). As a result, the implicit taxation within the system through 'oneri impropri' has progressively increased. The economic interests of producers and consumers find their natural arena of conflict in the regulation of transmission and distribution tariffs, because on the one hand these tariffs affect the value and profits of companies such as ENI, ENEL and Terna, while on the other hand there is a need to protect consumers from too high tariffs (Interview to Professor Sergio Garribba, member of the Autorità 1997-2003, 15.06.10). The tensions between these competing economic interests have largely been unloaded through the pervasive cross-subsidization that favours certain interest groups and that at the same time hinders the adoption of a new economic form of regulation based on cost reflective tariffs.

The contribution of Peltzman has certainly brought a broader perspective on how economic interests shape regulation and on how this is reflected in an economic regulation heavily distorted by cross-subsidies. However, this theory does not offer feasible explanations of cases where economic interests do not play a predominant role. The clearest example is ownership unbundling, imposed to ENEL in the electricity sector but not yet to ENI in the natural gas sector, notwithstanding the repeated invitations by the Autorità to proceed towards this direction. It is hard to believe that this differential treatment is only due to the better capacity of ENI to promote its interest *vis-à-vis* the government, as suggested by the president of the Autorità 2003-2011 (Interview to Alessandro Ortis, president of the Autorità 2003-2011, 18.05.10). Rather, it seems necessary to adopt new lenses to go beyond the analysis of

either producers or consumers economic interests and to recognise to perceived costs and benefits or, in other terms, to beliefs, the importance they deserve.

3.3 The Politics of Regulation: Beyond Economic Interests

Stigler argues that *‘as a rule, regulation is acquired by the industry and is designed and operated primarily for its benefit’*, to the detriment of most of the people who will bear limited per capita costs, for instance deriving from reduced competition (1971, p.3). Peltzman (1976) widened this perspective, claiming that the ‘capture theory’ is correct but it is not reasonable to assume that only business firms are able to capture regulators. *‘Because interests compete, politicians must reach compromises that permit large, politically heterogeneous coalitions to be formed in support of a policy. Neither adversary party gets all it wants: each is optimally disgruntled’* (Wilson, 1980, p.361). Wilson observes, however, that *‘when one examines matters closely, they appear a good deal more complicated than is assumed’*, probably because *‘many people find complexity dull: simple statements are easier to remember; dramatic arguments are more interesting to read’* (1980, p.x). The fundamental contribution of Wilson consists in underscoring the existence of the *politics* of regulation and in clearly distinguishing it from the *economics* of regulation: *‘whereas economics is based on the assumption that preferences are given, politics must take into account the efforts made to change preferences’*. In economics, consumers’ preferences are given and considered exogenous: the focus is not on what they desire or why they desire it, but only on the quantity they wish to buy on the market (preferential regulation representing the product in this case). On the contrary, *‘much, if not most, of politics consists of efforts to change ‘wants’ by arguments, persuasion, threats, bluff and education. What people want—or believe they want—is the essence of politics’* (Wilson, 1980, p.363). Regulation needs to be supported by a broad-based coalition not only for the economic reasons outlined by Peltzman (1976), but also because in politics decisions must have justifications to convince people who do not have a stake, and even people who have a different stake. In particular, the importance of the costs and benefits of a specific policy relates both to their dimension and to their distribution. If the former is certainly relevant, as the term ‘windfall profits’ itself shows, Wilson identifies the latter as crucial for policymaking processes. The distribution of the costs and benefits of a regulatory intervention is linked to *‘perceptions of the fairness and unfairness of a policy’*, that in turn *‘profoundly affect the extent to which it is regarded as legitimate and thus the difficulty (or cost) of finding persuasive justifications for that policy’* (Wilson, 1980, p.366). In conclusion, *‘a complete theory of regulatory politics requires the attention to be paid to beliefs as well as interests’* (p.372), as demonstrated by the fact that most regulatory interventions are not due to changes in technologies or prices, but rather to changes in the perception of what constitutes a problem. For instance, the establishment of the Environmental Protection Agency (EPA) in the United States was not caused by a high number of deaths due to pollution, but to the fact that the potential effects of pollution had become subject of public attention and concern. The adoption of Wilson’s theory does not imply neglecting that politicians have an interest in being re-elected, companies in increasing their profits and consumers in maximizing their benefit. It rather implies acknowledging that the relation between these dynamics and regulatory interventions are far more complicated and uncertain than they may appear. Ideas on regulation themselves differ in time and among policymakers, and are strongly influenced by the opinions of lawyers and economists. As a result, the implementation of regulatory interventions by policymakers will be largely shaped by their education and experience and in particular by their perception of the costs and benefits of regulation, i.e. by their ideologies.

Two examples illustrate the explanatory power of Wilson’s theory. The first is the break-up of ENEL and the duty to divest 15000 MW of generating capacity. Although the modalities

through which this obligation was fulfilled safeguarded the capacity of ENEL to maintain its dominant position on the market and guaranteed record profits to both the company and the Treasury, theories of regulation based on the dominance of economic interest groups are unable to explain why the government imposed this requirement on the incumbent in the absence of any EU legal obligation. It is only by recognising the importance of the role of ideas, besides economic interests, that it is possible to square the circle. Through Wilson's lenses, the embracement by the Commission Carpi, created by the Prodi government in order to prepare the implementation of the Directive 96/98/EC, of an economic culture inspired by the British model that promoted fragmentation of the incumbent as a *viaticum* towards competition (Silva, 2004) provides the 'other part of the story' that the theories of Stigler and Peltzman are unable to tell. The downloading of the British reform has however found obstacles, because of the lack of a coherent consensus caused by the strong opposition of most of the political parties, '*convinced of the wisdom of defending a public service approach against 'wild' conversion to market forces*', and of the trade unions, that defended the publicly owned monopoly as the best protector of small users (Lorenzoni, 2003, p.316). The cultural dominance of ENEL, due to its widely recognised technical expertise, provided it with a 'transversal party' that contrasted the company restructuring to the detriment of competition (Silva, 2004) and still now makes it a special interlocutor *vis-à-vis* the Autorità and government (Interview to Giuseppe Poleo, ENEL, 10.08.10). In the words of Pippo Ranci, president of the Autorità 1997-2003, '*a legal and economic transition requires cultural change. It is not easy for political and public opinion to rely on an invisible hand when they have been educated to believe in a visible hand, and to seeing it operate for decades*' (2001, pp.198-199).

The clearest exemplification of the need to integrate the study of regulation based on economic interests with the role played by ideas is the ownership unbundling of networks. In the electricity sector, this was imposed in two steps. First, while the management of the network was delegated to an Independent System Operator (ISO), the ownership of the network was maintained by the incumbent through its controlled Terna, because of the '*violent pressures exercised by ENEL*' and as a probably necessary compromise to implement the partial liberalisation (Il Sole 24 Ore, 04.07.03). Then, after the 2003 black out that affected the whole peninsula, the idea that ownership and management had to be unified, as in every other electricity system, prevailed. The fundamental driver for the incorporation of the ISO within Terna was therefore the belief that this operation would have brought increased system efficiency and security, besides windfall profits for ENEL and the Treasury. In the natural gas sector, ownership unbundling has not yet been imposed by the government to ENI, despite the repeated invitations to proceed towards this direction by the Autorità and the National Competition Authority (NCA). The reason for this asymmetric treatment between electricity and natural gas sectors has been identified by the president of the Autorità 2003-2011, Alessandro Ortis, with the stronger 'capacity of persuasion' of ENI compared to that of ENEL *vis-à-vis* the government (Interview to Alessandro Ortis, president of the Autorità 2003-2011, 18.05.10). However, this interpretation is not completely convincing. Acknowledged that the present situation is likely to favour the economic interests of ENI, it would be a gross mistake to ignore the diffused ideas on which this 'preferential treatment' is grounded. The natural gas sector is characterised by impressive capital intensity, because of the investments needed to conduct upstream activities and to build transport infrastructures. These financial requirements give rise to significant economies of scale and to the pervasive use of long-term Take or Pay (TOP) contracts that provide adequate (price or quantity) certainty to companies to commit themselves to the required investments. These economic fundamentals, coupled with the need to buy natural gas from monopolists such as the Russian Gazprom or the Algerian Sonatrach, are at the very heart of the belief that breaking up ENI might not be the

best solution for both shareholders and citizens. A vertically integrated operator that owns considerable transport infrastructures, it is argued, will be better able to bargain with foreign monopolists and to guarantee energy security, both regarding external supply and the control of the national network. It exceeds the scope of this paper to evaluate whether these beliefs are well grounded or not. However, it has to recognise the importance of these beliefs in the politics of regulation of the case study.

The theories based on economic interests that stress the utilitarian hypothesis deny aspects that in fact matter, as the culture of civic duties and people's identification with institutions (Interview to Professor Pippo Ranci, president of the Autorità 1997-2003, 31.08.10). This approach oversimplifies the reality and overlooks that the liberalisation reform in Italy has progressively lost momentum (Interview to Davide Tabarelli, president of Nomisma Energia, 27.04.10). This in turn has been due not only to the strong opposition of interest groups, but also to the role played by beliefs. The crucial variable has been policy-makers' degree of trust in competition itself. For instance, the government has decided to safeguard national security of supply in the natural gas sector by supporting the 'national champion' abroad and by shielding it from excessive competitive pressure internally. This approach was preferred to the solution represented by a broad and competitive European market that, deriving directly from European treaties and directives, was considered more certain and legitimate by the Autorità (Interview to Professor Pippo Ranci, president of the Autorità 1997-2003, 31.08.10).

4. Conclusions

This paper provided an opportunity to test three regulatory capture theories against the incomplete liberalisation of the Italian energy markets. The incomplete privatisation of the incumbents ENEL and ENI set a trap to the liberalisation reform, creating a conflict of interest within a state that is both shareholder and regulator. At the same time, it emphasized the role of the Autorità as the 'third player' needed to deliver a credible commitment to investors and to guarantee a 'level playing' field to competitors based on cost-reflective tariffs. The government embraced the liberalisation reform enthusiastically: it went beyond what required by EU law and gave strong regulatory powers to the Autorità. However, at decisive moments it undermined the credibility of the entire reform process, either directly implementing decisions that hindered competition or reducing the powers of the Autorità. Each one of the theories adopted sheds a different light on this puzzle, contributing to its understanding. The Theory of Economic Regulation put forward by Stigler (1971) shows how in many cases government has actually protected the interests of producers, first of all ENEL and ENI. However, it is through the More General Theory of Regulation of Peltzman (1976) that it is possible to explain decisions that did not favour producers, and why cross-subsidization still pervades the tariff system. Finally, the Politics of Regulation as developed by Wilson (1980) squares the circle, highlighting how the liberalisation reform, with its missing parts and its asymmetries, is not just reflection of the dominance of producers or other interest groups, but has been largely shaped by beliefs. Each of the theories adopted maintains a considerable explanatory power. However, their combined use is necessary to completely understand the regulation of Italian energy markets. Overstressing the importance of economic interests would oversimplify reality. The incompleteness of the liberalisation reform, its progressive loss of strength and its asymmetries do not exclusively derive from the strong opposition of interest groups, but are also the result of policy-makers' degree of trust in competition itself. Acknowledging this 'part of the story' is the necessary starting point not only to completely understand the liberalisation reform of the Italian energy markets in its full complexity, but also to effectively identify what should be the roles of the government and the Autorità in the regulation of electricity and gas markets in the future.

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