CIRIEC PROJECT "MAJOR PUBLIC ENTERPRISES: COUNTRY ANALYSIS AND POLICY TRENDS"

Major Public Enterprises in Italy

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Abstract

Italian State-owned enterprises (SOEs) continue to occupy a strategic position in the national economy. In 2013, their aggregate value added was equal to 17% of the Italian national GDP, and they counted for around 40% of the total Italian stock market capitalization. The present paper focuses on the top ten Italian SOEs over the period 2004-2013. A first overview of the changes in their internal and external environment suggests the crucial importance of institutional conditions and the lack of a coherent policy design for privatisation and regulation, as the timing and the intensity of the reforms has varied deeply among sectors. Nevertheless, contemporary Italian SOEs have been increasingly exposed to market incentives, and they seem nowadays more oriented to markets than to public values, with some remarkable divergences depending on the degree of public control and market liberalization. Our textual analysis of the SOEs' statutes reveals a total absence of direct references to a formal public mission. Social goals have been increasingly addressed by means of regulation, while only Ferrovie dello Stato and Poste Italiane are formally subject to the Universal Service Obligation. We also find that, on average, the management and performance of the Italian SOEs has improved and it holds the comparison with private and public European industry peers. Still, remarkable differences across markets and across sectors persist. Listed SOEs are largely profitable and distribute positive dividends to their shareholders. Among them, Eni, Enel and Finmeccanica have expanded their business internationally, though cross-border M&As. As a result, a high share of their revenues and employees originates out of Italy. This suggests that their strategies are no more committed to political goals, such as employment protection. Conversely, other SOEs are somehow compelled to maintain an informal public mission. Unlisted SOEs that provide universal services often incur in economic losses which are partly covered by public subsidies or by taxpayers.Nevertheless they also have modernized their management and expanded into new profitable markets, such as high speed train (FS) and financial and insurance services (Poste Italiane). SOEs managing networks have invested in national strategic infrastructures and their employees and revenues are largely domestic-based. Finally, aggregate data do not reveal strong divergences among the Italian SOEs and their industry peers in terms of employment policies and labor productivity, with some important divergences among SOEs operating in labor-intensive and capital-intensive sectors. In terms of investments in fixed assets we observe divergences among SOEs and private ones. The former have increased their investments in tangible assets over time, while investments by private industry peers have been negatively affected by the financial crisis.

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1. Introduction

In spite of the wave of privatization, the Italian government has been keeping some strategic enterprises under its control. In 2013, 5% of the 1,523 major Italian enterprises[3] was controlled by a public – central or local – entity. Their aggregate value added corresponded to 17% of the Italian GDP (1.62 bln euros at current prices in 2013). This first picture suggests that SOEs still cover a relevant position in the Italian economy, especially in the sectors of general interest, where they are the top enterprises in terms of revenues, assets and number of employees (table 1).

Table 1 - Major enterprises in Italy by ownership and sector – summary data (bln €, 2013)

	Freq.	Turnover	Assets	Employees
All Sectors				
Private enterprises	1,453	808.10	936.32	2,441,690
SOEs	70	308.36	657.14	582,403
Total enterprises	1,523	1,116.47	1,593.46	3,024,093
Share of public enterprises	5%	28%	41%	19%
Production, distribution and trade of electricity and gas				
Private enterprises	25	26.43	31.05	11,326
SOEs	23	141.59	255.01	122,805
Share of public enterprises	48%	84%	89%	92%
Petroleum fuels, natural gas, mineral oils and petrochemicals				
Private enterprises	22	61.67	28.20	13,654
SOEs	2	115.47	138.38	82,879
Share of public enterprises	8%	65%	83%	86%
Transportation (Airlines, shipping, road and rail transport undertakings and ancillary)				
Private enterprises	41	20.58	19.20	54,730
SOEs	5	9.03	65.73	82,660
Share of public enterprises	11%	31%	77%	60%
Public services (water, airports, motorways, waste collection and postal services)				
Private enterprises	8	3.42	10.64	15,603
SOEs	24	14.51	149.11	175,942
Share of public enterprises	75%	81%	93%	92%
Broadcasting and media (including advertising, film and theatre)				
Private enterprises	5	8.10	12.57	15,291
SOEs	1	2.65	2.31	11,473
Share of public enterprises	17%	25%	16%	43%
Vehicles, aerospace, defence and security				
Private enterprises	41	136.63	154.14	345,265
SOEs	3	20.39	38.97	84,478
Share of public enterprises	7%	13%	20%	20%
Electronics				
Private enterprises	36	13.44	14.30	51,352
SOEs	1	1.42	1.27	9,464
Share of public enterprises	3%	10%	8%	16%

Source: own elaboration on Mediobanca 2014 and Amadeus
Note: data are limited to the top 1,500 Italian enterprises with an annual turnover higher than 50 mln euros

Contemporary SOEs are fundamentally different from traditional Italian SOEs that flourished in the twentieth century. Indeed, during the last two decades, SOEs have undergone some major internal and external reforms. They have reformed their legal status, they have been increasingly corporatized and subjected to a private law regime. Some of them have been listed on a stock exchange market and partially opened to private equity, becoming mixed public-private enterprises where the Italian government keeps the majority of shares. In some cases, direct public control has been substituted by an indirect ultimate control. As a result, their management and corporate structure have been re-organized and increasingly exposed to market incentives. The external environment where SOEs operate has been changing as well. While SOEs used to provide goods and services under a legal monopoly, nowadays they operate in liberalized markets open to international competition.

In the light of the major internal and external changes, one can wonder whether corporatized SOEs competing in deregulated and globalized markets have improved their performance and have re-oriented their market strategy and economic behaviour accordingly to the market incentives they have been increasingly exposed to. These reforms bring

[3] We consider all the Italian enterprises with an annual turnover higher than 50 mln euros. In case of corporate groups, only the parent company is counted (consolidated data), while controlled enterprises are not included in the list

us also to question whether contemporary SOEs are managed the same way as private companies or whether they still preserve some features of traditional SOEs in terms of public mission and general interest objectives. We address these research questions by analysing the 10 major Italian SOEs controlled by the Italian central government according to the following outline. Box 1 describes the approach adopted to select the 10 major Italian SOEs, and shortly introduces their core business and activity. Section 2 offers an historical overview of the Italian SOEs, focusing on the evolution of the institutional framework governing them, and describes the change in the portfolio of enterprises owned by Italian central government. Section 3 discusses how the external environment where SOEs operate has been reformed, namely market liberalization and the introduction of regulation. In section 4 we restrict the focus on the major Italian SOEs which constitute the core of our analysis and we recall the internal reforms that have modified their structure and organization. In order to discuss whether new SOEs behave like private enterprises or still pursue social goals, section 5 first offers a brief overview of the concept of public mission and reviews the main related literature. Then, it analyses whether and how a public mission is displayed in SOEs' formal documents (section 5.1) and the SOEs' position with respect to the universal service obligation (section 5.2). Section 6 moves to analyse the ten major Italian SOEs in terms of economic performance, investments and portfolio strategies to infer whether their behaviour differs with respect to private enterprises and can somehow be linked to an informal public mission. For this purpose, we will mainly analyse budget and balance-sheet data over the period 2004-2013, and we will compare the Italian SOEs with some selected European private and state-owned industry peers. We first assess whether modern Italian SOEs are profitable, whether they are budgetary autonomous and independent or if they still rely on public subsidies. We will assess what is their impact on the national public finances by comparing the dividends from the SOE to the central governments with the economic transfers from the governments to its SOEs (section 6.1). By surveying the firms' M&As we will discuss the change in the firm's core business, and to which extent the Italian SOEs have internationalized, by expanding their business beyond national borders after markets have been liberalized. In this way we try to infer whether, after being reorganized and increasingly exposed to market incentives, modern SOEs show an improved entrepreneurial attitude (section 6.2). Next, we analyse their approach towards the issue of employment: Are SOEs used by the government to support employment? Have they improved their labour productivity? Does their approach towards employment strongly diverge from their private benchmark? (section 6.3). Moreover, since the presence of a major controlling public shareholder is likely to ensure stability to the firm, we will discuss whether firms' strategies are more likely to be short-run or long-run oriented. Then, we look at the level of investments by tracing the trend of their fixed assets, with a particular focus on investments in R&D (section 6.4). Then, we discuss how the principal-agent relation has been effectively implemented: whether and how public majority shareholder exercises its controlling power, an area where the appointment of top managers and directors represents the major aspect. Finally, section 7 draws some conclusions from previous analysis on the SOEs attitude towards some economic and social issues.

Box 1 – The 10 major Italian SOEs and their core business

To select the Italian major SOEs we first consider all Italian SOEs with an annual turnover higher than 50 mln euros. Then, we exclude from our sample the public enterprises controlled by municipalities or other local entities. Thus, we focus only on the SOEs controlled by the central government. Then, we have ranked these SOEs in terms of turnover, assets and number of employees. Finally, we have selected only those SOEs which are simultaneously reported in all the three sub-groups. This procedure has brought us to identify these ten Italian SOEs: Eni, Enel, Finmeccanica, Poste Italiane, Ferrovie dello Stato (FS), Snam, RAI, Terna, and STMicroelectronics. They operate in different sectors, but mainly in sectors of general interest, characterized by network industries.

ENEL is the former monopolistic national energy provider. After market liberalization it has reduced its market share and it has been vertically disintegrated, as it does not own and manage anymore the energy transmission grid. It continues to be the largest Italian energy company and operates in the production, distribution, and final retail of electricity and gas, especially in Europe and in South America.

ENI is the national champion in the oil and gas sector with several subsidiaries around the world and the highest revenues among the cases considered. It is an oil company engaged in the exploration, production, transportation, transformation, and marketing of oil and natural gas. Moreover, it is active in the refining and marketing of petroleum and chemical products. In addition, it engages in the offshore and onshore hydrocarbon field construction and in drilling.

SNAM is the main Italian operator for the transport and dispatching of natural gas and the only Italian operator that re-gasifies liquefied natural gas. After the unbundling from ENI, SNAM owns and manages the natural gas pipelines and operates into highly regulated markets.

TERNA is the company that owns and manages the electricity transmission grid. It is the result of the unbundling of the network from ENEL and it is organized as a holding and control different operative societies corresponding to the different activities in the management of the electric network. It operates under a natural monopoly condition and its economic activity is highly regulated.

FINTECNA is a holding that controls several societies in the real estate sector and FINCANTIERI, a society in the defense, security and vehicle sector. FINCANTIERI operates mainly in the shipping and in the constructions and is mainly based in Italy.

FINMECCANICA is a holding in the defense, security and vehicle sector. Its subsidiaries ALENIA AERMACCHI and AGUSTA WESTLAND are involved in the development, design, and manufacture of aircraft, helicopters, satellites, missile systems and other equipment.

FERROVIE DELLO STATO is the holding that collects RETE FERROVIARIA ITALIANA, the owner of the about 16,200 kilometers (10,000 miles) of track, and TRENITALIA, the operating company for the transport of passengers.

POSTE ITALIANE is structured as a holding that puts together subsidiaries acting in quite different services. Apart from the postal services operated by POSTE ITALIANE and SDA EXPRESS COURIER, the holding controls different societies in the postal savings, financial activities and also telecommunications. It has also insurance and real estate companies (POSTE VITA, POSTE ASSICURA, EUROPA GESTIONI IMMOBILIARI).

RAI is the broadcasting company charged with the public service. It is organized as a holding that collects societies in the movie, advertising, internet and broadcasting grid networks.

STMicroelectronics operate in the electronic and in the conductor market.

2. State ownership in Italy: The historical background and emergent trends.

As in many other late-industrialized countries, the role of the state in the Italian economy had been massive throughout the XX Century. In particular, SOEs had represented not only the main instrument of economic governance for network industries, but also important actors in sectors such as finance and manufacturing.

The rise of state intervention in the Italian economy occurred in separate waves. The first large-scale nationalization was enacted in 1905, as the government led by Antonio Giolitti took over main railway concessions from private operators, which merged into *Ferrovie dello Stato* (FS). While the First World War facilitated close relationships among the State and business (Grifone 1971), it is only after the Great Depression that the state decided to take over assets of the main financial and industrial groups. These had been collected within the *Istituto di Ricostruzione Industriale* (IRI), a conglomerate with private-law forms but directly controlled by the state established in 1933 to relief financial institutions from the burden of industrial assets and, at the same time, re-launch industrial policy in crucial sectors such as steel, electricity and shipbuilding (Castronovo 2012).

After the II World War, the economic intervention of the state definitely consolidated between the 1950s and the 1960s. In this period, the size and the role of state capitalism had been shaped by three major strategic decisions. The first concerned IRI's strategy, which refocused on the support to country's development by the provision of infrastructures and basic products for private manufactures (Wormald 1972; Barca and Trento 2010). The most profitable and technologically advanced among IRI's subsidiaries were Autostrade and STET[4]. IRI's network industries included also the Rome's Airports and ALITALIA, the national airline company. Within IRI, a key role was played by heavy industry as in the case of enterprises producing steel (ILVA), ships (FINCANTERI) and defence and aerospace systems (FINMECCANICA). Besides, IRI acquired a number of other companies such as the national TV and radio Broadcaster, RAI, and retail enterprises such as SME and Autogrill. Although beyond the scope of this paper, it is worth to mention that IRI had shares in some of the most important financial institutions of the country.
The second strategic decision relates to the oil and gas sector. In the aftermath of the war, the government was about to dismantle Agip, a SOE established in 1927 to promote oil exploration and extraction. Nonetheless, Enrico Mattei, the Agip CEO, conducted a successful lobbying campaign against the operation and, some years later, further developed the domain of the company. In 1953, Agip became subsidiary of the *Ente Nazionale Idrocarburi* (ENI). ENI's mission aimed at creating a vertically integrated oil and gas player. Its activities ranged from extraction and engineering to the actual distribution of fuel[5].
A third strategic decision was made in 1962, when the centre-left government led by Amintore Fanfani nationalized of the electricity sector. The new *Ente Nazionale per l'Energia Elettrica* (ENEL) took over power stations and grids previously owned by private operators and started to expand the production capacity and the infrastructure to electrify the Italian territory. The main public mission was to promote the universal access to services throughout the whole country at reasonable fares for both individual customers and firms, irrespectively of diversified fixed and marginal costs. Along with FSI, nationalised in 1905, ENEL, ENI and IRI constituted a highly relevant component of the Italian economy in terms of size, sectors covered and investments made (Amoroso and Olsen 1978; Barca and Trento 2010). Figure 1 gives an overview of the sectors covered by these four SOEs in the decade before major privatization. In this period, Italian SOEs were run under the public-law, they were *Enti pubblici a carattere economico*, to mean a kind of corporation that, although separated from government in terms of accounting, was ultimately part of the state. The governance of this network was not based on ownership basis of the Treasury. On the contrary, several government departments such as Industry, Public Enterprises, Telecommunications shared coordination powers with the Treasury. Often, such a collaboration took the form of interdepartmental committees, such as those responsible for economic planning and the setting of fares for public services delivery.

Figure 1. Systemic governance of Italian SOEs before privatisations

Parliament, government, interministerial commitees (CIPE, CIPI, CIPET, CIP) and Corte dei Conti

Ministry of State Participations	Public Agencies		Ministry of Transportation	Ministry of PT Services	Ministry of public works	Local Authorit
ENI (gas)						
IRI (holding)	BNL (banks)	INA (insurance)	FS (railways)	POSTE (post, as internal dep)	ANAS (roads)	Municipal
EFIM	IMI (real estate)	MS (tobacco)		ASST		companies
		ENEL (energy)				

Legend: thick vertical line means "control" (ex. The Ministry of Transportation controls FS).

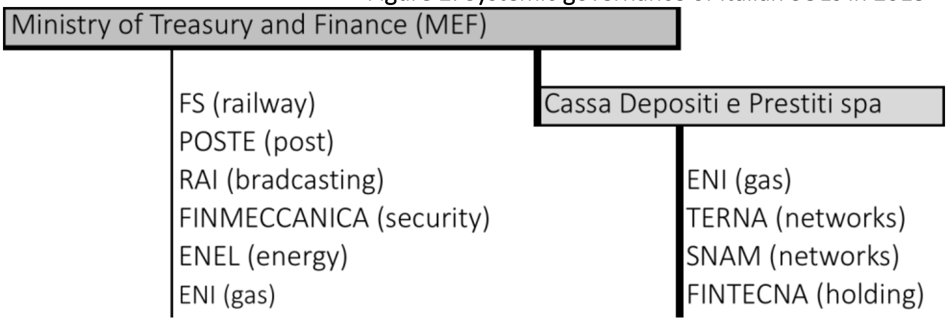
Such a system underwent a radical change during the 1990s. In 1992, the emergence of a joint financial and monetary crisis pushed national policy makers to design and implement a drastic cut back of public assets culminating in 1999 with the privatization of IRI's Autostrade and STET[6]. Others less profitable IRI's companies have been reassembled in FINTECNA and transferred to the Treasury. IRI's dismantling was part of a larger design that Beniamino Andreatta – foreign minister in 1994 – negotiated with the European Commission to cope with both the Italian public debt and compatibility of IRI with Common Markets rules on state's aids after the Maastricht's Treaty (Artoni 2014). A first look to the new governance of SOEs shows a pivotal role played by the Treasury, which became by far the most important department, controlling SOEs by shareholder powers grounded in private law. Indeed, the Italian SOEs reformed their legal form and they were corporatized. Previous public-law entities turned into joint stock companies, *Società Per Azioni* (*SpA*) in Italian, allowing the separation of their budget from that of the State and from the composition of the public debt. Among the newly

[4] The former was the franchisee of the main toll motorway trunk connecting Milan to Neaple, while the latter was the main national telecommunication operator.
[5] Progressively, ENI added businesses in the chemical industry, as in the 1970s it merged with *Montedison*, the main private player in Italy, and acquired corporations in manufacturing such as *Nuovo Pignone*, a Florence-based enterprise active in the production of turbines and compressors, and the textile company *Lanerossi* (Grant et al 1989; Sapelli and Carnevali 1992).

[6] Conversely, the privatization of ALITALIA has been implemented in many steps and completed in 2009.

corporatized Italian SOEs, some remained totally owned by the state (FS, POSTE, RAI, FINTECNA), while others underwent partial privatization and have been listed to the stock market, with the Treasury keeping a role as key shareholder (ENI, ENEL, FINCANTIERI).

Figure 2. Systemic governance of Italian SOEs in 2013



Legend: thick vertical line means "control" (ex. The Ministry of Treasury controls FS).

During the following decade, such a pattern underwent a further reshuffling, with the emergent involvement of *Cassa Depositi e Prestiti* (CDP), a state-controlled financial institution managing postal savings and providing financial services on behalf of the state and local governments. In 2003, the government corporatized CDP[7], allowing it to acquire shares in strategic enterprises on the condition that these were economically and financially viable. Over the last decade, CDP took over relevant shares of SOEs formerly owned by the Treasury, and after the grid unbundling in the network industries CDP has become the major shareholder of national grid operators - Terna (electricity) and Snam (gas). This phenomenon partially restructured the governance of SOEs in a more polycentric arrangement and has been underpinned by a mix of financial, legal and industrial drivers. First, CDP has always had a crucial importance in the management of State's debt. In fact, the huge amount of postal savings it manages have been mainly deployed for investments of both the State and local governments. After 2003, the possibility for CDP to take over shares of SOEs introduced for the government a further instrument to expand its current assets at need without "real" privatization or pure nationalization. In turn, CDP has had the possibility to set up a portfolio of investments with a solid anchor in the network industries (mainly the gas and electricity grids, respectively SNAM and TERNA), providing a good risk/return ratio for its shareholders (Battilossi 2014, pp. 87-92; la Repubblica 2013, 28). A further rationale behind CDP involvement in the network industries concerns the legal basis of market opening in these sectors. In this sense, CDP ownership of SNAM and TERNA constituted a viable solution for the Italian State to unbundle the grid operators from the national incumbents while continuing to keeping indirect public control over strategic assets and preventing them from being privatized.
The next section will further develop such a dimension of the institutional change, emphasizing how the unbundling process is pushing SOEs to re-focus their strategies on more regulated businesses, while the original public mission of these companies has been progressively taken over by the overall sectorial regulation. A third and not less important driver of CDP involvement in SOEs relates to the development of an industrial policy in strategic sectors. In fact, the initial idea that market regulation and privatization would have also been the optimal solution for industrial growth has been gradually replaced by a more pragmatic approach towards the potential role of the state. Under this perspective, the 2008 financial crisis represented the juncture that allowed CDP to effectively implement state's comeback to economic policy making (Financial Times, 2012, 17; Salvemini 2014, p. 290). However, it should be noted that such an involvement does not seem to reproduce a new IRI, as some commentators claimed. Differently from IRI, CDP does not use public money and cannot by statute invest in loss-making companies. From an industrial perspective, if state involvement in sectors such as Telecommunication and Motorways underwent a relevant retreat, the new role assigned to CDP seems to highlight the emergence of a new wave of state intervention and industrial policy.

3. Market building and regulation

The major changes that affected the Italian SOEs and their corporate governance have been accompanied by no less important reforms of the markets in which they operate. Indeed, the liberalization of service markets restructured SOE's environment in two different components: a de-regulated, competitive environment, and highly regulated sectors where SOE's acts without economic competition and the State provides sector regulation as a public good for the guarantee of Universal Service Obligations.
The liberalization of services of general economic interest (SGEI) has been driven by the European sectorial policies which broken up the former vertically integrated monopolies and opened them to market competition. Three main processes

[7] Since its foundation, CDP had been a branch of the Treasury. A first reform occurred in the 1980s, as CDP acquired more organizational autonomy. The 2003's reform transformed CDP i a limited company, with the Treasury holding a 80% stake, while the remaining 20% has been taken over by financial institutions controlled by local governments (s.c. Fondazioni Bancarie).

of market building were introduced at the EU level to foster competition and to protect costumers: 1) the unbundling of networks, i.e. the separation of network activities as natural monopolies from other more commercial activities such as production, trade, metering or sale, through the introduction of budgetary distinction between the controller of the network and the controller of the activities; 2) the opening of the market to non incumbents through the sell of licenses for the operation on the network; 3) the creation of independent regulatory agencies (IRA) at the national level, with different competencies over prices, costumer protection, service quality. The three reforms have not been implemented homogeneously across sectors. If we take a wider perspective, important differences can be found also in comparison with other countries due to some discretion in the European legislation according to the subsidiary principle. For example, as far as the unbundling of networks is concerned, ENEL and ENI were forced to separate the budget, the organization and the ownership of networks, though with different timing, while the French EDF is still a vertically integrated company. Instead, the unbundling in railway is limited to budget; it is related to the existence of postal offices in posts and though difficult to be implemented, and it is lacking in broadcasting.
Similarly, the levels of opening of the market vary consistently: the market share of ENEL in the wholesale energy market is lower than 30% (while EDF's market share is higher than 80%), while other sectors are much more concentrated even after liberalisation of the access (railways and post in particular). The degree of public control varies significantly among sectors and countries: The Italian government has completely privatized Telecom, it owns 30% of ENEL share (while the French government owns around 80% of EDF), and it control the 100% of FS and Poste Italiane. Finally, the institution of national Independent Regulatory Agency was very diverse regarding the timing, the powers and the existence itself of the authority (without considering the varying degrees of formal independence). For example, the national authority for gas and electricity, the AEEG, was soon introduced and gained through time more powers and independence also from the influence of the national government, which repeatedly tried to limit the AEEG intervention (La Spina and Cavatorto 2008). Not the same can be said regards the AGCOM and its Regional branches, often considered weak in their interventions and politicised in their composition (Caretti 2010), but recently charged also for the regulatory functions of the postal service, with the personnel and competences coming from the Ministry (as in the case of the competence for water, attributed to the AEEG in 2011). At the same time, the national authority was only very recently introduced in railways (2011).
The OECD indicators – which measures the intensity of the market reforms against 4 variables reported in the table below – offer a quite straightforward information on the heterogeneity of the market reforms among sectors

Table 2. Intensity of market reforms among sectors

	overall			Entry		Market structure		Vertical integration		Public ownership	
	1991	2003	2013	2003	2013	2003	2013	2003	2013	2003	2013
Telecoms	6,0	0,6	0,4	0,0	0,0	1,7	1,3	-	-	0,0	0,0
Electricity	6,0	3,4	1,4	2,3	0,0	3,0	0,0	4,5	0,0	3,6	1,9
Gas	6,0	2,3	1,9	0,0	0,0	3,0	0,8	4,7	1,9	1,6	1,8
Post	5,8	4,3	3,3	2,0	1,0	6,0	4,0	-	-	5,0	5,0
Rail	6,0	3,1	2,8	2,0	2,0	1,5	0,0	3,0	3,0	6,0	6,0

Source: OECD ETCR dataset *; Note:* indicators are normalized between 0 and 6 with 6 being the smallest grade and 0 being the largest grade in terms of reforms; Entry: measures the presence of barriers to entry the market, where 0 represents the lowest level of entry barriers and 6 the highest level; Market structure: market share of the largest company, where 6 indicates a market share higher than 90% and 0 a share lower than 50%; Vertical Integration: 0, 3 and 6 correspond rispectively to ownership separation, Legal/Accounting separation and no separation; Public ownership: graded 6 in case of 100% public ownership and 0 in case of no public ownership; Overall: average of the grades attached against the other criteria

These differences may suggest the absence of a coherent political design towards the transformation of some constitutive aspects of the public enterprises, namely of the public mission itself. The different intensity and timing of the liberalisation and of the introduction of the regulatory institutions and tools also show the lack of a stable political orientation, at least in general. As the analysis will show, stable orientations are difficult to be found also considering each policy sector separately. Indeed, the different extent of liberalisation and of implementation of the different reforms may also depend on the actor configurations in the policy domain: following Asquer (2011), in the sectors where the national champions were stronger on the domestic market, the opening of the market was wider and the internationalisation of former national monopolies more pronounced. So, it is plausible that common lines of development (either pro-opening or conservative), when existing, can be seen only at sector level.
As a result, market building and regulations impinged not only on the organizational structure of several SOE's but also on their mission, as regulation separates Universal Service Obligation from former monopolies (see section 6.3).

In the regulation of the energy sector, the Italian policy can be considered among the frontrunners in the process of liberalisation. The so-called Bersani law of 1999 (d. lgs. 79/1999, after the name of the Minister of Industry at the time)

introduced the network unbundling that culminated in the creation of TERNA as a separate organisation from ENEL. Since 2004, TERNA owns the transmission network and operates as monopolist with the concession for the transmission activities. In 2013, TERNA's shareholders do not include ENEL anymore, while state ownership has been restructured, as CDP took over Treasury's shares.
The Bersani law also opened the electricity distribution market to newcomers and imposed to the former monopolist Enel to sell energy plants. Moreover, it allowed the constitution of energetic market with the IPEX (Italian Power Exchange) that is managed in concession by the public GSE spa, since 2009. From 2007 on, private clients in the domestic market are allowed to choose their energy provider, thus completely liberalizing the sell of energy.
Finally, in 1995 the National IRA named AEEG, namely the Italian Regulatory Authority for Electricity and Gas, was established with different regulatory and monitoring functions in relation to prices, protection of consumers and promotion of the quality of electric and gas services.
The AEEG is one of the main actors also in the regulation of the gas sector. The d.lgs. 164/2000, also known as "Letta decree" opened the market to other players and the introduced the network unbundling. SNAM spa is now the owner of the gas network, though still partly controlled by ENI, the former vertically integrated monopolist in gas. As in the case of electricity, the distribution of gas at the local level is awarded after municipal concessions opened to different players for a long period of time.
The resulting market format for both energy and gas is a form of oligopoly where ENEL and ENI remain the main actors at national level, now sided by the multi-utilities in the center-north of the country (A2A, IREN and HERA in particular).
Transport is the other sector where the relevance of networks and the adoption of EU policies brought the most relevant changes from the original monopoly of Ferrovie dello Stato. The first changes are linked to the EU legislation on budgetary separation of the infrastructural network from the operation activities (see the Council directive 1991/440/CEE). Moreover, substantial market opening has been introduced by the commission in 2007 for freight and in 2010 for international passenger transport. In Italy, the implementation of the EU reforms started in 1998 and 1999 (dpr 277/1998 and 146/1999). On the example of German reforms, the Infrastructure management, Rete Ferroviaria Italiana spa, has been kept within the national incumbent Ferrovie dello Stato, thus complying EU standards on separation at the minimum level. On the contrary, since 2000 the domestic market has been deregulated both for freight and national passenger routes. In parallel, local mobility services have been devolved to regions that received powers over planning and awarding concession (Di Giulio 2011).
The introduction of an independent regulatory agency, though debated since 1996, is a recent phenomenon, as the Transport Authority was created only in 2012. This is responsible for the guarantee of competition and efficiency, for the control of prices, for the definition of quality standards, for the competitive tendering procedures and for the definition of a minimum standard for costumer protection standards. Moreover, the Authority is expected to pave the way for structural separation of the infrastructure management from FS and the implantation of competitive tendering for regional services.
Postal services also underwent a process of liberalisation by receiving the EU legislation (dir. 97/67/CE on limitation to weight, 02/39/CE and 08/7/CE), notwithstanding the different type of network involved (organizational rather than infrastructural). In Italy, the first transformations where structural, turning the postal division of the Ministry first into a *Ente pubblico economico* in 1994 and hence into a joint stock company in 1998, POSTE ITALIANE spa. The liberalisation of the postal market was introduced gradually from 1999 and completed only in 2011. In that same year, the regulatory activities in the postal services were attributed to the AGCOM, the National Authority for the regulation of the Communications. Over the last decade, Poste Italiane underwent major corporate changes, expanding its domain far beyond the collecting and delivery of postal service. Building on a strong and constant demand for postal saving, the group developed strategies which strongly focused on financial and assurance services.
In this complex process of market liberalisation, the case of broadcasting is one where the non-market component of the activities represents the most important part of the production of the former monopolist, the RAI, whose activity is mainly based on the provision of media products intended as "public services". The sector was affected at first by the Television Without Frontiers act in 1989 and subsequent directives that were implemented in 1997, in 2004, in 2005 and in 2010. .
In the remaining sectors of economic activity, the environment changes were linked to the progress of the economic integration and competition policies, with particular reference to the European legislation on anti-trust, cartels, mergers and state aids.

4. The reformed SOEs

Previous sections have described how the evolution of Italian SOEs is a complex phenomenon, encompassing features of both stability and change. On the one hand, public ownership has stably represented an important element of Italian political economy. Although privatizations culminated over the 1990s and the 2000s produced a state's retreat in some sectors such as Motorways and Telecommunication, the overall public assets seemed to be resilient, as they still represent an important share of country's economy. From a different point of view, nonetheless, the markets where Italian SOEs are currently involved have undergone significant changes toward higher degrees of contestability.

This section shows how the persistence of SOEs and the emerging of markets in previously closed sectors are strictly interwoven. SOEs adapted to the changing institutional and business environments through an intense re-structuring of their corporate governance. All of them, for instance, became joined stock companies and assumed an "holding" structure; this, in turn, eased several processes of unbundling. Moreover, some SOEs underwent a deeper change as they have been partially privatised and listed on the Italian stock market. As emerged in section 2, also the state restructured its strategy as a shareholder. In general, it gradually diluted its capital in some of the most profitable companies, such as Eni and Enel, and, in some cases, restructured its controlling power through CDP, which is taking over an increasing amount of public assets. Table 3 summarizes the main features concerning the corporate governance of our sample of SOEs. These differ with respect to the number of shares owned by the central government, the type of control (direct or indirect), the legal status and whether they are listed on the stock exchange.

Table 3. A taxonomy of the major Italian SOEs

SOE name	Legal form	Public-owned shares	Type of control	Listed
Eni	Private law company; Joint Stock company	25,76% CDP S.p.A. 4,34% MEF	Indirect: CDP S.p.A. Direct: MEF	Listed since 1995
Enel	Private law company – Joint Stock company	25,5% MEF	Direct: MEF	Listed since 1999
FS	Private law company – Joint Stock company	100% - MEF	Direct: MEF	Unlisted
Finmeccanica	Private law company – Joint Stock company	30,2% - MEF	Direct: MEF	Listed since 2000
Fintecna	Private law company – Joint Stock company	100% CDP S.p.A.	Indirect: CDP S.p.A.	Unlisted
Poste Italiane	Private law company – Joint Stock company	100% - MEF	Direct: MEF	Unlisted
RAI	Private law company – Joint Stock company	99,56% MEF	Direct: MEF	Unlisted
Snam	Private law company – Joint Stock company	30% CDP reti S.p.A.	Indirect: CDP S.p.A.	Listed since 2001
Stmicroelectro nics	Private law company – Joint Stock company	27,5% STMicroelectronics Holding II BV	Indirect: STMicroelectronic Holding II BV controlled by 50% MEF	Listed since 1994
Terna	Private law company – Joint Stock company	29,8% CDP RETI S.p.A.	Indirect: CDP reti S.p.A.	Listed since 2004

The ten cases considered in this study are all joint stock companies and they are structured as holding companies, with the only exception of STMicroelectronics that is a limited liability company.

The Ministry of Economy and Finance is the major shareholder of ENEL (with the 25% of the shares), FINMECCANICA (30%), and it wholly owns FERROVIE DELLO STATO, POSTE and RAI. Moreover, it indirectly controls the other companies - ENI, FINCANTIERI and FINTECNA, in SNAM, in TERNA and in STMicroelectronics - via CDP and its subsidiaries.

Some of the SOEs where the government is the major, but not unique shareholder, have been opened to private equity and listed in the Italian Stock Market. These SOEs are subject to the supervision of the Italian Authority CONSOB. POSTE and FS were recently in the rumors for an entrance in that market, but the listing is still on paper. This impressed a major change in the size and structure of Stock Market (Barucci and Pierobon 2007), where publicly owned enterprises which underwent only partial privatizations account today for the 40% of the whole capitalization (Consob 2013, p. 6). Notably, out of the SOEs we are focusing on, those who are listed (and their listed subsidiaries) overall count for 28% of the total Italian market capitalization (table 4).

Table 4. Market capitalization of Italian SOES (bln euros, 2014)

	Market capitalization	% of total market capitalization
Enel	34.87	7.49%
Enel Green Power (controlled by Enel)	8.72	1.87%
Eni	52.94	11.37%
Saipem (controlled by Eni)	3.87	0.83%
Fincantieri (controlled by Fintecna)	1.31	0.28%
Finmeccanica	4.48	0.96%
Ansaldo STS (controlled by Finmeccanica)	1.67	0.36%
RAI WAY	0.86	0.19%
Snam	13.91	2.99%
Stmicroelectronics	-	-
Terna	7.60	1.63%
Total	130.24	27.96%
Total Market Capitalization	465.80	100%

Source: Borsa Italiana, LSEG market analysis; December 2014

4.1 The State as shareholder in Italian SOES: corporate governance and appointments

As in other enterprises, the elements of the corporate governance structure the relationships between actors in the firm and influence the strategy of the firm. In the case of public enterprises, the analysis of some elements of the corporate governance serves to show how the public actor interprets his role as shareholder in the in the Board of Directors (BoD). Even though the appointment of directors formally pertains to a political choice, a central role in the governance of publicly owned enterprises is attribute directly to the offices of the Ministry for Economy and Finance, especially in those firms where it is direct shareholder. The MEF monitors the activities of all its corporations and exerts its rights as shareholder according to the civil law (i.e. it approves the balance, the appointment of directors, their wages, it may modify the bylaws). The MEF also enjoys powers in the form of "golden powers", but only over extraordinary operations in enterprises in sectors as defence and national security, energy, transports and telecommunications.
The firms in our sample are different basically for the number of the director directly or indirectly appointed in the BoD, and for the type of public shareholders who decides. Furthermore, the Italian legislation obliges to the publication of the wages of managers in publicly owned enterprises. Moreover, the unlisted SOEs have to contribute to the overall goals of the spending review and efficiency in management (ex. Directive of the MEF April, 24 and June, 24, 2013).
The abovementioned directives define the eligibility criteria and the appointment procedures and also introduced limitation to the wages of delegated directors according to the s.c. "spending review" law n. 95, 2012.
In addition to these rules, the SOE's by laws define the shareholders rights and the procedures for the appointment of directors. Moreover, listed SOE's have further obligations on corporate governance and transparency.
As far as the number of appointments is concerned, the government jointly with the MEF appoint 6 members up to 9 in both the BoD of ENEL and ENI. In FINMECCANICA, the MEF appoints 7 up to 11 directors and expresses a further director deprived of the vote, to guarantee for the special safeguards state by law n. 474/1994. Moreover, the MEF directly nominates the whole BoD of FS (5 directors, in agreement with the Ministry of Transports) and of POSTE (5 directors). As far as the Rai is concerned, the MEF appoints only 2 directors up to 9, while the rest selected among MPEs by the parliament itself, according to a partisan logic.
STMicroelectronics represents a further exception, since it is the only enterprise in our sample that adopts a dual model of corporate governance. The MEF appoints 3 members of the Supervisory Board and 1 member in the management board. Finally, CDP nominates respectively 5 up to 9 in TERNA and 5 up to 9 in SNAM. Directors remain in charge for three years. Hence, the privatisation of former public enterprises has shaped differently the corporate governance of each SOE; the public nature of the State as shareholder and the memory of the politicization of appointments in former public enterprises also imposed further obligations on transparency and limitations to management wages. In other words, the passing of time after privatisation may have changed some "privileged" rules for public shareholders, but it also have also made the picture much more complex.

5. Public Mission: a brief introduction

This deep corporate re-organization opens the arena to new research questions: Have they taken on the challenges of corporate re-organization and market competition as an opportunity to expand their business and improve their performance? Are modern SOEs managed the same way as private companies? Do SOEs still preserve some features of traditional SOEs in terms of public mission and general interest objectives? To address these research questions, this section introduces the concept of public mission.
That a government-owned enterprise is required to pursue goals other than the maximization of profit (economic goals) to generate positive externalities for the social environment in which these are embedded (social goals) is now a generally accepted idea (Aharoni, 1981; OECD, 2005; Thynne, 1994; Wettenhall & Thynne, 2002). Social goals, such as welfare, social cohesion, equity, consumer protection and public interest outcomes, are the linchpin (the main *raison d'être*, according to Scott (2000)) that holds together the mission of an SOE. In turn, the mission provides overall strategic direction (Stevens, Moray, & Bruneel, 2014). Literature argues that the combination (mix) of (potentially competing) economic and social goals mirrors the hybridity of the public enterprises and shapes their behaviour and performance (Christensen & Lægreid, 2011; Grossi & Thomasson, 2015; Walsh, Weber, & Margolis, 2003). According to Thynne (1994, p. 73), the biggest problem is "the need for an effective mix of commercial and social objectives: the need to recognize that, given their 'publicness' some companies, quite rightly, are unable to operate on a 'competitively neutral' footing vis-a-vis non-government companies".
The public mission is a good way to better understand the past and present features of contemporary public enterprises (Florio, 2014). However, the fact that there is no consensus on the meaning of the term itself – although it does seem to somewhat overlap with notions such as corporate social responsibility and public value, or theories like business ethics and stakeholder theory – poses a major challenge for analysing the 'public mission'. This Section therefore takes a pragmatic look at the available evidence, and attempts to first clarify the 'what' and the 'why' of public mission.
To begin with, the research contributions that address the various types of public enterprises are not always consistent in their use of the term 'public mission' or similar, e.g., public purpose, collective purpose, social mission, public function

(see for an extensive analysis: Bozeman, 2007, p. 133; Jørgensen & Bozeman, 2007; Wettenhall & Thynne, 2002). Hence, in this paper, 'public mission' is used as an umbrella term, while the public enterprises are broadly defined as "(a) the direct producers of public services, either through liberalized market arrangements or under franchised monopoly, (b) ultimately owned or de facto controlled by public sector entities, (c) having a public mission that can be identified in legislation, regulation, statutes, etc., (d) whose ownership in principle can be shifted to the private sector" (Ciriec & Bernier, 2014, p. 16). Following Preston and Post (1975), the scholars that coined the expression 'public responsibility', we have chosen to use the adjective 'public' rather than 'social' because it more truly reflects the notion of mission and the fact that the SOE operates within the specific context of public life. Here, the term 'public mission' is meant as an organization's mission informed by context-specific public values.

At an organizational level, the public mission encompasses disparate needs and values, those of the collective (society's public values) and those of the individual (the individual's public values), which find common ground purely because the values are divorced from pure market logic and from legal concerns. For a value to be called 'public', there has to be a collectivity, an aggregation level that can benefit from the protection of this value (de Bruijn & Dicke, 2006, p. 719). In the liberalized utility sectors examples of public values are consumer protection, universal services, reliability, safety, quality and affordability of the service (de Bruijn & Dicke, 2006).

Values are enduring beliefs that influence the choices among available means and ends (Kernaghan, 2000, p. 95), although no organization of any kind is free to unilaterally choose either the means or the ends for operating in its specific task environment. Heath and Norman (2004, pp. 255-256) have identified five general categories of responsibilities imposed upon the SOE by the State, one of the key actors with the most influence on the task environment of these organizations:

1. *Macroeconomic*. Several reasons can push SOEs into counter-cyclical spending during recessions, including the need to level out the business cycle; to create over-capacity and "make work" projects to stem unemployment and safeguard employment levels; and to keep inflation in check through wage and price controls. Moreover, the government can use the SOEs to help it to meet specific fiscal objectives.
2. *National interest*. SOEs are often seen as the 'house stewards' of national industry, providing domestic firms with subsidized goods and services (especially energy) and guaranteed markets in which domestic suppliers take precedent over foreign suppliers. The SOEs are usually a strategic card of national interest, the government's preferred channel for investment in sectors identified as national priorities, or to support the development of fledgling industries with the potential to enhance international competitiveness. The SOEs are also used to ensure that industries, information, and productive technology deemed essential to national security remain under state ownership and control.
3. *Redistribution.* The state relies heavily on the SOEs to help achieve redistributive goals. This normally translates into refraining from the kind of price discrimination practices adopted by profit-maximizing private firms to ensure that the same services are delivered at the same price nationwide (e.g. postal service).
4. *Model employer.* SOEs are cast in the role of model corporate citizens, obliged to 'lead by example' and to act as a 'pressure gauge' for the private firms. This means that the SOE often offers higher wage rates, superior benefits (e.g. on-site daycare), better job security, or that it hires more women or members of disadvantaged minorities.
5. *Reduction of externalities.* The production of positive externalities can be defined as the main social responsibilities of an SOE, even though the need to control negative externalities leads the state to keep certain SOEs firmly in the public sector domain. Above all, in the liquor and gambling industries, where the state monopolies act to prevent the private enterprises from producing "too much" of the relevant good. Likewise, the public ownership of industries with the potential to create catastrophic environmental externalities (such as uranium mining and refinement, nuclear energy generation, etc.).

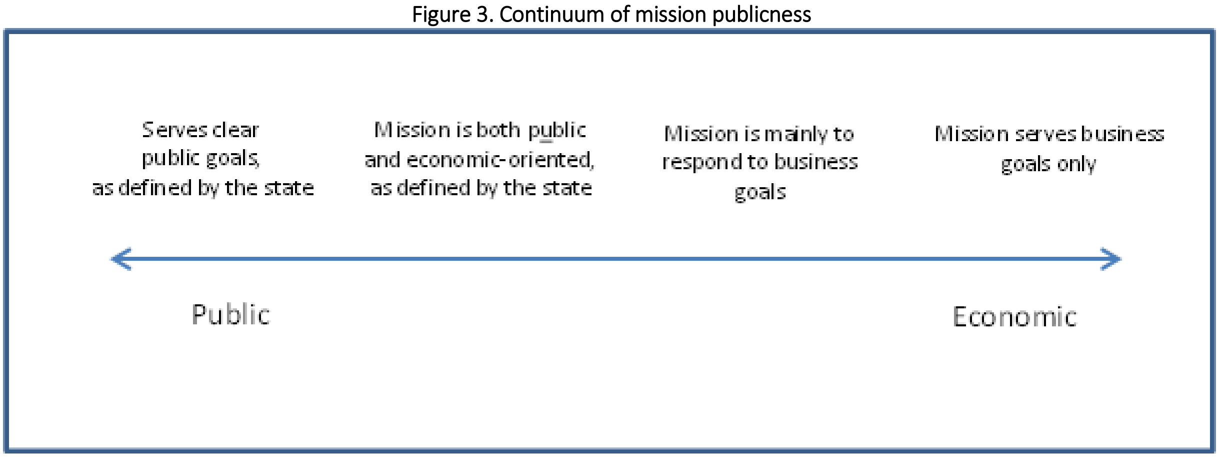
While there are many combinations in real-life practice, the above categories give an overall but not exhaustive idea of the ways the State affects the organizational strategies and practices of public enterprises, and the variety of values and issues that potentially fall within the remit of the public mission.

Nonetheless, among other things, public values are, 'by definition, never static' and 'inherently relative' (Bognetti & Obermann, 2012; de Bruijn & Dicke, 2006, pp. 721-722). Moreover, according to de Bruijn and Dicke (2006, p. 720) "what is defined as a public value in a utility sector in one country may be labelled as 'private' in the same sector in another country. Or what is labelled as a public value in one period of time may be defined as private in another decade". According to Carroll (1979) one consequence of this is that 'the degree of organizational interest in the issues' is 'always in a state of flux' (p. 501).

Other contributions recognize that the SOE mission is also shaped by 'country-specific institutional characteristics' (Stan, Peng, & Bruton, 2014, p. 482), including 'the dominant patterns of economic organization and control' of the business systems (Hotho, 2014, p. 673; Lorrain, 2005) and the different national public-service traditions (Scott, 2000). It is widely believed that the current strengths and weaknesses of the organization of the markets, the industrial supply and the *modalities of competition* are the result of certain key choices made in the past (Lorrain, 2005, p. 260, emphasis in the original).

Based on the three dimensions of organizational publicness identified by the seminal book of Bozeman (1987), i.e., ownership (public, private, or nonprofit), funding (government grants versus consumer payments), and control (by political or market forces) (Andrews, Boyne, & Walker, 2011), it is plausible to say that the SOE mission is shaped by these same three aspects. In Bozeman's original model all three variables should be viewed as continuous rather than categorical. For example, 'when government has the greatest influence, then the …. organization is more public. When government influence is diminished, the organization is more private' (Emmert & Crow, 1987, p. 57).
Therefore, adopting a 'dimensional' approach means that the SOE mission can be considered 'public' at different degrees (see Figure 10). The right-hand side of the continuum depicts the highest level of economic orientation (e.g., profit maximization), while the left side describes an economic orientation less central to organization's mission. The two extreme situations and the two intermediary situations are the result of a mix of ownership, funding and control variables that cannot be predetermined. As a result, it is impossible to place a specific SOE in discrete categories, instead it needs to be characterized by its relative placement along the public-to-private focus continuum (ibidem). Likewise, it is impossible to establish which of the three dimensions of publicness is most important, and for which aspects of goal achievement.

Figure 3. Continuum of mission publicness



The literature abounds with studies that ask whether the SOE has the effective ability to reconcile concurrent economic and social objectives, summing up the 'dual' public mission challenge in four interrelated critical issues – mission drifts, clashing values, performance, and behaviour. Nonetheless, the results of these studies suggest conflicting reasons for the practical consequences of the dual mission.
More recently, the thrust of the empirical research critics' main argument is that regardless of the legal status under which the SOE formally operates, the driving force of its activities – especially in the case of market-listed public enterprises - is increasingly self-interest, e.g., market profitability rather than customer service or social responsibility (Wettenhall, 2001, p. 27). For instance, one needs only to look at the internationalization strategies of the big energy players (Soda, 2015); the use of market criteria in the scheduling of public TV programmes (Meier, 2003); the attempts of the public broadcasters to combine audience orientedness and public mission, ratings and quality (Celli & Balestrieri, 2003; Meijer Costera, 2005); the tension between the innate *territorial vocation* of utilities tied to the community of reference; and the *industrial-business vocation* that focuses more on the intention to respond to market stimuli, meant, in the broadest sense, as the centre of all the opportunities (wherever these may be located) to enhance technical and commercial know-how and distinctive competences (Citroni, Lippi, & Profeti, 2012; Elefanti & Cerrato, 2008, p. 4 our translation; Giannelli, 2010). Hence, it is not unusual to see this tension progressively *erode* the public mission (Delponte, Sorrentino, Turri, & Vandone, 2014).
One hypothesis is that the self-interest that is increasingly shaping the strategies and behaviours of the SOEs is due to the combined effects of the isomorphic (coercive and normative) dynamics set in motion by the respective task environments. One example of the isomorphic behaviour of the ten major Italian SOEs (see below) is their commitment (and claims) to a range of corporate social responsibility (CSR) initiatives, the undisputed domain and culture of the business world.
Is the public mission thus set to become *invisible* because absorbed into the CSR actions of the contemporary SOE? In addressing the idea of publicness, however, we believe it important to treat the two notions on separate analytical and practical levels.

5.1 SOEs and Public Mission revisited

Previous sections showed how SOEs face today an increasingly complex environment. If, on the one hand, they have been corporatized, partly privatized and brought to compete in liberalized markets, on the other, SOEs still represent actors with which national and local governments maintain privileged relations.

It goes without saying thus, that also the public mission of these enterprises is expected to be influenced by such institutional and organizational changes, adapting their structures and strategies according with the reforms which, in each sector, re-defined the boundaries between the provision of public services and the commercial activities. While it is plain that the former represents a typical case of public mission, less clear is the meaning of SOEs involvement in de-regulated markets. The emergence of a significant profit orientation of SOEs is in fact challenging with respect to the publicness of their original models. With this respect, we distinguish between a formal public mission that SOEs may be explicitly required to pursue from an informal public mission that may be deduced by analysing the SOEs behaviour and strategy in terms of profit destination; degree of internationalization, attitude towards the issue of employment; and propensity towards long-term investments and R&D.

The following sub-section discuss whether the concept of public mission if formally embedded into the SOEs' statutes and whether SOEs are formally subject to a universal service obligation

5.2 Analysis of the SOEs statutes

Our textual analysis of the statutes (articles of association) of the 10 companies investigated in the study reveals a total absence of direct references to their respective public missions. The average document length of the Articles, which set out the purpose of each company and how they are run, governed and owned, including the responsibilities and powers of the directors and other corporate bodies, is approximately 20 pages. However, none of the clauses on the purpose of each company shed much light on the public mission and, given that all the organizations in question are large-sized multibusiness operators, tend to be highly generic. Moreover, the language used in the Articles is not only the driest of dry technical jargon, but verges on the legalistic.

After discovering that none of the information given in the Articles could enlighten us about any of the company-specific public missions, we examined the content provided by the official websites. Here, too, there were but two allusions to the PEs' overall idea of the orientation to publicness:

- the main stakeholders targeted by the web-driven communication; and
- the methods used to communicate the respective missions and values, which are directed at the external environment.

The main corporate communication targets of the PEs are the clients, the media, jobseekers, suppliers, investors, and consumer associations. The web pages of the "Company profile" or "Mission" sections generally deliver brief statements on recurring values, such as: corporate social responsibility (CSR), respect, ethics, trust, transparency, integrity, attention to people and their needs, commitment to innovation. Sustainability (with the emphasis on environmental issues) is the main focus of the institutional website content. The homepage menus of many of the companies investigated direct the user to sections dedicated to the corporate social responsibility initiatives launched in a variety of sectors through foundations and cultural and other projects, in Italy and abroad.

On the topic of sustainability, Terna is the only company of the panel of ten that distinguishes among the different stakeholder categories, which it divides into the following groups: Regulators of licensed activities; Public decision makers and authorities; Shareholders; Lenders; Electricity system operators; Media and opinion makers; Customers (non-regulated activities); Suppliers; Business partners; People in the organization; The wider community; Local communities. Terna, in fact, sets out its commitment to each category, as well as the methods used to monitor and check the results.

Ruling out an exhaustive textual analysis of the entire website, it was decided to explore the homepage menu to see if we could find, with just a couple of click-throughs, any documents of relevance that could shed light on these same values. Indeed, this proved an easy route to not only the company profile and the financial statements, but also to the Code of Ethical Conduct, the Report on Sustainability, human resource policies, and corporate governance systems (in pdf or html format). The content is almost always rich and appealing; some of it is even in multimedia format, such as the interactive financial statements of SNAM or the Terna website's streaming of Professor Freeman's video, the scholar who developed the theory of stakeholders. In addition, all the companies make active use of the most popular social media.

In short, while acknowledging the fact that the results of this analysis rely significantly on the structure and the quality of the websites visited, as well as the business in which the specific company operates (usually to serve a vast market), our findings indicate that none of the companies have a clear and explicit public mission and that the public commitment of the panel investigated mainly revolves around their CSR activities. Nevertheless, it is worth remembering that corporate communications are unidirectional by definition, regardless of the methods and tools used. In other words, the chorus is incomplete, and other 'voices' (those of the stakeholders *in primis*) are needed to understand and show how these companies actually translate their stated principles into concrete behaviours and practice. We should bear in mind, also, that some of these players have a history tainted by unresponsive behaviour, the impact of which had global repercussions.

5.3 SOEs as providers of universal services

The passage from the vertically integrated monopoly towards more de-regulated market shifted some functions related to the public mission towards different actors of the regulation and relied on different instruments. The concept of Universal Service Obligation (USO) has been introduced at the European level to concretely translate the concept of public mission in relation to the delivery of services that would not be spontaneously provided by the market otherwise. The liberalization of service markets itself helped to redefine the universal service in the different sectors.

For instance, in the electricity sector ENEL does not formally receive from the State any compensation for the USO. At the same time, the issue of consumer protection has been tackled by establishing the Acquirente Unico SpA (Single buyer), a subsidiary of GSE indirectly controlled by the Treasury, is vested by law with the public mission of procuring continuous, secure, efficient and reasonably-priced electricity supply for households and small businesses. Acquirente Unico buys electricity in the market on the most favourable terms and resells it to distributors or retailers of the standard offer market ("mercato di maggior tutela") for supply to small consumers who did not switch to the open market. Finally, the AEEG determines the prices for energy acquired via the AU. Hence, we can say that in the energy sector the public goals are not implemented through regulated markets and public subsides.

Nonetheless, the public interest can be pursued through other instruments. For example, in 2008 a "social tariff" has been introduced by legislation. Moreover, law n. 239/2004 delegates the national government to regulate issues of energy security. another indirect contribution to the public interest may lay in the initiatives of the Ministry of Economic Development aimed at the development of Resource and Development activities through some joint ventures to be financed with three year agreements.

In the gas sector, the obligation to provide a "safeguard regime" (in Italian servizio di tutela) only remains for a particular category of domestic clients since 2013 (see laws n. 125/2007; n. 69/2013; AEEG del. n. 280/2013/R/gas and 457/2013/R/gas).

In railway transports, Italy decentralized the system for USO (Di Giulio 2011). The USO is financed with transfers from the State to the Regions, which award concessions for the operation of regional transports. Overall, Trenitalia receives circa €2 bn a year – inclusive of regional integrative funds – for carrying out local mobility services. The instrument to regulate this system is the regional service contract between the Region and the railway operator who holds the concession. Similar contracts, but of lesser value, have been introduced also for some non-profitable freight and long distances passenger services, which the Department of Transport has directly awarded to Trenitalia.

In postal services, Poste Italiane holds the concession for the Universal Service until 2026, as established through the EU and the Italian legislation (2008/6/CE, D.Lgs. 58/2011). The national regulatory agency AGCOM dictates the conditions for universal postal services with the deliberation n. 353/12/CONS AGCOM. The content and the financing of the Universal services are contained into a "program contract" between the Ministry of Economic Development and POSTE ITALIANE, under the supervision of the AGCOM that impinges on the monitoring of activities, the conditions of the service and the composition of compensations for the public service. This type of service contract is usually signed for three years and often extended in prorogation.

A form of service contract also regulates the Universal Service as public broadcasting for television. The main issue relates to the awarding of the "Public Service", the name that the Universal Service takes in the sector of broadcasting, paid mainly through television license fee. Therefore, the RAI receives the television license fees as the main compensation for some particular limitations to program schedule and reserved video time. The RAI is awarded the concession for the public service until 2016 and it is compelled to structure its programme schedule according to the service contract renegotiated every three years on paper with the Ministry of Economic Development.

Overall, four different patterns emerge in relation to Universal Service Obligations and resulting subsides in our sample, for 2013. While FINMECCANICA, FINTECNA and STMelectronics do not benefit from direct service contracts, even though enterprises such as ENEL and ENI may rely on favorable conditions due the State direct intervention in the different countries. POSTE represents a case where the incidence of subsides on total revenues is irrelevant (343 millions from service contracts over 22,822). FS gains less than a half on service contracts (3,000 out of 8,329), while the RAI basically lives on the Universal Service Obligations, as the great part of its revenues comes from the general public (1,755 out of 2,748).

6. Contemporary Italian SOEs: an economic assessment

This section analyses the behaviour of Italian SOEs looking at the main economic and financial outcomes produced over the last decade. The main goal of this section is to understand whether the contemporary Italian SOEs have improved their performance and financial position; whether their strategies still differ from the private companies' ones and whether they still achieve, though more softly or indirectly, an informal public mission.

In 2013 the value added of the top ten Italian SOEs corresponded to 4.5% of the Italian national GDP (table 5). Moreover, compared to the ten top Italian private enterprises, the 10 major Italian SOEs have higher operating revenues and assets, while they employee a lower number of workers. The assets of the ten major Italian SOEs is even higher than the aggregate level of assets of the Italian top 50 private enterprises (table 6). The reason behind their significant size in terms of assets and revenues is quite straightforward. Most of these SOEs provide primary services to a very large number of consumers. They mainly operate, though not exclusively, in sectors of general interest with features of network industry, where they still hold a dominant position and own a relevant market share.

Table 5. The ten top Italian SOEs – Value added (bln euros, 2013)

SOE name	Value added
Eni	26.002
Enel	19.567
Finmeccanica	5.392
Poste Italiane	7.998
FS	5.802
Fintecna	1.031
Snam	3.087
RAI	1.187
Terna	1.679
Stmicroelectronics	0.655
Total SOEs	72.399
Total industry and services	1,423.104
National GDP (current prices)	1,618.904
SOEs on total industry and services	5.10%
Total SOEs on national GDP	4.50%

Source: own elaboration on Mediobanca 2014 and Amadeus

Table 6. Top ten public enterprises in Italy (thousand euros, 2013)

Enterprise	Sector	Turnover	Assets	Employees
ENEL	Energy	80.54	164.15	71,394
Sector weight		48%	57%	53%
ENI	Oil and Gas	116.93	138.29	73,171
Sector weight		66%	83%	76%
FERROVIE DELLO STATO ITALIANE	Transportation	9.37	63.24	71,031
Sector weight		32%	74%	52%
FINMECCANICA	Defense and security	17.03	29.03	63,355
Sector weight		11%	15%	15%
FINCANTIERI	Construction	3.83	7.06	20,341
Sector weight		2%	4%	5%
POSTE ITALIANE	Other public services	13.20	133.93	145,531
Sector weight		74%	84%	76%
RAI	Broadcasting	2.81	2.31	12,965
Sector weight		26%	16%	48%
SNAM	Energy	4.11	24.18	6,034
Sector weight		2%	8%	4%
STMICROELECTRONICS	Electronics	1.44	1.27	9,464
Sector weight		10%	8%	16%
TERNA - RETE ELETTRICA NAZIONALE	Energy	1.99	14.88	3,465
Sector weight		1%	5%	3%
Top ten SOEs (sum)		251.23	578.33	476,751
top ten private enterprises (sum)		213.84	331.99	676,980
top fifty private enterprises (sum)		354.64	491.23	1,126,117
top ten SOEs/top ten private enterprises		117%	174%	70%
top ten SOEs/top fifty private enterprises		71%	118%	42%

Source: own elaboration on Mediobanca 2014 and Amadeus

What remains less clear concerns their economic performance and industrial strategy. In addition to being large, are these companies profitable? Have they improved their performance? Moreover, how do they behave compared to other private and public enterprises? In the next sections, we analyse the SOEs budget data and industrial strategies to infer whether their behaviour differs with respect to private enterprises and can somehow be linked to an informal public

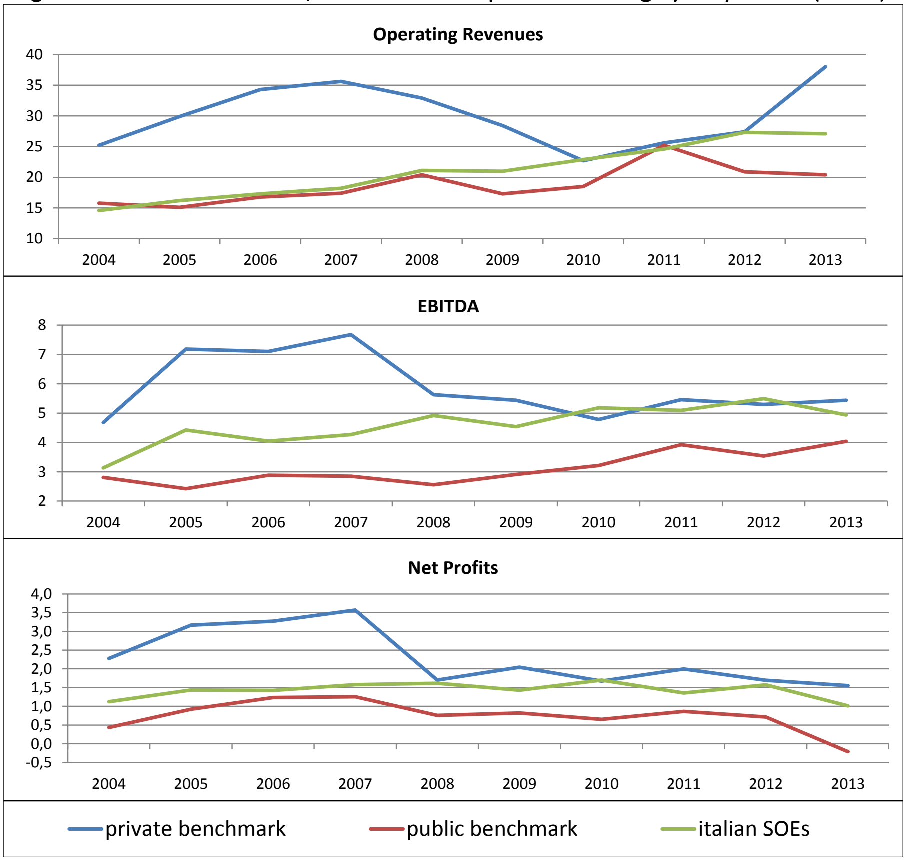
mission. We first analyse whether modern Italian SOEs are profitable and what is their impact on the national public finances by comparing the dividends from the SOE to the central governments with the economic transfers from the governments to its SOEs (section 6.1). Then, we move to analyse whether and to which extent the Italian SOEs have internationalized, by expanding their business beyond national borders after markets have been liberalized. In this way we try to infer whether, after being reorganized and increasingly exposed to market incentives, modern SOEs show an improved entrepreneurial attitude (section 6.2). Next we analyse their approach towards the issue of employment: Are SOEs used by the government to support employment? Have they improved their labour productivity? Does their approach towards employment strongly diverge from their private benchmark? (section 6.3) Then, we look at the level of investments by analysing the trend of their fixed assets, with a particular focus on investments in R&D (section 6.4).
In particular, we will look at the SOEs balancing sheet data over the period 2004-2013, and we will compare them with some industry peers. As proper industry peers cannot be identified within the national domestic borders, we broaden our geographical scope of analysis and for each Italian SOE we look for some European industry-peers operating in the same sector of activity, and with comparable size in terms of total assets. We have chosen for each Italian SOE at least one private and one state-owned benchmark[8], and they are reported in table A.1 of the Appendix I.

6.1 Italian SOEs as economic players: profitability

Traditional SOEs were widely found to be unprofitable, and the Italian SOEs did not represent an exception to this case. Their excessive and unsustainable burden on public finances were one of the main motives for promoting privatizations also in Italy. Are these arguments still valid after the Italian SOEs have reformed their corporate, legal and economic profile? We want to assess whether the modern Italian SOEs are still unprofitable and, in particular, what is their impact on the national public finances. In general, contemporary SOEs do not directly affect public finances anymore. After they have reformed their legal status, they face budget autonomy and the European State Aid rule strictly regulates and limits economic transfer from the States to enterprises. Nevertheless, as controlling shareholder, the State is entitled to receive an amount of dividends in proportion to the percentage of owned shares, while public finances are likely to decrease due to the transfer from the State to its SOEs by virtue of specific contracts for the provision of a universal service under no direct costs' remuneration. We first compare the economic performance of the Italian SOEs with their industry peers first by looking at their average revenues, EBITDA and net profits. Aggregated data show that the Italian SOEs, on average, have earned over the period 2004-2013 positive net profits. In particular, we observe that SOEs and their State-owned benchmark face a comparable trend with respect to all the considered variables, though, on average, the former shows higher values than the latter. Conversely, before the financial crisis the private benchmark shows significantly higher revenues, EBITDA and profits than the Italian SOEs, while their values tend to converge after 2008. This suggests that the crisis has affected more private than SOEs.

[8] We have not found a private benchmark for "Poste Italiane" since most of the postal services in EU is provided by a SOE, while we have not found an appropriate state-owned benchmark for the firm "Stmicroelectronics".

Figure 4. Trend of Revenues, EBITDA and net profits – average yearly values (mln €)



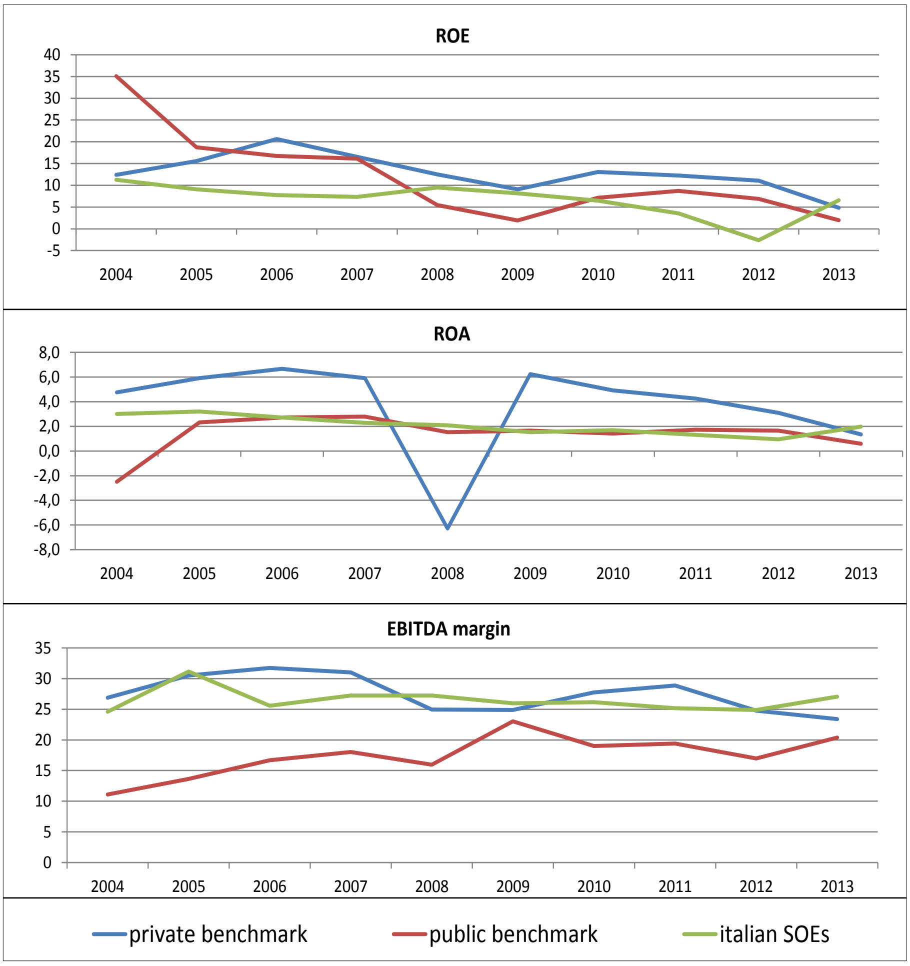
Source: own elaboration on Amadeus

Profitability ratios allow for a better comparability among enterprises with different size. They confirm that, on average, the profitability of the Italian SOEs is aligned to their state-owned European peers and quite comparable with their European private peers.

Disaggregated data at a firm level show some heterogeneity in the Italian SOEs profitability (see table A.2 in Appendix I). Notably, only those firms operating in the energy sectors – Eni, Enel, Terna and Snam – plus Poste Italiane show positive profit ratios over time. Conversely, FS and STmelectronics incurred in economic losses before 2008, while their profit ratios turned positive in the last period 2009-2013. In particular, FS' profit increase has been mainly due to the entry into operation in 2007 of the High Speed network. The opposite occurred when looking at Finmeccanica and Fintecna, whose profits have declined after the economic crisis. Finally RAI shows negative data over the whole period.

When comparing the Italian SOEs to their respective private and state-owned peers we observe that the Italian energy SOEs – Enel, Terna and Snam – show better or highly comparable profit ratios. In particular, those enterprises operating in the energy sectors, and in particular the grid/pipeline operators, have the highest profitability ratios. Eni, Poste Italiane and Fincantieri show better values for just one of their peers, while the other Italian SOEs have a worse performance than both their private and public benchmarks.

Figure 5. Trend of profitability ratios – average yearly values



Source: own elaboration on Amadeus

6.1.1 Dividends

After having undergone some major reforms, Italian SOEs are on average profitable firms, with remarkable differences among firms and sectors. But how are these profits employed? To which extent are their kept inside the firm and used for investing in the future of the company or distributed among shareholders in the form of dividends? In this section we first focus on the Italian listed SOEs, as they are the most profitable ones, and we try to infer whether their dividend policy differs with respect to the private listed enterprises. For this purpose, we focus on their dividend yield over the period 2009-2013: the ratio of the last annual dividend per share paid to shareholders and the share closing price.

Table 7. Dividend Yield for Italian listed major SOEs

	2009	2010	2011	2012	2013	2009-2013 mean
ENEL	7,1	7,4	7,3	5,9	4,8	6,5
Eni	6,8	6,2	7,1	6,5	6,5	6,6
Finmeccanica	4,0	4,5	0,0	0,0	0,0	1,7
Snam	6,2	6,5	6,6	7,4	6,8	6,7
STMicroelectronics	5,1	4,9	5,3	6,8	4,8	5,4
TERNA	7,4	6,8	7,5	7,2	6,0	7,0
Mean SOEs	6,1	6,1	5,6	5,6	4,8	5,7
Mean top ten private firms	5,9	3,7	4,9	5,4	4,0	4,8

Source: own elaboration on Mediobanca

Over the period 2009-2013 the Italian SOEs granted a higher dividend yield than the top ten private companies listed on the Italian stock exchange. This suggests that some of the Italian SOEs, and the listed ones in particular, not only have turned into well performing and profitable firms; they also bring some relevant revenues to their shareholders. This also brings us to exclude that, when listed, the Italian SOEs behave in a significant different way from other private enterprises in terms of dividend policy. If anything, this suggests that Italian listed SOEs are instructed to distribute among their shareholders a high share of their positive profits in the form of dividends. The following table reports the amount of dividends that the Italian listed have distributed to their controlling and minority shareholders over the period 2009-2013. RAI and FS are not reported as they have not distributed dividends over the considered period. Data show that the Italian SOEs have distributed a higher amount of dividends than the top 30 private listed firms. On average, 2.4 bln €/year of dividends have been distributed to the public shareholder over the period 2009-2013. This points out that the control of some enterprises by the Italian central government ensures some positive economic returns and suggests that one of the driving motives for keeping these firms under public control is that these firms are profitable and bring to the State a non-negligible amount of economic entries which increase public finances. The opportunity costs of distributing dividends is given by a lower amount of profits which could be kept into the firms and that would improve the firm's financial position (liquidity) allowing to develop long-term investments with a lower leverage position. If anything, this suggests that for the Italian listed SOEs the short-term dividend goal weights strongly. Thus, we have not found a clear evidence that, when listed, the Italian SOEs strongly diverge from private enterprises in terms of profit and dividends.

Table 8. Distribution of dividends among controlling and minority shareholders (€ mln.)

	2009	2010	2011	2012	2013	2009-2013
ENI						
Controlling shareholder	1,097	1,097	1,142	1,178	1,200	5,714
Total shareholders	4,079	4,188	4,371	4,118	3,986	20,741
ENEL						
Controlling shareholder	734	823	764	441	382	3,144
Total shareholders	2,351	2,675	2,483	1,452	1,273	10,233
TERNA						
Controlling shareholder	114	126	126	120	120	606
Total shareholders	381	421	422	402	402	2,028
SNAM						
Controlling shareholder	-	-	-	424	326	750
Total shareholders	-	-	-	845	845	1,690
STMICROELECTRONICS						
Controlling shareholder	47	73	75	74	71	340
Total shareholders	171	264	274	269	258	1,236
FINMECCANICA						
Controlling shareholder	72	72	-	-	-	143
Total shareholders	237	237	-	-	-	474
POSTE ITALIANE						
Controlling shareholder	150	500	350	350	250	1,600
Total shareholders	150	500	350	350	250	1600
FINTECNA						
Controlling shareholder	30	30	30	100	100	290
Total shareholders	30	30	30	100	100	290
Total SOEs						
Controlling shareholder	2,244	2,721	2,487	2,263	2,123	11,837
Total shareholders	7,399	8,315	7,930	6,691	6,269	36,602
Weight controlling shareholder	30%	33%	31%	34%	34%	32%
Private enterprises listed on the Italian Stock exchange						
Controlling shareholder	1,067	876	1,089	1,651	1,040	5,723
Total shareholders	3,396	3,177	3,214	3,363	2,526	15,676
Weight of the controlling shareholder	31%	28%	34%	49%	41%	37%

Source: own elaboration on Mediobanca and firm annual reports

We finally compare the revenues returned to the Italian governments in terms of dividends with the transfers made by the State to certain SOEs by virtue of specific program contracts or agreements for the provision of an universal service. We observe that over the period 2009-2013 the amount of transfer to the Italian SOEs which are subsidized to provide a universal service (FS and Poste Italiane) is comparable with the total amount of dividend distributed by the Italian SOEs. Nevertheless, only part of the dividends has been distributed to the public controlling shareholder, thus the government incurred over the period 2009-2013 in a deficit equal to 24 mln euros. Moreover, the firms receiving the public transfer are different from the firms who earn positive profits and have distributed those dividends to the government. This constitutes a kind of cross-subsidization among firms and sectors which brings us to distinguish those SOEs, which are listed, profitable and do not show significant differences with respect to private enterprises, from other enterprises, such as RAI, Poste Italiane and FS, which are unlisted, wholly controlled by the State, and mainly unprofitable. Indeed, RAI has incurred in losses, while the positive net profits registered by Poste Italiane and FS in the last years are largely determined by the direct transfer they received from the government in terms of both current and capital assets. It is worth to mention that these firms are the most labor intensive ones and that, after their corporatization, they have improved their corporate organization and the quality of their management. Moreover, they have expanded their business into new and more profitable markets (high speed rail for FS and financial services for Poste Italiane). What can we infer is that these companies have the duty to provide a public service, and the related costs are mainly financed through direct transfers from the central government rather than being entirely passed through into final prices. Though assessing the quality of these services goes beyond the scope of this paper, this analysis has highlighted that both the services provided by this latter category of SOE and the way these services are financed can be linked to an informal public mission, which is the provision of a universal service financed through a cross-subsidization system.

Table 9. Surplus and Deficit between transfers and dividends (€ mln.)

	Transfer from Italian Government		Dividends By Italian SOEs		Total Dividends – Total Transfers	Dividends to – Transfers from the central government
	Poste Italiane	FS	All Shareholders	Controlling shareholder		
2009	682	9,134	7,399	2,244	-2,417	-7,572
2010	489	5,806	8,315	2,721	2,020	-3,574
2011	380	6,484	7,930	2,487	1,066	-4,377
2012	360	7,559	6,691	2,263	-1,228	-5,656
2013	350	5,228	6,269	2,123	691	-3,455
Total	2,261	34,211	36,602	11,837	130	-24,635

Source: own elaboration on Mediobanca, Aida, Arrigo and Di Foggia 2013; 2014; FS and Poste balance sheets data

6.2 Italian SOEs as global players: Internationalization.

As discussed above, for SOEs profit-oriented activities rapidly grew in values and strategic importance. SOEs used to hold a monopolistic position in their domestic markets. Recently, market liberalization gave as well to SOEs the opportunity to explore new business opportunities in a global scenario. They have been increasingly playing an active role in the financial markets and to diversify their business and expand internationally though cross-border M&As. In particular, Italian SOEs have been quite active players in the Market for Corporate Control. We have recorded 327 deals between 1997 and 2014. This activity has increased before the financial crisis, and then it declined.

Figure 6. Number of M&As performed by Italian SOEs in the new millennium

Source: own elaboration on Zephyr

Eni, Enel and Finmeccanica are the most active Italian SOEs in the market for corporate control. Together, they cover more than 70% of these deals. Respectively, 57%, 48% and 36% of their deals targeted firms outside Italy. While the internationalization of ENI and FINMECCANICA is not a recent phenomenon, ENEL used to operate only within domestic borders. Thus, the pattern of M&As performed by ENEL is informative on how ENEL has re-oriented its business strategies by looking at new expanding markets and facing the challenge of competition in a globalized scenario. The ENEL's internationalization has been a radical change, boosted by the takeover of ENDESA, the Spanish power incumbent with a leading position in Latin America. Today, the Group serves approximately 61.5 million power and gas customers in 40 countries worldwide (Soda *et al.* 2012).

Interestingly, also FS, Snam and Terna have expanded their economic activities beyond the Italian borders, consistently with the increased geographical scope and European integration of the markets where they respectively operate. In particular, FERROVIE DELLO STATO recently internationalized mainly in the German market with NETINERA for passengers and with TX LOGISTICS for freight. Conversely, Poste Italiane, RAI, Cassa Depositi e Prestiti and Fintecna have performed a lower amount of M&As, and mainly at a domestic level.

Table 10. Domestic and cross-border M&As by the Italian major SOEs

	Domestic M&A	Crosss-border M&As	Share of cross-border deals	Target countries
Cdp	12	4	25%	AT, GB, NL
Enel	47	44	48%	BG, CL, DE, DZ, ES, FR, GR, NL, PA, RO, RU, SK, SV, TR, US
Eni	36	48	57%	BE, BR, CH, CZ, DE, DZ, ES, FR, GB, HU, IN, IR, NG, NL, NO, PL, PT, SK, TR, UA, US, VG
Finmeccanica	39	22	36%	ES, FR, GB, LY, MY, NL, RU, TR, US
Fintecna	10	0	0%	-
FS	3	6	67%	DE, FR
Poste Italiane	11	1	8%	RU
RAI	2	0	0%	-
Snam	16	7	30%	AR, BE, GB, GR
Terna	17	8	47%	BR, ME, SM, DE
Total	185	134	42%	

Source: own elaboration on Zephyr

A look at the corporate re-organization through subsidiaries controlled by each SOE confirms the SOEs' expansion in the global arena. The number and percentage of subsidiaries held abroad in different countries confirm that Eni and Finmeccanica are highly internationalized, as 80% of their subsidiaries are located out of Italy, respectively in 53 and 37 foreign countries and various continents. Even more interestingly, firms that used to operate within domestic borders, such as Enel, Terna, Snam and FS, have caught the opportunity of market liberalization to expand their business abroad. While ENEL has become a global player, owning subsidiaries also in North America and Latin America, Snam Terna and FS have mainly expanded in Europe, where markets have been increasingly integrated bringing domestic players to compete in an enlarged scenario.

Table 11. Domestic and foreign subsidiaries controlled by the Italian major SOEs

Company	Domestic Subsidiaries	Subsidiaries abroad		Foreign Countries
	N	N	%	N°
Enel	17	25	60%	7 (BE BR CA CL ES NL US)
Eni	71	347	83%	53 (AE AO AR AT AU BE BM BR BS CA CG CH CN CY CZ DE DO DZ EC EG ES FR GA GB GR HU ID IE IN IQ KW KZ LU LY MA MZ NG NL NO PG PL PT QA RO SA SG SI TN TT UA UG US VE)
Fincantieri	23	14	38%	8 (AE BE BR DK IN NL NO US)
Finmeccanica	75	288	79%	37 (AE AR AU BE BR BW CA CH CN DE ES FR GB HK HU IE IN KZ LK LU LY MU MX MY NL PL PT QA RO RU SA SE TR UA US VE ZA)
FS	22	67	75%	8 (AT BE CH DE DK FR NL SE)
Poste Italiane	41	2	5%	2 (BR DK)
RAI	11	3	21%	2 (FR US)
Snam	11	5	31%	3 (BE FR NL)
Stm	9	1	10%	1 (MT)
Terna	5	8	62%	5 (BE DE ME SM TN)

Source: own elaboration on Aida

Next, we assess which part of the SOEs' revenues and employees refers to domestic or foreign markets. We focus on the Italian listed SOEs which have shown a higher propensity towards internationalization and we compare them with the top 30 private companies listed on the Italian stock exchange. Interestingly, we find that the Italian listed SOEs generate more than 50% of their revenues outside Italy. STMicroelectronics and Finmeccanica operate mainly abroad and their foreign revenues represent respectively 98% and 80% of their total revenues. On average, their share of cross-border revenues is highly comparable with the ones by the top private listed Italian enterprises, which show a high degree of internationalization. Conversely, the core business of network operators and basic service providers, such as Poste

Italiane, FS, Snam, RAI and Terna is still mainly focus on the domestic market, though they own some assets even outside Italy, and they do not report significant data on cross-border reveneus.

Table 12. Domestic and cross-border revenues (€ mln.)

	Domestic Revenues			Cross-border Revenues			Share of cross-border revenues (%)		
	2009	2012	2013	2009	2012	2013	2009	2012	2013
Enel	30,739	32,695	32,566	31,759	50,004	44,692	51	61	58
Eni	27,950	33,998	32,044	55,277	93,222	82,678	66	73	72
Finmeccanica	3,975	3,119	2,829	14,201	14,099	13,204	78	82	82
Snam	2,438	3,405	3,416	0	0	0	-	-	-
STMicroelectronics	11	26	20	927	1,327	1,403	99	98	99
Terna	1,317	1,724	1,839	0	0	0	-	-	-
Total SOEs	66,430	74,967	72,714	102,164	158,652	141,977	61	68	66
Private listed corporations	63,617	55,995	52,784	91,770	176,697	175,561	59	76	77

Source: own elaboration on Zephyr and Mediobanca

Part of the share of cross-border revenues is export-driven, thus the comparison between domestic and cross-border employees gives a clearer information about the degree of firms' internationalization through delocalization/relocalization. Enel and Eni show highly comparable shares of cross-border revenues and cross-border employees. This points out that they have effectively internationalized and expanded their business by delocalizing plants and activities beyond the national borders. Since they employee more than 50% of their employees outside Italy, it is difficult to argue that they have been following a clear public mission in terms of employment policies. Conversely, in the case of Finmeccanica the share of cross-border revenues doubles the share of cross-border employees. This implies that a relevant part of their cross-border revenues is export driven, as its manufacturing activity is mainly based in Italy.

Table 13. Domestic and cross-border employees

	Domestic employees			Cross-border employees			Share of cross-border employees (%)		
	2009	2012	2013	2009	2012	2013	2009	2012	2013
Enel	38,121	36,114	34,269	43,087	37,588	37,125	53	51	52
Eni	35,085	26,804	26,782	42,633	51,034	55,507	55	66	68
Finmeccanica	43103	39771	37663	29953	27637	26172	41	41	41
Snam	6,307	6,067	6,034	0	0	0	0	0	0
Terna	3,447	3,433	3,442	0	3	3	0	0	0
Total SOEs	126,063	112,189	108,190	115,673	116,262	118,807	48	51	52
Private listed corporations	229,798	222,106	222,334	280,777	419,155	419,217	55	65	65

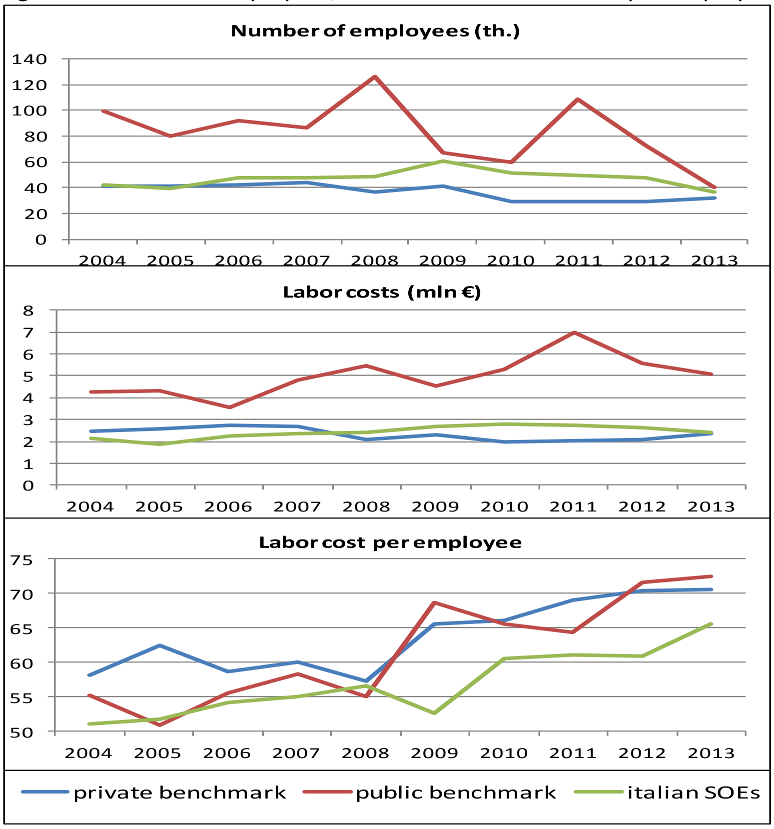
Source: own elaboration on Zephyr and Mediobanca

6.3 Italian SOES as employers

In this section we try to gain further insights on the SOEs' approach towards employment. We observe that the Italian SOEs are on average quite aligned to their private European benchmarks in terms of number of employees and labor costs, while they show lower value than their state-owned European peers. In detail, the number of workers employed by Italian SOEs has decreased over time (-11% from 2004 to 2013 from 41,858 to 37,140), while labor costs have grown by 12%. The same trends, though more pronounced, can be observed for the European state-owned firms. As a result, the Italian SOEs' labor costs per employee show an increasing trend over the period 2004-2013, though on average they are lower than their private and public European peers. This brings us to exclude the risk that the central government has interfered with the management of their controlled firms to support employment, as it used to take place in the past decades.

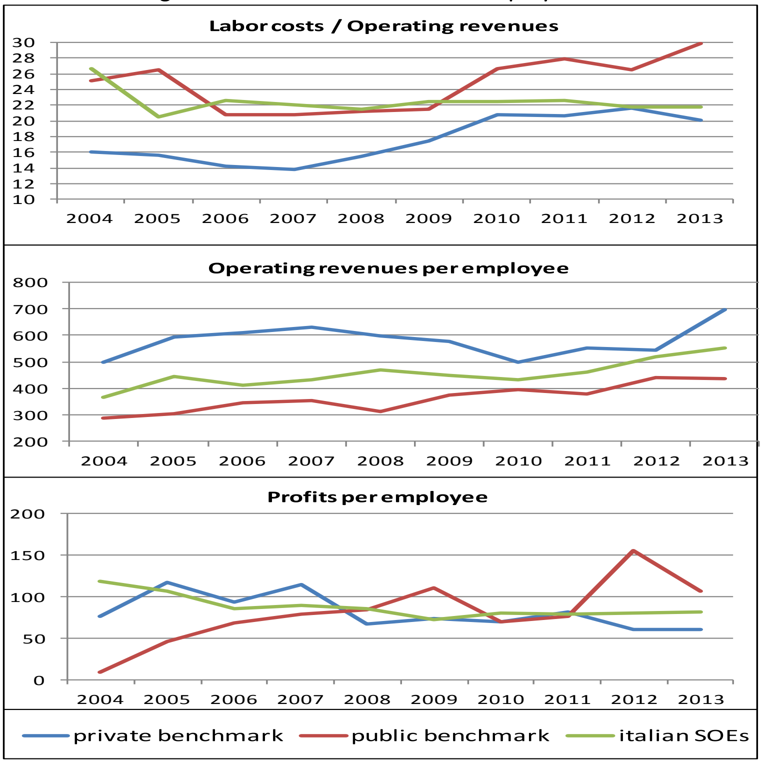
We also look at some "per employee ratios" as a proxy for the labor productivity. Figure 8 shows that, on average, over the period 2004-2013, labor costs cover 22% of the operating revenues for the Italian SOEs – in between the values registered by the public benchmark (25%) and the private benchmark (18%) – and they show a declining trend mainly due to their revenues' increase over time. For the same reason, also operating revenues per employee increase over time, like in their benchmark cases. Moreover, the Italian SOEs and their private industry peers have on average similar profits per employee and both show a declining trend over time, as the number of employees decreases more than their profits. In terms of labour productivity we do not find significant differences among firms depending on their ownership nature.

Figure 7. Number of employees, labor costs and labor costs per employee



Source: own elaboration on Amadeus

Figure 8. Labor costs ratios and employee ratios



Source: own elaboration on Amadeus

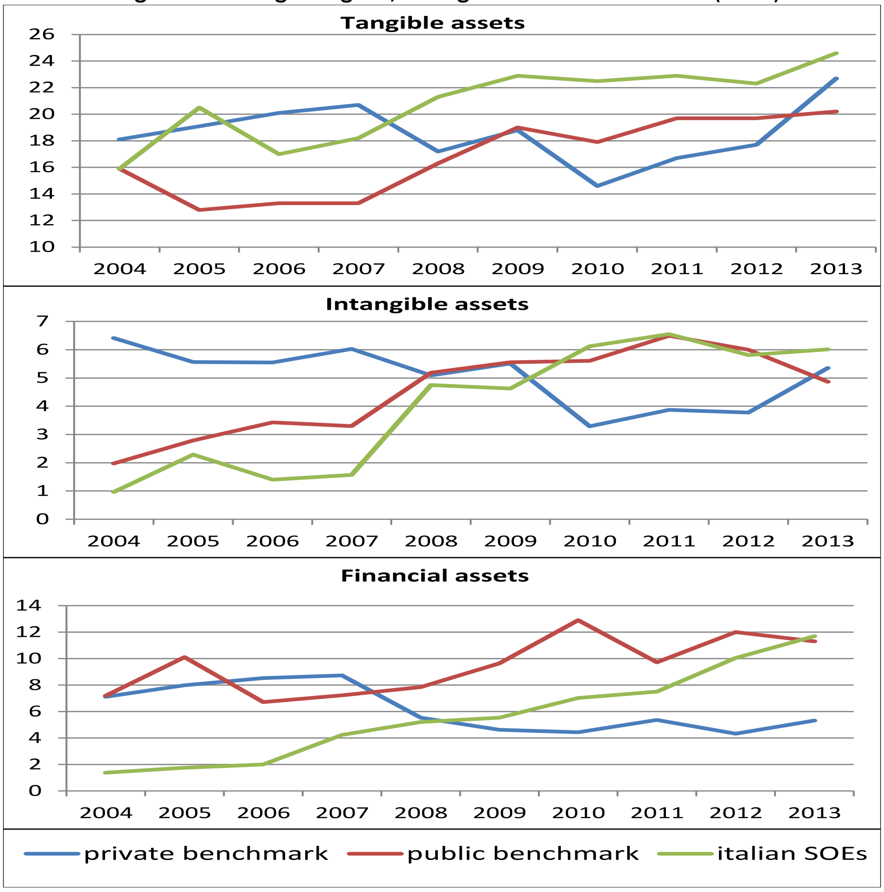
These data do not show strong divergences among the Italian SOEs and their industry peers in terms of employment policies and productivity. To gain more insights we first focus on the Italian SOEs and then we compare each of them with their respective private and state-owned peers (see table A.3 in Appendix I).

First it should be noticed that the postal service is the most labor intensive service, followed by the rail service. In Italy, while the number of people employed by Poste Italiane and the related labor costs have increased over time, they have instead declined in the case of FS. Interestingly, FS shows lower labor costs per employee than its European peers. Moreover, the ratio between the labor costs and revenues is highest in the case of FS (higher than its peers and other Italian SOEs), though it has significantly declined over time as a consequence of a management more aligned to the private standards. Among the other SOEs, Poste Italiane, RAI, Finmeccanica and STM show higher percentage of labor costs over revenues. Conversely, Enel, Eni, Snal and Terna the highest operating revenues and profits per employee, mainly because they are capital intensive sectors. Notably, the firms operating in the energy sectors are highly comparable of slightly better than their respective peers and the same holds for Poste Italiane and Finmeccanica. Conversely, FS, RAI and Stmicroelectronics are worse than their respective peers.

6.4 Italian SOEs as investors

The trend of assets is quite informative about the type of investments undertaken by various companies. In particular, we observe that Italian SOEs on average behave more likely to their public industry peers than to the private ones in terms of investments. Indeed, both the Italian SOEs and their state-owned industry peers have increased their investments in tangible assets over time, the former more than the latter. Their long-term strategies do not seem strongly influenced by the financial crisis. Conversely, the private industry peers have significantly reduced their tangible assets during the financial crisis, while increasing them in the new decade. Concerning the intangible assets, state-owned and private enterprises show opposite trends. State-owned firms have increased their investments in intangible assets during the first decade of the 2000s, while reducing after the European economic recession. Conversely, private enterprises have divested until 2010, while increasing their investments in the new decade. In 2013, the level of intangible assets is quite comparable among SOEs and private counterparts. Similarly, Italian SOES and their public European peers on average have increased their financial assets, while privates have lowered them over time.

Figure 9. Average tangible, intangible and current assets (bln €)



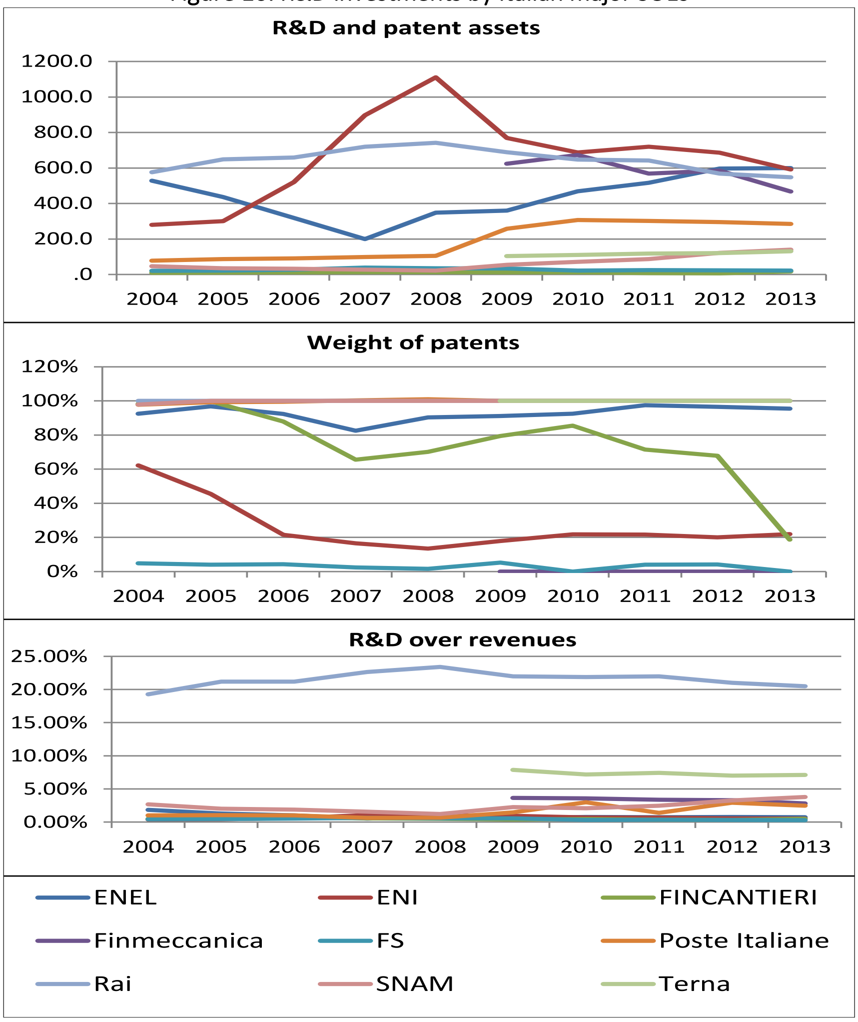
Source: own elaboration on Amadeus

The firm detail confirms that the energy and the rail sectors are the most capital intensive ones. Notably, FS, Enel and Eni have significantly higher fixed assets than the other Italian SOEs. Enel and Eni have increased over time their investments in tangible assets in correspondence with their increased internationalization. Conversely FS has significantly lowered its tangible assets[9]. Enel has the highest amount of intangible assets, followed by Eni, Finmeccanica and Snam. Poste Italiane shows the highest and fastest increasing amount of financial assets, mainly as a consequence of its increased activity of savings' collection through its subsidiary Bancoposta, followed by Eni, Enel and FS which have increased their shares and credits in other enterprises during the first decade of the 2000s (see table A.4 in appendix I).

6.4.1 Italian SOEs as promoters of R&D

A look at the firms' attitude towards R&D investments can be informative about the SOEs informal public mission. Amadeus does not provide systematic information on the firms' R&D expenses. Therefore, for the Italian SOEs we have extracted this information directly from the enterprises' yearly balance sheets (as reported by AIDA in the firm report section). Unfortunately, the high number of missing values does not allow to develop a comparative analysis with the public or private benchmarks. Thus, we focus only on the Italian SOEs. Within this group data are not available for STmicroelectronics, while Terna and Finmeccanica report data since 2009. Available data are quite heterogeneous and show different trends among Italian SOEs. At the end of 2013, Eni, Enel, Finmeccanica and RAI show comparable levels of R&D and patent expenses. In the new decade, Snam, Terna, Enel and Poste Italiane have increased their investments in R&D, while ENI, while after the crisis FS, Finmeccanica and ENI have lowered them.
Important differences concern the type of R&D investments as well. This voice refers almost exclusively to the holding of patents when looking at Enel, Poste Italiane, RAI, Snam and Terna, while it refers to other types of R&D investments for the rest of Italian SOEs. Finally, we observe that almost all companies invest in R&D between 1 and 3% of their operating revenues. This percentage increases to 7% and to 20% for Terna and RAI respectively.

Figure 10. R&D investments by Italian major SOEs



Source: own elaboration from AIDA

[9] We believe this change is accounting-based and it derives by the adoption of the international standards IAS / IFRS. Indeed, in these years FS has not divested its assets nor it has sold some of its subsidiaries. Conversely, the length of the rail network has slightly increased from 16,686 to 16,704 km. The reduction in the value of the FS' tangible assets by 23 bln € has corresponded to a reduction of the risks fund by 25 bln €.

7. Conclusions

This paper has provided an analysis of behavioural and institutional features concerning the most important among contemporary Italian SOEs. Although these corporations have very different organizational legacies and face heterogeneous and often idiosyncratic markets some general trends can be drawn.

A first overarching finding concerns the size and the scope of Italian state capitalism. To this respect, it can be said that, after major retreat from specific sectors such as Telecommunication and Motorways, occurred in the late 1990s, State direct intervention in the economy through publicly controlled companies remained a stable feature. In second place, with the sole exception of the national broadcasting company, RAI, Italian SOEs underwent a deep restructuring of both their structures and strategies toward models which are peculiar of the private sector in terms of corporate structure and orientation to profitability.

Nonetheless, with respect to this latter dimension, the sample of corporations examined also highlighted relevant differences. On the one hand, in fact, the national champions of energy such as ENI and ENEL and the aerospace manufacturer FINMECCANCA underwent the most radical transformation, in line (and because of) with the deep restructuring of the market they face, which are becoming even more deregulated and internationalized. They have been partially privatized and listed on the stock market, even if the State still maintain controlling power. Moreover, the gas and electricity grids, respectively SNAM and TERNA, once vertically integrated to ENI and ENEL, have been recently unbundled, listed on the stock market and put under the control of CDP.

Conversely, companies such as FINTECNA, POSTE and FS underwent a more smooth transformation. They in fact has been only corporatized, since the State so far has kept 100% stakes. Moreover, these companies have faced a more stable and protected business environment, often characterized by highly subsidized sectors, as in the case of railway services. Nonetheless, also in these cases, the corporate strategies is becoming more business-oriented as they started to mark profits. In the last decade, POSTE has strongly diversified its activities, becoming a relevant player in the market of financial services and even a traditionally loss-making corporation such as FS started to internationalize its activities, as it is stably present in the rich and competitive German market. Also within FINTECNA, the last of IRI's manufacture assets kept by the State, recent reshufflings has been implemented since FINCANTERI, its main subsidiary, has been listed in the stock market in 2014 and has recently obtained two large orders, respectively from the Italian Marine and the MSC shipping company, amounting to €5bn.

In parallel with the emerging market orientation of main SOEs, the paper highlighted a general weakening of the "publicness" of these corporations. No specific mention to public goals can in fact be traced in their statutes. Of course, Italian SOEs provide the large majority of universal services and normally carry out environmental, cultural or social projects, alone or in partnership with third sector organizations. This, nonetheless, does not represent a distinctive characteristic of public enterprises, as also privately owned companies are often involved (and benefit from) such activities.

If one of the direction undertook by Italian state capitalism, thus, seems to be that of a profit-oriented conversion of SOEs, less certain is so far what the state is intended to do with its ownership rights. On the one hand, in fact, all the last national executives have expressed their commitment to further privatize SOEs and some steps in this direction have been made. The Treasury stakes in ENI, ENEL and FINMECCANICA have been constantly diluted over time, and further divestiture are constantly announced. Moreover, since a couple of years, the privatization of POSTE and FS has been announced and is currently under review.

From another perspective, State's direct intervention proved to be stable. Much of Treasury divestments have been in fact absorbed by CDP, which in turn is controlled by the Treasury. Moreover, this financial body is day by day more active in PPP investment projects in which, nonetheless the public stake often outnumbers the involvement of private partners. In the weeks while this paper has been drafted (may-june 2015), in fact, the national government is preparing an investment project to finance the extension of internet broadband and the possible re-nationalization of ILVA is raising criticism about the limits of State intervention in recovering industrial failures.

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Appendix I

Table A.1. List of private and state-owned industry peers

	Country	Sector of activity	State-owned*	N° of subsidiaries	Total Assets mean 2004-2013 (mln €)
Enel	Italy	Energy	1	806	123.0
E.On	Germany		0	1072	135.0
EdF	France		1	1226	211.0
ENI	Italy	Oil and gas	1	591	118.0
Total	France		0	1201	131.0
GDF Suez	France		1	2260	127.0
Snam	Italy	Transport via pipeline	1	20	17.2
National Grid GAS	UK		0	10	21.2
Grtgaz	France		1	4	5.7
Terna	Italy	Transmission of electricity	1	16	9.9
Red Electrica De Espana	Spain		0	6	7.7
Alliander	Netherlands		1	43	9.5
FS	Italy	Rail transport	1	89	79.0
Network Rail	UK		0	15	48.4
Deutsche Bahn	Germany		1	782	30.2
Soc. Nat. des Chemins De Fer	France		1	689	42.8
Poste Italiane	Italy	Postal activities	1	43	82.0
Die Schweizerische Post	Switzerland		1	76	59.9
Deutsche Post	Germany		1	1229	180.0
LA Poste	France		1	153	170.0
RAI	Italy	Broadcasting activities	1	13	2.6
Mediaset	Italy		0	40	6.9
France Televisions	France		1	25	2.1
Finmeccanica	Italy	Manufacture of air and spacecraft	1	517	27.9
BAE Systems	United Kingdom		0	790	26.7
Thales	France		1	299	17.9
Fincantieri	Italy	Building of ships and floating structures	1	95	3.9
Azimut - Benetti.	Italy		0	19	0.8
Navantia SA	Spain		1	8	4.5
D C N S	France		1	25	7.3
Stmicroelectronics	Italy	R&D natural sciences and engineering	1	9	1.8
Infineon Technologies Bipolar	Germany		0	2	0.1
NXP Semiconductors	France		0	0	0.1

Source: own elaboration on Amadeus *The value equals 1 when the firm is state-owned and zero otherwise; **The value equals 1 when the firm is listed and zero otherwise

In the following table, we report the pre-crisis and post-crisis average value of various profitability indexes.

Table A.2 Italian SOEs, private and state-owned benchmarks. Profitability ratios. Average values for the periods 2004-2008 and 2009-2013

	ROE		ROA		ROCE		EBITDA margin		Profit margin	
	04-08	09-13	04-08	09-13	04-08	09-13	04-08	09-13	04-08	09-13
Enel	16.7	12.1	5.3	3.2	9.7	7.6	23.3	21.9	13.4	9.8
EdF	16.7	9.4	2.0	1.2	6.4	4.6	26.7	23.6	8.4	6.1
E.On	11.6	12.4	4.4	3.8	7.2	6.5	15.3	12.0	10.6	6.7
ENI	20.6	10.9	9.9	4.9	14.7	7.7	27.2	23.0	20.2	13.5
Total	29.0	15.5	11.2	6.5	18.3	9.9	22.2	18.5	18.2	14.0
GDF Suez	11.8	1.2	4.2	0.4	8.9	2.8	20.6	17.6	10.9	3.8
Snam	12.5	13.1	4.7	3.9	7.7	7.5	71.2	68.3	38.7	39.4
National Grid GAS	7.2	13.2	2.2	4.3	5.7	6.9	51.0	61.2	21.1	33.3
Grtgaz	-11.1	3.8	-6.7	1.9	5.0	3.8	50.8	47.4	30.0	25.5
Terna	16.0	19.9	4.8	4.8	8.9	7.7	67.1	74.0	41.8	43.5
Red Electrica De Espana	9.1	29.6	2.2	5.1	4.3	9.5	65.2	72.5	31.9	39.4
Alliander	15.0	9.0	6.7	3.6	10.1	-	21.7	32.0	14.7	18.5
FS	-1.7	0.7	-0.7	0.4	-0.1	1.1	13.6	18.9	-5.9	3.6
Deutsche Bahn	8.6	7.2	3.0	3.7	6.1	5.8	3.1	10.9	34.4	48.5
Soc Nat Des Chemins De fer	13.1	0.8	1.8	0.2	5.1	1.3	7.8	8.3	1.8	-
Network Rail	7.7	8.6	1.4	1.3	5.7	4.8	43.9	53.6	13.5	9.4
Poste Italiane	11.7	22.7	1.1	0.9	4.7	2.4	15.8	7.8	8.9	7.8
Die Schweizerische Post	105.5	23.3	1.5	1.0	42.7	17.2	13.6	14.5	10.4	10.6
Deutsche Post	8.8	11.3	0.7	3.3	4.5	11.8	8.7	6.8	3.6	3.0
LA Poste	19.1	9.2	0.6	0.3	8.7	5.0	7.0	9.7	3.5	-
RAI	-0.3	-22.0	0.0	-3.2	0.2	-5.2	23.7	21.7	2.6	-0.9
France Televisions	1.0	-2.1	0.0	-0.7	2.7	-0.4	5.6	6.5	0.3	0.2
Mediaset	20.1	4.3	10.5	2.0	17.8	5.8	51.9	40.5	25.4	6.1
Finmeccanica	12.4	-10.1	2.5	-1.1	11.9	1.9	10.3	4.9	7.4	-3.6
BAE Systems	17.8	16.4	4.0	3.1	19.1	17.1	10.8	12.6	6.6	5.4
Thales	18.2	7.0	3.1	1.2	11.4	5.2	8.4	6.5	5.2	1.9
Fincantieri	6.7	-1.9	1.1	-0.6	6.1	0.4	6.4	1.7	4.0	-1.4
Navantia SA	-22.3	-42.7	-1.3	-1.3	-1.1	1.4	-5.8	-6.1	-6.5	-7.4
D C N S	39.5	13.6	2.3	1.9	15.2	9.6	9.0	6.2	9.0	-
Azimut - Benetti.	16.5	-3.6	5.2	-1.0	14.9	-0.6	12.8	4.9	9.2	-1.2
Stmicroelectronics	-2.9	2.0	-1.7	1.5	-1.3	2.7	18.9	12.4	-1.0	1.9
Infineon Technologies Bipolar	7.1	8.6	4.6	6.0	5.5	6.9	7.7	12.3	3.8	6.1
NXP Semiconductors	-	16.7	-92.9	9.4	-255.0	33.9	6.2	8.7	-2.7	4.5

Source: own elaboration on Amadeus

ROE=(Net income / Shareholder funds) * 100; ROA= (Net income / Total Assets) * 100; ROCE= ((Net income + Interest paid) / (Shareholder funds + Non current liabilities) * 100; Profit margin=(Profit before tax / Operating revenue) * 100; EBITDA margin=(EBITDA / Operating revenue) * 100

Table A.3. Selected enterprises' per employee ratios

	Labor cost per empl.		Labor costs/Op. Rev.		Op. Rev. Per empl.		Net Profits per empl.	
	04-08	09-13	04-08	09-13	04-08	09-13	04-08	09-13
Enel	52.0	61.0	8.1	6.5	648.5	958.7	86.9	91.0
EdF	59.5	71.5	16.3	15.5	366.9	464.3	31.8	28.1
E.On	59.3	65.2	6.6	4.2	914.6	1,621.1	91.6	89.9
ENI	51.7	64.9	4.4	4.7	1,193.7	1,415.0	240.5	187.1
Total	60.0	69.0	4.7	4.4	1,320.3	1,606.6	238.4	223.8
GDF Suez	49.3	51.5	10.9	13.4	469.7	379.8	52.6	26.4
Snam	58.4	61.7	6.9	10.0	854.8	616.0	329.0	241.8
National Grid GAS	52.7	57.5	11.7	9.8	453.7	588.6	97.9	197.2
Grtgaz	62.5	86.2	11.9	14.5	542.7	603.7	167.7	157.2
Terna	66.0	73.3	17.3	14.8	380.5	495.0	158.9	216.7
Red Electrica De Espana	66.3	71.3	8.3	7.6	795.7	946.1	253.6	371.3
Alliander	56.1	113.4	9.9	29.5	575.1	331.3	85.5	76.1
FS	48.3	53.2	47.3	44.7	100.3	119.4	-7.0	4.5
Deutsche Bahn	71.8	88.1	22.9	18.1	317.0	493.2	171.3	375.1
Soc Nat Des Chemins De fer			42.0	39.1				
Network Rail	57.3	58.1	28.0	27.1	207.4	215.2	30.0	20.8
Poste Italiane	36.2	40.4	38.0	28.6	100.3	142.0	9.1	11.0
Die Schweizerische Post	52.1	63.5	46.9	46.4	110.9	136.8	11.6	14.8
Deutsche Post	37.9	36.3	30.0	30.5	126.8	119.1	4.5	3.6
LA Poste			59.5	61.2				
RAI	73.9	77.1	30.3	33.7	244.7	224.2	5.2	-1.8
France Televisions			27.9	28.4				
Mediaset	87.4	96.6	11.7	14.0	820.5	698.3	185.8	47.4
Finmeccanica	58.5	67.2	24.6	25.1	238.0	267.7	17.3	-9.1
BAE Systems	64.8	71.4	30.0	28.7	217.2	249.2	14.6	13.2
Thales					196.9	206.4	10.3	3.9
Fincantieri	46.8	48.2	17.0	19.8	275.8	247.2	10.6	-4.2
Navantia SA	50.8	54.6	23.6	27.4	218.3	217.4	-13.0	-14.2
D C N S			13.3					
Azimut - Benetti.	42.2	42.0	10.4	14.9	408.2	280.5	37.2	-3.8
Stmicroelectronics	47.0	54.6	28.2	35.5	160.0	159.3	874.3	6.8
Infineon Technologies Bipolar	43.0	55.6	14.7	18.5	290.0	304.8	11.0	19.8
NXP Semiconductors	58.4	92.9	28.0	49.3	208.3	190.6	-5.6	8.0

Source: own elaboration on Amadeus

Table A.4. Assets' composition by Italian SOEs and their public and private European industry peers

	Enel		EdF		E.On	
	2004-08	2009-13	2004-08	2009-13	2004-08	2009-13
Total Assets	87,0	168,0	178,0	244,0	133,0	142,0
Tangible	50%	48%	58%	49%	35%	39%
Intangible	16%	22%	5%	7%	15%	16%
Financial	5%	5%	10%	17%	17%	10%
Current	29%	25%	27%	27%	32%	35%
	ENI		Total		GDF Suez	
	2004-08	2009-13	2004-08	2009-13	2004-08	2009-13
Total Assets	97,4	138,0	106,0	156,0	66,6	187,0
Tangible	49%	48%	38%	41%	41%	42%
Intangible	5%	6%	4%	7%	19%	21%
Financial	12%	11%	17%	14%	7%	8%
Current	35%	35%	41%	38%	32%	30%
	Snam		National Grid GAS		Grtgaz	
	2004-08	2009-13	2004-08	2009-13	2004-08	2009-13
Total Assets	11,1	22,0	20,1	22,3	4,5	6,9
Tangible	90%	66%	59%	61%	88%	90%
Intangible	0%	17%	0%	1%	0%	2%
Financial	5%	4%	38%	28%	0%	2%
Current	5%	12%	10%	11%	12%	7%
	Terna		Red Electrica De Espana		Alliander	
	2004-08	2009-13	2004-08	2009-13	2004-08	2009-13
Total Assets	7,2	12,7	5,5	8,2	11,8	7,3
Tangible	72%	68%	91%	92%	54%	75%
Intangible	4%	4%	0%	0%	3%	4%
Financial	1%	4%	2%	1%	13%	10%
Current	23%	25%	8%	6%	30%	11%
	FS		Deutsche Bahn		Network Rail	
	2004-08	2009-13	2004-08	2009-13	2004-08	2009-13
Total Assets	90,8	67,3	30,8	29,2	40,9	55,9
Tangible	83%	77%	6%	0%	93%	90%
Intangible	1%	1%	0%	0%	0%	0%
Financial	1%	7%	81%	84%	4%	3%
Current	14%	15%	13%	16%	4%	6%
	Poste Italiane		Die Schweizerische Post		Deutsche Post	
	2004-08	2009-13	2004-08	2009-13	2004-08	2009-13
Total Assets	62,3	102,0	36,4	83,5	208,0	38,4
Tangible	5%	3%	4%	2%	4%	17%
Intangible	1%	1%	0%	0%	6%	32%
Financial	31%	57%	66%	64%	0%	1%
Current	63%	39%	30%	33%	90%	50%
	RAI		France Televisions		Mediaset	
	2004-08	2009-13	2004-08	2009-13	2004-08	2009-13
Total Assets	2,6	2,5	2,2	2,1	6,3	7,4
Tangible	24%	26%	20%	22%	7%	7%
Intangible	36%	37%	5%	5%	50%	52%
Financial	1%	1%	2%	2%	10%	12%
Current	39%	36%	74%	71%	33%	28%
	Finmeccanica		BAE Systems		Thales	
	2004-08	2009-13	2004-08	2009-13	2004-08	2009-13
Total Assets	25,6	30,3	26,5	26,9	15,6	20,2
Tangible	10%	11%	9%	10%	7%	7%
Intangible	19%	27%	43%	48%	17%	21%
Financial	4%	3%	13%	10%	9%	9%
Current	66%	60%	34%	31%	66%	63%
	Fincantieri		Navantia SA		D C N S	
	2004-08	2009-13	2004-08	2009-13	2004-08	2009-13
Total Assets	4,4	3,5	4,2	4,7	7,2	7,4
Tangible	9%	18%	7%	6%	4%	7%
Intangible	0%	6%	0%	0%	3%	7%
Financial	6%	4%	39%	62%	0%	7%
Current	84%	72%	55%	32%	91%	79%
	Stmicroelectronics		Infineon Technologies Bipolar		NXP Semiconductors	
	2004-08	2009-13	2004-08	2009-13	2004-08	2009-13
Total Assets	2,2	1,4	0,1	0,1	0,1	0,1
Tangible	59%	45%	14%	22%	19%	8%
Intangible	0%	1%	31%	18%	33%	31%
Financial	3%	9%	1%	1%	0%	0%
Current	38%	45%	54%	60%	48%	61%

Source: own elaboration on Amadeus