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**Politics, Labor, Regulation, and Performance:  
lessons from the privatization of OTE**

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# Politics, Labor, Regulation, and Performance: lessons from the privatization of OTE

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## ABSTRACT

We use a public interest approach to assess the impact of weak regulation and troubled labor relations on the Hellenic Telecommunications Organization (OTE) market and social performance since 1992. Our findings confirm that regulation in tandem with reduced state ownership generally improves market and social performance. Much depends on the intensity of regulation, not just its scope. Labor also plays a critical role in tempering performance in critical junctures of the privatization cycle; in order to secure industrial peace in the short run political authorities undermine the company's long-term market performance. The study sheds light on the political calculus of labor policy and state-business relations during and after privatization.

Keywords: privatization; regulation; telecommunications; Greece

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# Politics, Labor, Regulation, and Performance: lessons from the privatization of OTE

## 1. Introduction

We seek to understand the impact of privatization by examining the country's flagship project, the gradual privatization of the Hellenic Telecommunications Organization (OTE). Following Durant et al (1998), we differentiate between two types of performance: one that reflects market values and affects the company's management and another that reflects social values and affects society at large. How do weak regulation and troubled labor relations affect OTE's market and social performance?

The criteria of performance change with privatization. Public sector bodies pursue many different goals, while private companies focus more squarely on economic performance. For this reason, we follow a public interest approach which couples the monitoring of economic performance and the achievement of social objectives. Analysts contend that increasing market exposure through reduced state ownership, regulation, and status of public disclosure significantly affects performance. Generally, as market exposure increases, market- and social-based performance improves. We argue that shifting degrees of political involvement through regulatory intensity and labor

relations refract the hypothesized beneficial effects of reductions in state ownership.

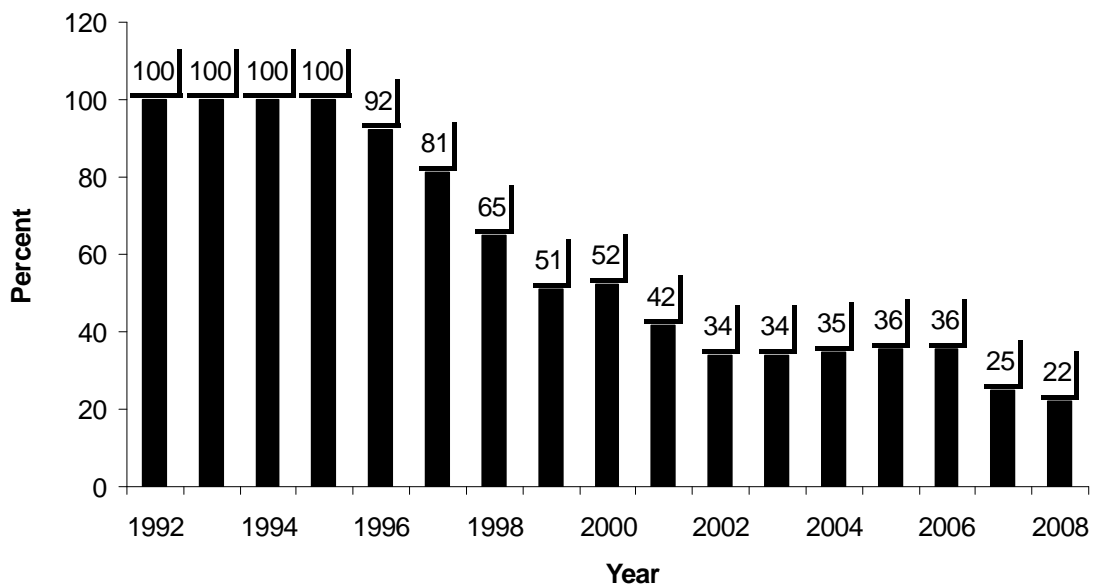
We have chosen to focus on OTE because of its importance for the Greek market. In this way, OTE becomes a linchpin by which we may gauge the progress of privatization. Being one of the biggest companies on the Greek stock exchange, its fate and financial health reverberate throughout the national economy. In addition, potentially lower social and financial performance indicators may retard Greece's efforts to modernize given the importance that telecommunications play in everyday life in general and economic development in particular. We examine primarily issues regarding fixed-telephony because mobile telephony or data services were introduced after privatization began. In that case, a pre/post design becomes impossible.

## **2. The Privatization of OTE**

OTE was gradually privatized in the 1990s and 2000s through successive minority share offerings. Like the entire Greek privatization program, the sale of OTE was crucially driven by revenue-raising incentives (Pagoulatos, 2005). However, the policy ended up fundamentally transforming the structure and operation of both OTE and the telecoms market. After a daring but aborted effort of the ND government in 1992 to transfer 49 percent-plus-management of OTE to the private sector, the post-1993 PASOK governments adopted a less confrontational, gradualist approach, which emphasized the retention of public

control over major public utilities such as OTE. The strategy evolved under the second Simitis government of 2000-04 into a bolder choice of crossing the 49 percent privatization threshold. Public control could still be made possible through a blocking minority stake, as long as the rest of the company's shares were widely dispersed. Legislation in 2000 laid the ground for allowing private majority stakes. The legislated minimum public stake of 51 percent was lowered and eventually stood at 22 percent by 2008 (Figure 1).

**Figure 1. State Ownership of OTE**



Since the mid-1990s, Greek authorities sought to integrate OTE to an international alliance (Mohan et al, 1996). However, towards the end of the 1990s there was growing concern that OTE was missing the boat of technological change, at a time when South European telecoms organizations (the Spanish Telefonica, the Portuguese PT and Telecom Italia) were moving faster to joining strong international alliances (Jeronimo, 1997). The benefits of

partial privatization in terms of shareholder control and managerial efficiency were decreasing. Thus, reduction of state control to a minority stake sought to prepare the ground for the entry of a strategic partner.

Though the revenue-raising incentive behind OTE's privatization remained strong, the doctrine evolved. The PASOK governments of the 1990s sought to render OTE a healthy and profitable public enterprise delivering shareholder value to its public owner. OTE was turned into a "national champion", leading Greek corporate expansion (alongside the National Bank of Greece) to the emerging markets of Southeastern Europe. However, underinvestment threatened OTE's ability to catch up with the next big technological waves, such as broadband telephony. Thus, the "national champion" strategy gave way to internationalization through entry of, and transfer of management to, a major foreign strategic partner. After various vicissitudes, the policy finally materialized in 2008, with the entry of Deutsche Telekom, amounting to a belated or "slow" internationalization of OTE (Clifton, Díaz-Fuentes, and Revuelta, 2010). Deutsche Telekom bought an additional 3 percent of OTE's shares, raising its existing stake of 22 percent to 25 percent plus one vote. Together the Greek government and Deutsche Telekom held a majority of 50 percent plus 2 votes in OTE.<sup>1</sup> A major reform of OTE's employment regime in 2006, in agreement with the company's labor union federation (OME-OTE), led to the voluntary retirement of a large number of employees and liberalized

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<sup>1</sup> In 2009 the Deutsche Telekom share rose to 30 percent and the government share was reduced to 20 percent.



individual contracts for all future hiring, paving the way for the entry of the strategic partner.

The 2001 liberalization of the telecoms sector, which was led by European integration imperatives (Clifton, Comín, and Fuentes, 2006), accelerated OTE's restructuring in terms of internal management structures and quality of service. In view of liberalization, the government undertook a 160-billion drachmas investment program in 1997-2000, largely funded by the EC, from which OTE benefited significantly. When a public utility is forced to operate in a newly liberalized environment, strategies usually range between two poles. At one pole lies a strategy of disregarding the loss of market share and focusing on the priority of retaining existing profits. At the other pole lies the opposite strategy of seeking as a priority to retain market share even at the cost of accepting a reduction of profitability. OTE followed the second strategy to an extreme. In the areas where it faced competition, OTE limited its profit margins to as low as 2-3 percent, in order not to lose market share. Indeed, operational profits of OTE declined following the 2001 liberalization, but the decline was significantly offset by the large profitability of OTE's mobile telephony subsidiary, Cosmote, launched belatedly but successfully in 1998. The latter accounted for an important share of the consolidated profits of the OTE Group. It can well be argued that OTE's strategy was endogenous to its inherited

employment relations. Given the instituted job tenure of its personnel, a lower market share would also inevitably imply lower profitability<sup>2</sup>.

### **3. Politics, Regulation, Labor, and Performance**

State involvement in corporate management has shifted in the last twenty years from direct methods of control, i.e., ownership, to indirect methods, i.e., regulation (Zahariadis, 1995). When it comes to telecommunications, the question is not whether state involvement wanes, but how well it aids enterprise performance in its market and social tasks. We contend that regulatory intensity (not just scope) and labor relations mediate the results, making them far less beneficial under certain conditions. However, we acknowledge that company performance also depends on many other internal and external factors, including managerial vision and strategy, labor skills, technological innovation, market maturity, and domestic and European legal and tax concerns (Bortolotti et al, 2002).

Because of privatization, governments can no longer overtly affect company decisions. But they often appeal to the public interest in order to stay politically engaged via weak regulatory structures and periods of labor tension. Regulation is a form of state involvement (Latzner et al, 2006). It is expensive because of information costs. Regulators need to collect information to make decisions that stimulate competition and protect the public interest (Baumol, 1995). If

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<sup>2</sup> We owe this last point to the paper's anonymous referee.

authorities do not have enough resources to collect this information independently, they have to rely on privatized companies, risking regulatory capture. Companies have incentives to selectively provide information that favors their pricing schemes or discriminates against potential competitors (Rees and Vickers, 1995). Such “weak” regulation also aggravates “the commitment problem.” The privatized company will not make substantial sunk-cost investments because it is uncertain about the regulator’s guarantee that external parties may not opportunistically exploit the situation *ex post*. The cost of capital is likely to increase. When capital costs are used to determine prices, prices are likely to rise to compensate for risk-adjusted returns by investors (Grout, 1995). Consequently, the quality of regulation is very important in assessing company performance. If the scope and intensity of regulation are weak, politicians will be called upon to arbitrate disputes either by regulatory authorities or by potential entrants. The narrower the regulatory regime, the greater the political involvement is likely to be in company management. More political involvement translates into a blurring of market-based performance because politicians seek to satisfy national and special interest needs that go beyond the company’s “welfare.” Political interference is in this case more likely and more costly to the privatized company.

The Greek national regulator is Hellenic Telecommunications and Post Commission (EETT). It is an independent, self-funded decision-making body whose aim is “to promote the development of telecommunications, to ensure the proper operation of the market in the context of sound competition, and to

provide for the protection in the interests of end-users” (EETT, 2009).<sup>3</sup> It was established in 1992 but did not commence operations until 1995. Its powers were further strengthened and broadened with laws 2867/2000 and 3431/2006. Changes in the regulatory regime provide a unique opportunity to assess three different phases of state involvement (Lutzer et al, 2006). The first we call virtual regulation (1992-1995). The second phase we call weak regulation (1996-2000). The final phase, since 2001, we call arm’s length regulation.

Concurrently, we track the various ownership sales by the Greek state to private investors. The first sale, which took place in 1996, coincides with the beginning of the weak regulatory period. The remaining sales, taking place over several years since 2001, occurred in the arm’s length regulatory period. We examine whether ownership sales precede or succeed stronger regulatory control. If they precede changes in regulatory control, we may attribute performance gains/losses in the qualitative analysis to privatization and reduced direct state involvement. If they succeed changes in regulation, we may attribute performance changes to regulatory control and indirect but strengthened state involvement. More direct state involvement, under virtual or weak regulatory conditions, is likely to increase market-based performance but reduce social-based performance. The reason is that private investors are interested in profitability and the financial health of the company. As such, management is likely to pay more attention to these indicators and reduce the temptation to interfere in operational management. The logic of privatization

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<sup>3</sup> Since 1998 EETT has also been responsible for regulating postal services.

demands that company health be made a priority for both management and state. Because successive governments wanted to increase interest in possible future sales, they needed to maintain a profitable and viable operator. However, the (virtual) presence of a weak regulator means that social objectives, such as reductions in call failures, increase of network reliability, and transparency of indicators through public disclosure will not be optimally pursued because they require resources that may be taken away from profits and other income-generating activities. Simulation or nurturing of actual competition through regulation may likely achieve these objectives. Consequently, we expect social-based performance to increase significantly only during the third period of arm's length regulation.

Privatization reduces labor benefits and increases labor anxiety about possible lay-offs. Consequently, unions become more militant. Labor relations deteriorate, but the rate of deterioration is managed by political parties because they control different unions. Acting in the name of the public interest, political parties use the uncertainty felt by labor to oppose or support government policies.

Changes in ownership bring about a shift in company objectives. For various reasons, public sector companies tend to be overstaffed as political paymasters seek to placate various constituencies in ways that have little to do with the company's profitability or financial welfare (Aharoni, 1986). The public sector is often used to provide political favors, buy votes especially in marginal

constituencies, and subsidize interest groups deemed beneficial by the government. Sale of ownership shares removes these effects and increases the pressure on management to become more attuned to private-sector objectives, i.e., to reduce costs. Unions interpret this strategy with due caution because it logically translates into labor-shedding (Haskel and Szymanski, 1994). Employment, therefore, is expected to fall with unions becoming more militant in an effort to prevent or avoid this fate. Higher rates of labor unrest are likely to reduce company performance as employee and management attention is focused on resolving operational differences rather than on increasing the quality or quantity of services (Ferner and Colling, 1993). Market- and social-based performance indicators are likely to suffer as the company is gradually privatized. As long as the government continues to maintain part ownership and a presence in senior management, labor unions will continue to behave politically, seeking a political settlement to increasingly private labor-management differences. Labor tension is more likely to subside when the government severs ownership ties with the now private company. Private management will likely drive a tougher bargain with labor because the range of issues separating the two is reduced. Politics is now less prominent because labor concerns are no longer a form of political protest. As differences between management and labor diminish, the company will focus more squarely on improving market- and social-based performance.

#### 4. Hypotheses, data and measurement issues

Based on the above discussion, we can derive the following hypotheses:

*H1*: Gradual privatization increases market (H1.1) and social performance (H1.2) but it also increases political involvement by way of rising labor tension (H1.3).

*H2*: Weaker regulatory intensity leads to higher market performance (H2.1) and lower social performance (H2.2).

*H3*: Rising labor tension decreases market (H3.1) and social performance (H3.2).

Our timeframe involves the period from 1992, which marks EETT's creation, to 2008. It involves four years prior to OTE's first sale of shares, offering a benchmark against which we examine subsequent performance.

The **dependent variables** include market- and social-based performance. Market-based variables generally measure OTE's financial health, measuring only fixed telephony, i.e., the parent company and not the OTE group which also includes Cosmote, a mobile telephony subsidiary. The variables include:

- *Labor Productivity*, measured as revenues (million €) per employee per year corrected for inflation and logarithmically transformed;

- *Capitalization*, measured as capital expenditures in fixed assets (million €) per employee per year corrected for inflation and logarithmically transformed;
- *Profitability*, measured as pre-tax profit (million €) deflated and logarithmically transformed;
- *Company Size*, measured as total revenues (million €) deflated and logarithmically transformed.

All data was taken from OTE, *Annual Report* (various years). Amounts were deflated using the GDP deflator in IMF, *Yearbook of Financial Statistics* (various years).

Social-based variables capture the quality of services delivered by OTE. They are prescribed by EETT and include:

- *Technical faults*, measured as technical faults per 100 connections;
- *Network Reliability*, measured as percent of faults repaired within the next working day.

We also collected data on call failure rates but unfortunately 11 years were missing. Moreover, the methodology for collecting such data was changed by EETT, rendering impossible comparisons before and after 2007. Data on directory assistance was equally sporadic. All data are taken from OTE, *Annual Report* (various years), supplemented, if necessary, by data provided directly by the company.



Our **independent variables** include:

- *Regulatory Intensity*, measured as strength of regulatory powers (0 in years 1992-94, 1 in years 1995-1999, 2 in years 2000-2005, and 3 in years since 2006;
- *Status of Labor Relations*, measured by
  - a. hours lost, measured as number of man/hours lost due to strikes logarithmically transformed;
  - b. annual real percent rise in compensation per employee; data are deflated using the consumer price index;
  - c. number of employees in thousands logarithmically transformed; hiring more employees or paying them better gives us alternative measures of labor tension, hypothesizing higher pay increases make controversial management decisions more palatable to labor.
- *State Ownership*, measured by
  - a. degree of state ownership, as indicated by percent of shares owned by the state.

We also collected data on number of EETT staff and budget as proxies for regulatory intensity. The idea is more resources in the form of more staff or higher budgets indicate greater regulatory intensity. Unfortunately, missing data precluded us from including these indicators in our statistical analysis. We could locate data on the number of EETT staff only since 1998 and data on EETT's budget only since 1999. The short duration of available data makes any

statistical analysis using these indicators highly suspect. Data regarding labor relations and state ownership are taken from OTE, *Annual Report* (various years), supplemented, if necessary, by data provided directly by the company. Data about EETT are provided by EETT's press information service.

**Control variables** include:

- *General Macroeconomic Conditions*, measured by two indicators:
  - a. percent real economic growth;
  - b. national unemployment rate (numbers unemployed as percent of civilian population).

Data are taken from the IMF's *Yearbook of Financial Statistics* (various years). We also collected data from 25 interviews with five key stakeholders of the company: government officials, EETT officials, OTE management, OTE labor (employees and relevant union members), and political groups (individuals from political parties who are knowledgeable and/or responsible for telecommunications). The interviews were semi-structured. The interviewees answered several questions, but they were also given flexibility to articulate their own concerns and opinions about other issues they considered relevant and important. The structure of the interviews precluded any coding schemes. The time frame of the project does not allow us to examine the effects of the entry of Deutsche Telekom in the management of OTE, but we addressed the expectations of key stakeholders regarding the change of management.

We use both quantitative and qualitative techniques to analyze the data. Quantitatively, we run a Prais-Winsten regression. However, the low number of degrees of freedom reduces the reliability of our findings. For this reason, we use the statistical results as preliminary guide and complement statistical influence with qualitative nuance. Qualitatively, we ask our interviewees about possible political influence and whether they perceive it has hampered the company's performance. We use triangulation techniques to verify arguments. For example, we asked the same question of OTE managers and employees to verify the impact of a particular source. We also used a snowballing technique to identify individuals we may have missed. This involves asking interviewees about other important, knowledgeable individuals whom we should interview. Once interviewees no longer offer new names, we can be certain that we have interviewed the more important persons.

## **5. A Statistical First Cut**

Does the state's reduced ownership affect OTE's performance? If so, to what extent do regulatory structure and (more-or-less) troubled labor relations affect OTE's market- and social-based performance? Tables 1-3 summarize our findings. The models have a reasonably good fit, explaining in some instances more than 95 percent of the variance. However, the fit is poor when it comes to capitalization and profits.

Decreasing state ownership has a significant effect on most indicators of market performance (H1.1 – see Table 1). Labor productivity is negatively affected, confirming our expectation that as state ownership decreases, labor productivity increases. The same is true for overall size. Conventional wisdom appears to be correct, as government retreats from ownership, OTE's market performance increases. Surprisingly perhaps, this is not the case with profitability, which appears not to be affected by state ownership. The low number of degrees of freedom precludes any additional analysis. Rather we use these as preliminary findings and leave the qualitative evidence, which follows this section, to fill in the rest of the story.

Social-based performance follows the same path. As state ownership decreases over time, the number of technical faults also decreases. Under the same conditions, network reliability improves. Again, the findings confirm our expectations of the beneficial effects of privatization, even after taking into account the regulatory framework and macroeconomic controls (H1.2).

Table 1 also includes estimates of the impact of regulation. As mentioned in the previous section, regulation was weaker in the years up to 1999 and has since been strengthened. The findings confirm somewhat the positive relationship between weak regulation and lower social performance (H2.2). As expected, when regulatory intensity increases over time, the number of technical faults decline. But the network's reliability remains unaffected. However, the same cannot be said about regulation and market performance (H2.1). In three areas

of market performance—capitalization, size, and profits—regulation has no effect. Moreover, stronger regulation leads to higher labor productivity. Why? The reason has to do with competitive pressures. The main purpose of regulation in telecommunications is to meet social goals, prevent potential abuses due to predatory behavior, and stimulate competitive pressures to enhance consumer welfare. In all cases, labor productivity is likely to increase as companies become more efficient in their quest for higher profits under external regulatory constraints. The findings partly support Boylaud and Nicoletti's (2001) cross-national findings regarding regulatory effects. Examining telecommunications firms in OECD countries during the period 1993-97, the authors find that regulatory regimes but not state ownership account for improvements in labor productivity. Our findings from Greek telecommunications reveal that both do. It is possible that the Greek case is an outlier or that their shorter time frame yields misleading results. Nevertheless and somewhat contrary to conventional wisdom, ownership rather than regulation has the stronger and more robust impact.

We checked the robustness of our findings in two ways. First, we re-ran the equations by measuring regulation as a dummy variable getting the value of 1 during the third period of arm's length regulation, i.e., since 2006; 0 otherwise. We also measured regulation as strengthening since 2000; 0 otherwise. As we postulated above, we expected social-based performance to be particularly affected only after the intensity of regulation reached a certain threshold. In both cases the findings do not support this argument. The results were exactly

the same, suggesting that the mere strengthening of regulation, rather than a particular threshold, has the anticipated impact.

Second, variance inflation factors suggest the possibility of problematic levels of multicollinearity between state ownership and regulation;  $vif < 6.5$ . As a result, the models may understate the true effects of either variable. In separate equations we estimated the effects of state ownership and regulation. The effects of state ownership stayed the same in all equations, adding more weight to our statistical findings. In the case of regulation, the results stayed the same except for size. When we don't account for state ownership, strengthened regulation now becomes statistically significant. Stronger regulation leads to increases in company size as measured by revenues. State ownership appears to overshadow regulatory effects in some cases. All this elevates the significance of using qualitative evidence to complement the statistical results.

Table 2 shows the impact of labor relations on performance. The effects of state ownership are almost identical to the ones in Table 1. This adds more weight to the statistical findings. However, labor tension seems to be unrelated to either market or social performance (H3.1 and H3.2). We re-ran the analyses using the number of strikes and strikers. The impact was similar; no relation. Why? Our interviewees note that labor issues have a significant effect on performance, especially profits, but it is possible that our numerical macro-indicators do not capture the subtle impact of unionized labor. It is also possible that strikes for better pay or more benefits are less important than the

quality of labor's skills on company performance. We explore these issues in the next section. At this point, we don't have any statistical evidence to support the argument that labor tension affects market or social performance.

Finally, Table 3 includes estimates of the impact of state ownership on labor relations. We hypothesized gradual privatization would lead to rising labor tension (H1.3). Table 3 partially disconfirms our hypothesis, after accounting for OTE's profitability and the Greek unemployment rate. Lower state ownership actually leads to fewer hours lost due to strikes and to lower employment. While lower state holding is accompanied by labor shedding, as Haskel and Szymanski (1994) theorize, unions do not become more militant. Ferner and Colling (1993) claim unions strike to prevent lower company employment levels, but this is not the case with OTE. All OTE employees (excluding its subsidiaries and excluding new OTE personnel hired after 2007) enjoyed job tenure.

At the same time, pay raises are generally higher under state monopoly. Although the statistical test shows no relationship between state ownership and pay raises (Table 3), the actual data tell a different story. The average real compensation growth per employee for the period 1994-2000 (our employee raise data begin with 1994) stands at 5.38 percent, while the average for the rest of the time period under investigation is .34 percent. What makes the difference are primarily two years, 1999 and 2000. They show significant spikes in employee compensation (an average of 13.28 percent) and coincide with state

ownership hovering slightly over 50 percent. In 2001, the state's share falls to 41.76 percent. Clearly, the raises were given to "buy" labor's acquiescence in return for the state dropping its majority owner status. In line with Haskel and Szymanski (1994) labor is likely to view privatization when the government is no longer majority owner as inimical to its members' salaries because private management wants to keep its costs down. While generous severance packages may buy labor's acquiescence to a sale of state shares in the short run, future employee raises under private management are definitely not generous.

## **6. Regulation and Corporate Performance**

The information gathered through the interviews has corroborated the statistical findings, and clarified certain aspects where statistical evidence has remained ambiguous. During the period of weak regulation (1995-2000), EETT operates under a 1994 law practically in a consultative capacity to the Communications minister. It is not a regulator that is taken seriously, let alone feared by market players; certainly not by OTE, who provided the staff, resources and even the president of EETT until 2000. OTE, backed by the unions, certain government ministers, and the so-called "national suppliers" (OTE's main long-term suppliers of equipment) fiercely opposed market liberalization and a strengthening of regulation, exhausting all available possibilities for delaying the EC-imposed liberalization deadline. This has been illustrated and corroborated by several of the people interviewed for this project. The extended



deadline for the liberalization of the Greek telecoms sector was set by the EC for 1998; Greece obtained a final deadline extension for 1/1/2001. In 2000 a new government-appointed president of EETT took over, elected by reinforced Parliament majority as an independent regulatory authority on a 5-year term, as provided by the new Brussels-originating legislative framework. After 2006, the regulatory interventions of EETT are even further intensified, with dense regulatory output produced for specific telephony subsectors.

Since 2000, our interviews have pointed out, EETT graduates into the new liberalized environment as an actor with considerable autonomy from the government. Often at odds with government ministers eager to safeguard OTE's comfortable profitability and national champion position, EETT was emboldened by the institutional backing of the European Commission to become OTE's principal nemesis. The growing EETT pressure on OTE in the 2000s often was opposed by government officials, especially the Finance minister, who, acting as OTE's major shareholder, was unhappy with the squeeze on the company's profits. Backed by certain government ministers, the OTE administration took exception to the European Commission's support of fully fledged competition, arguing instead that a small market such as that of Greece needed a strong national telecoms company and could not afford many competitors.<sup>4</sup>

Under the new framework of regulatory independence in 2000, our interviews pointed out, the principal objective of EETT was to break OTE's monopoly in

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<sup>4</sup> Interviews with a former minister and two senior executives of OTE and EETT.

the fixed voice telephony market and generate real market competition. To that aim, EETT enforced a number of measures that put pressure on OTE, such as the possibility of carrier selection and pre-selection by the consumers, number portability, and price regulation in liberalized fixed voice telephony. Thus the EETT costing (wholesale price) and pricing (retail price) policy slashed OTE's erstwhile monopoly profits, forcing the company to boldly restructure if it were to successfully compete.

EETT forced OTE to allow competing service providers to make use of its network (on which it practically had a monopoly) charging them a certain wholesale price. After 2001, in an effort to facilitate the creation of real market competition, EETT forced OTE to lower its wholesale prices to competitors for using its network, while at the same time it prohibited OTE from charging consumers (retail price) below a certain threshold which was already well above the retail prices of its consumers. In 2004-2008, for example, under the price regulation exercised by EETT, the retail prices of OTE were 20-25 percent higher than those of its competitors. From EETT's standpoint, the policy sought to prevent OTE from applying price squeeze upon its upcoming competitors; from OTE's viewpoint, the company and its infrastructures were being cannibalized by its competitors.<sup>5</sup> Unable to lower its retail prices in order to compete with alternative service providers, OTE suffered a steady decline of market share. EETT calculated its wholesale price formula by using forward looking cost-accounting methods; that is, calculating costs on the basis of a

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<sup>5</sup> This section has relied on interviews with a former minister, three senior EETT executives (present and former) and two senior executives of OTE.

hypothetical network free from actual OTE inefficiencies, such as high labor costs. This amounted to a strong pressure on OTE to improve its cost efficiency if it were to survive market competition. Able to attract consumers by offering cheaper prices, a growing number of highly aggressive alternative service providers started to gradually erode OTE's market share. Starting from 98 percent in 2002, the market share of OTE in fixed telephony declined to 66 percent in 2008 (EETT data).

Contrary to the initial expectations of EETT, which reflected the European Commission doctrine, the competitors of OTE, which entered the market as alternative service providers, failed to climb the investment ladder from the initial stage of exploiting carrier selection to the final stages of creating their own network. The 2001 global telecoms market crash prevented major international players from entering the Greek market, though the domestic market continued to grow, boosted by the investment and liquidity bonanza in preparation for the 2004 Olympic Games. For several years, market competition was exercised by service providers who operated as resellers of voice telephony, buying at low wholesale price from OTE and reselling to clients attracted by their lower retail prices. Thus competition, until the end of the period examined, remained focused on services and not infrastructures, where OTE dominated.<sup>6</sup>

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<sup>6</sup> As late as 2006, EETT and European Commission pressure led OTE to open a small part of its premises to allow competitors to establish equipment and enforced the use of local loop unbundling (interviews with EETT and OTE officials).

In a labor-intensive service industry such as telecoms, OTE's exorbitant personnel costs in the face of competition became a crippling factor. Hence the main way for improving its balance sheet (being a company listed in the Athens Stock Exchange and –from 1998—the New York Stock Exchange<sup>7</sup> as well) was personnel downsizing. The reduction in the number of employees, reducing the denominator, improves the appearance of labor productivity indicators. Thus, the finding of our statistical analysis is better understood: stronger regulation intensifies the pressure of competition, leading to higher labor productivity.

Unable to compete in retail prices, OTE during the 2000s increasingly focused its efforts on improving service quality, establishing customer care, launching and marketing new consumer products, taking advantage of personnel experience, incumbent status, and economies of scale.<sup>8</sup>

Under the pressure of competition, the social performance indicators of OTE generally improved, and were typically superior to those of its rivals. To that aim, OTE exploited the advantages of its monopoly on the network, by offering fast repair of technical faults to its own clients and dragging its feet when it came to clients of other service providers. For such practices OTE was repeatedly sanctioned and fined by EETT. Market pressure did not always lead to improvements in social performance indicators: following the 2005-06 mass early retirement, OTE lost some of its most experienced personnel, as a result

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<sup>7</sup> OTE was delisted from the NYSE in 2010.

<sup>8</sup> Interviews with two former OTE managers and a senior OTE executive.

of which service quality deteriorated and the market share of its competitors increased.<sup>9</sup> The role of EETT on social performance has been only indirect, consisting mainly of a (recent) obligation on companies to publicize social performance indicators. But the causal link between regulation and social performance was clearly corroborated by the interviews: strong regulation intensifies market competition; the force of competition and the effort to defend market share lead OTE to improve its social performance (technical faults, network reliability, and client service).

From the early 2000s, OTE faced a rapidly changing environment, which included both adverse trends and positive opportunities. One adversity had to do with the international trend of substitution of mobile telephony for fixed voice telephony, which suppressed OTE's revenues. To some extent, revenues lost to mobile telephony were recovered for the OTE group thanks to its competitive mobile telephony subsidiary Cosmote. On the other hand, around 2003 the broadband trend emerged, which allowed telephone lines to carry large capacity online internet access, as opposed to the previous low-data rate dial-up connections. OTE had lobbied the government hard to prevent EETT from acquiring jurisdiction in regulating broadband prices. As a result of OTE pressures, the relevant EC directive was incorporated into national law as late as 2006, instead of 2003 as was mandated by the EC. It is worth noting that the mobile telephony industry joined OTE in lobbying the government against the regulation of broadband prices: OTE's high retail prices allowed mobile

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<sup>9</sup> Interviews with an OTE executive, an EETT executive, and a trade unionist from OTE.

telephony companies to attract customers and increase their own broadband market shares!<sup>10</sup> OTE benefited from the regulatory loophole in 2003-2006 and charged high prices for broadband connections. Through the profitability of the broadband business the OTE Group compensated for its loss of fixed voice telephony market share to mobile telephony. This cross-subsidization practice ended in 2006, when last among European telecom regulators EETT acquired legal jurisdiction over broadband.<sup>11</sup>

## **7. Privatization and Labor Tension**

As mentioned earlier the statistical analysis suggests that labor tensions subside, instead of increasing, as privatization progresses. The interviews have helped us explain this apparent paradox.<sup>12</sup> The qualitative evidence gathered from the interviews corroborates our distinguishing critical junctures or watershed years in the period examined. As these specific years are watersheds in defining the evolving loss of state control over OTE, they are crucial for determining the unions' stance. The crucial years which also represent local peaks of labor tension are the following. In 1994 a law is passed by the 1993-elect PASOK government, following the ND government's aborted privatization attempt. The 1994 law opens the way to OTE's entry to the stock

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<sup>10</sup> A principal motivating factor of this lobbying effort was also that the new legislative framework granted EETT the power to regulate the mobile telephony market.

<sup>11</sup> Information for this section was gathered through interviews with several (acting and former) senior executives of EETT and OTE.

<sup>12</sup> Information for this entire section was gathered through interviews with two former ministers, several (acting and former) executives and managers of OTE, one former EETT official, and two trade unionists from OTE.

market and future partial privatization, setting a minimum government share of 75 percent; in return to the labor union, the law establishes (or rather confirms) job tenure of OTE's personnel. In 1996 the first 8 percent public offer of OTE shares through the Athens Stock Exchange is implemented. In 1998 an additional minority stake is offered to investors through stock exchange, and the government amends the legislated minimum state share down to 55 percent. In 2000 a new law allows the state share to go below 50 percent but above 1/3 of the company's equity capital.<sup>13</sup>

Labor tension increases after 2004, as the centre-right ND party comes to power after 10 years of uninterrupted government by the socialist PASOK. The pro-PASOK OTE unions become more aggressive, the number of strikes and hours lost in 2005 and 2006 increase dramatically, after a moratorium for the 2004 year of the Olympic Games. The year 2006 is another watershed, when new government legislation abolishes the mandatory minimum 33.4 percent government blocking share and repeals (under EC pressure) a 1994 legislative provision that any other shareholder owning over 5 percent of the company's shares could not be represented above 5 percent in the OTE general shareholders assembly. The intention of the new government-appointed management of OTE after 2004 was to bring in an international strategic partner-investor, preferably a large advanced Western telecoms company. The plan did not materialize until 2008. Instead, in 2007 OTE was subject to a hostile takeover bid of over 10 percent of its shares by a private equity fund,

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<sup>13</sup> In 2002 the Economy and Finance minister attempted to establish a state golden share but was rejected by the European Commission.

which gradually, by buying shares from various minority shareholders, raised its control towards a 20 percent announced objective (Roussakis, 2010). After realizing that it had opened the backdoor to its own contenders, the government officially proclaimed it would not accept a private equity fund as strategic partner and exercised a set of pressures that finally led to the 2008 entry of Deutsche Telecom. In 2008 industrial conflict reaches its peak; the number of strikes and hours lost is the highest since 1994, as the unions fight a rear guard battle against granting Deutsche Telecom the right to joint management. Throughout the period 2004-2008 industrial conflict intensifies, and the surrounding political context becomes ripe with poisonous polarization and opposition accusations of a sellout of OTE.

In light of these observations, we re-ran the equation on hours lost (Table 3), including a political party variable. It takes the value of 1 for all the years ND was in power; 0 otherwise. The results confirm the argument that strikes increase significantly when ND is in power. Profitability now becomes statistically significant. As profits go up, labor tensions increase in the form of hours lost. When company profits increase, unions are more willing to fight for more money. Thus, indication is provided of potential rent-sharing between OTE and its labor union, the company raises wages in response to threat of industrial action (Blanchflower, Oswald and Sanfey, 1996). Since the issue is not exactly within the remit of this paper, we shall not seek to test or explore it any further.



The above observations and qualifications notwithstanding, the overall data demonstrate that the gradual privatization of OTE leads to lower labor tension. The information gathered through the interviews has pointed to a number of potential explanations. First, a careful focus on the company's peak labor union, OME-OTE, reveals the limits of industrial action. A powerful federation comprising the company's separate unions representing employees on the basis of skills and occupational background (technicians, shop clerks, university graduates, radio-telegraphers, etc), OME-OTE enjoyed a density above 90 percent. The OME-OTE power notwithstanding, its pressure effectiveness during the period examined has been steadily declining. As OTE's monopoly erodes, OME-OTE becomes increasingly aware of the limits of industrial action. Over the 1990s and especially into the 2000s, OTE is no longer the absolute monopoly in telecommunications. From the early 1990s consumers can turn to mobile telephony, and from 2001 the fixed voice telephony market opens as well. Contrary to the labor union of the monopoly Public Power Corporation, whose strikes are feared by the management and the government as being capable of paralyzing electricity provision in the country, OTE union strikes lack any such pressure impact on the government. Moreover, in a market of emerging competitors, prolonged strikes would only cause nuisance to the consumers, who would react by turning to alternative telephony providers. So limited union power in a non-monopolistic environment was a reason why privatization, which evolved in parallel with the gradual (though

belated) market liberalization, did not lead to increasing but decreasing labor tension.

A second important explanation is that OME-OTE extracted significant concessions in exchange for its acquiescence or tempered opposition to privatization. In 1994, job tenure was reassured. During the first public offering in 1996, a number of shares were distributed to OTE employees. From 1996, attractive voluntary retirement programs were instituted under the pressure of OME-OTE. During 1996-2000, a consensus-seeking policy of industrial peace was pursued by OTE's management, concordant with the government policy at macro-level. Very favorable enterprise-level collective labor agreements were signed, and an extensive bonus system was applied until 2004. Between 1994 and 2000, the annual average nominal wage increase of the OTE personnel was 11 percent, without taking into account wage maturity averaging 2.2 percent on an annual basis. Until the 2001 liberalization of the telephony market it was relatively easier for the company management to satisfy employee remuneration demands. The annual average nominal wage increase for 2001-2008 was ostensibly lower, 3.8 percent, but still positive in real terms. Wage increases in OTE were typically above the national collective labor agreement. Eventually, as a result of chronic overstaffing, party-clientelistic hiring of personnel, and generous remuneration policies, the wage bill of OTE was very high. Until 2006, when a large scale voluntary personnel exit was implemented, OTE's wage bill totaled 33 percent of the company's revenues, compared to 22 percent average levels for other European national telecom companies.

Between 1996 and 2009, the company's management implemented successive early retirement programs agreed with OME-OTE, which benefited a total 9,700 employees, 2,200 of whom exited the company in 2004-2009. OTE's workforce declined by 38 percent in four years since partial privatization in 1996, while unionization of newly-hired staff stood at roughly 30 percent as opposed to 98 percent for continuing employees (Soumeli, 1999). The 2006 voluntary exit (agreed with the 2005 collective labor agreement) was an example of a lucrative deal with the union in order to minimize its opposition to the crucial government-OTE decision to lower the state share below the 33.4 percent threshold, which had ensured government blocking rights. About 1/3 of OTE employees opted for early retirement under very favorable terms, and in 2006 the company's personnel fell to 11,700 from 17,300 at the end of 2003. OTE lost a large number of employees which included its best qualified personnel, who thereafter went on to work in the private sector or as external contractors for OTE.<sup>14</sup> The wage bill went down to 26 percent of company revenues, only to climb back to 33 percent by 2009 (year of further reduction of the government share to 20 percent) as a result of generous wage policies combined with declining revenues. Following the 2006 personnel downsizing, OTE hired 1,200 new employees for the first time without the legally assured job tenure hitherto enjoyed by all its employees. As a result of the 2005-06 agreement with the management, and the abolition of tenure for new staff in specific, OME-OTE suffered a credibility blow; its leadership was accused by

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<sup>14</sup> In that sense, to a considerable extent, the employment decline after 2006 represented a shift from dependent employment to sub-contracting/ outsourcing, thus suggesting an "increase in flexibilities" rather than a "reduction in inefficiencies" (we owe this point to the paper's referee).

the more radical rank-and-file of securing a golden retirement deal for its members and unionists, at the expense of job security for future employees.

Apart from the favorable wage policies, a tradition of effective participation in company management is another explanation for the tempered labor union opposition to privatization. OTE was a prototypical case of industrial democracy; union representation in the company's governing board was established in the early 1980s, as part of the socialist government's policy of "socializing" public enterprises. Eventually, in 2000, the legally binding employee representation on the governing board was terminated (Zambarloukou, 2010: 244) but the effective (direct or indirect) involvement of trade unionists in crucial company decisions remained. In 1990-93, OME-OTE had fiercely opposed the eventually aborted privatization plan, which would transfer the company management to a private strategic investor. In 1996 the new OTE administration was cautious enough to co-opt the labor union into accepting the new policy of partial privatization. The policy was given a new name, "equitization" (*metohopoiese*) to avoid association with the unpopular term of privatization. The OTE administration implemented the broader government strategy of listing major public enterprises on the stock exchange, in order to raise capital needed for extensive investment, expose them to higher corporate governance standards and the discipline of the markets, and prepare them to compete in an eventually liberalized environment (Papoulias, 2007: 162ff). The management of OTE after 1996 was keen to emphasize the inevitability of liberalization of the telecoms market, and the need for OTE to

restructure in order to prevent becoming “another Olympic Airways”. The specter of the collapsing loss-making national air carrier, erstwhile a powerful monopoly enterprise (Featherstone and Papadimitriou, 2008), was a compelling counter-example for the employees of OTE.

OTE enjoyed another tradition that differentiated it from the other flagship monopoly public enterprise, the Public Power Corporation. It was not at all infrequent for trade unionists to climb the company’s career ladder up to the highest echelons. Many evolved into company directors and directors general, some even made it to the top. Party political patronage in a corporatist milieu had a lot to do with that too. OME-OTE was usually controlled by PASOK unionists, which meant privileged access to government power when PASOK ruled and political incitement to union mobilization when PASOK was in opposition, as during 2004-09. Several ambitious employees had become trade unionists in order to accelerate their career development within OTE. Some evolved into real power holders in the company’s crucial multi-million value procurement decisions, where corruption scandals were later revealed, featuring OTE executives in the illicit payroll of major private suppliers.<sup>15</sup> This evolution and tenacity of power substructures within the company was also an inevitable outcome of the brief tenure of OTE’s government-appointed administrations, subject to frequent replacement not just upon change of government but even upon change of minister. Until 2004, the average tenure

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<sup>15</sup> As reported repeatedly in the Greek press over the 1990s and 2000s, and corroborated by two interviewees.

of the company chairman was only 15 months.<sup>16</sup> Thus employee representatives remained a real source of institutional memory, continuity and influence until the 2000s; after 2004, labor union influence entered a period of accelerated decline.

The close involvement of trade unionists with the company's operational and business matters meant considerable receptiveness to managerial arguments articulated by the administration, an attachment to their company, and often genuine concern about its future. The unions supported the company's major restructuring and investment projects, as long as these did not involve negative repercussions for the personnel. For instance, digitization, OTE's major investment project of the 1990s, had been a long-standing demand of the union, as among others it would allow time billing; it took the entire 1990s to be implemented, was accelerated after 1996 and completed by 2000, boosting the company's revenues. A certain degree of "corporate patriotism" and pride of employees and unionists in their company had been a long tradition of OTE. They comprehended the irreversibility of the liberalization prospect, and they embraced the managerial vision in the second half of the 1990s of turning OTE into a profitable "national champion" active in the entire Southeast European region. Indeed, after 1995, an aggressive policy of business expansion led OTE to acquire major stakes in several national telecoms companies including those of Serbia, Armenia and Romania. In addition, again contrary to other major public enterprises such as the Public Power Corporation, OTE had always been

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<sup>16</sup> The 2004-appointed Chairman and CEO of OTE lasted for an exceptional duration of six years, until his resignation in 2010.

internationalized, by virtue of being interconnected with international telecoms networks. Since the 1950s OTE had an International Relations Department, which was later upgraded into Directorate General. Employees and trade unionists traveled a lot—since the 1990s they were frequent travelers to Brussels—and OME-OTE was part of the European telecoms union federation. All that meant that they were exposed to the evolving international transformation of the telecoms sector and capable of understanding the external market constraints. Such peer pressure and socialization mitigated union militancy. They would strike, “for honor’s sake” (*gia tin timi ton oplon*), as an interviewee put it, but they would generally avoid taking industrial conflict to the extreme.

In the increasingly hostile market environment of the 2000s, and especially after 2004, the cost-cutting pressure was felt by the labor unions. They reacted with strikes after 2004, also seeking to block what they saw as the imminent threat of transfer of the company’s management to the private sector, and “foreigners” to boot.<sup>17</sup> The new collective agreement and personnel statute signed in 2006 abolished job tenure for all new employees and allowed the company to hire executives from the market. This was a watershed for OME-OTE. Deprived of job security for the newly entering employees, OTE’s labor unions were confined to a “rearguard battle” (as an interviewee put it) of trying to rescue as much of their *acquis* as possible.

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<sup>17</sup> Nationalist reactions had also carried the day during OTE’s first privatization attempt in 1992-93.

## **8. Conclusions**

We assessed the impact of regulation and labor relations on OTE's market and social performance. Our findings generally confirmed but also qualified our expectations. As expected, regulation in tandem with reduced state ownership generally improves market and social performance. But, as this case study showed, much depends on the intensity of regulation, not just its scope. Labor plays a critical role in tempering performance in critical junctures of the privatization cycle; in order to secure industrial peace in the short run political authorities undermine the company's long-term market performance.

Decreasing state ownership has a positive effect on the market performance of OTE especially when it comes to labor productivity. The growing exposure of OTE to institutional investors, market pressures and rising standards of corporate governance improves the quality of its management and enhances its market performance. Similar is the effect on social performance. This is not so with profitability; privatization erodes monopoly profits if it evolves in a liberalizing market environment. In the 2000s it is difficult to dissociate the decreasing state ownership of OTE from the intensifying telecoms market liberalization.

Increasing regulatory intensity steadily opens way to OTE's competitors, reducing its market share, and squeezing its profitability. Moreover, the regulatory "commitment problem" intensifies. Because OTE is forced to offer its network to competing service providers at low cost, the company becomes



reluctant to invest, viewing it as free-riding on its own accumulated investments on the network. OTE revenues, investment in fixed assets and profitability all follow the same trend: they peak around 2000 and begin to decline after 2001. On the other hand, by strengthening market competition, increasing regulatory intensity forces OTE to improve its social performance in order to defend its market share.

Privatization increases political involvement *prima facie*. But, as privatization progresses, labor tensions subside, instead of increasing. This surprising result of the statistical analysis was corroborated and explained, but also qualified, by the qualitative evidence gathered through the interviews. Overall, the evolution of privatization in parallel with the opening of the telecoms market to competition pressures the OTE labor union into tempering labor tension. The broader implication of this argument is that political involvement persists in OTE but in ways that are different before privatization began. First, direct government control has shifted in favor of indirect measures of influence, especially profits. Monopolies were extended to retain market share and profitability even as the state progressively loosened its ownership grip. Second, regulatory reform is not as easy as one might expect. Monopolists will not give up their power to extract high profits without a fight. This is especially true in Greece because of lack of technical expertise. In the first couple of years, OTE acted both as “poacher and gamekeeper,” providing experts and manpower to the regulator. As regulation grows stronger, the scope for overt political pressure weakens not only over the privatized company but also over

the regulator. With some delay, the constellation of company, labor, and management interests realigns and company performance improves somewhat.

Third, this case study demonstrates that privatization does not simply involve an outright sale of shares but is accompanied by delicate labor policy. OTE's privatization became more politically palatable when the government "bought" union acquiescence through generous benefit packages. This was shrewd politics in the short-run but saddled OTE with high labor costs over time. Subsequent performance, in other words, does not only depend on ownership or regulation but also political maneuvering when it comes to labor policy. The triangle of labor, management, and politicians now becomes a pentagon of management, labor, politicians, regulator, and, to a lesser extent, competitors. Performance generally improves, but relations among stakeholders are now far more complicated.

While the literature tends to emphasize certain effects of privatization and regulation on company performance, this case study has provided fresh insight on the conditions of implementation and the importance of sequencing of both policies. In the initial stages of regulation, the regulator remains captured by the monopolistic public enterprise. Similarly, in the initial stages of gradual, partial privatization, management and government decisions are part of a broader bargain with the union, whose power is entrenched by a combination of monopoly rents, job tenure, and political resources. At the end of the day, union

power is undercut not just by the progressing company privatization, but by the growing intensity and depth of market regulation as well.

## Appendix

**Table 1. Regulation and OTE's Market and Social Performance**

	Market Performance			Social Performance		
	Labor <sup>1</sup>	Capital <sup>1</sup>	Size <sup>2</sup>	Profits <sup>2</sup>	Faults <sup>2</sup>	Reliability <sup>2</sup>
<b>State</b>	-.017	-.036	-.013	.002	.342	-.371
	(.004)***	(.012)**	(.004)**	(.030)	(.088)***	(.110)***
<b>Regulation</b>	.313	.397	.167	.209	-4.80	-1.75
	(.115)**	(.149)**	(.100)	(.741)	(1.96)**	(2.64)
<b>Growth</b>	.040	-.024	.018	.067	-.032	.588
	(.038)	(.037)	(.032)	(.228)	(.627)	(.857)
<b>Constant</b>	5.10	6.54	7.99	4.79	14.52	97.86
	(.411)***	(1.66)***	(.398)***	(2.76)	(7.82)**	(9.94)***
<b>Adjusted R<sup>2</sup></b>	.564	.423	.885	.250	.809	.541
<b>N</b>	17	16	17	17	17	17

<sup>1</sup> OLS coefficients with standard errors in parentheses

<sup>2</sup> Prais-Winsten coefficients with standard errors in parentheses

\* .05 < p ≤ .10, \*\* .01 < p ≤ .05, \*\*\* p ≤ .01; two-tailed

**Table 2. Labor and OTE's Market and Social Performance**

	Market Performance			Social Performance		
	Labor <sup>1</sup>	Capital <sup>1</sup>	Size <sup>1</sup>	Profits <sup>2</sup>	Faults <sup>1</sup>	Reliability <sup>2</sup>
<b>State</b>	-.024	-.013	-.017	.001	.459	-.327
	(.003)***	(.005)**	(.004)***	(.029)	(.064)***	(.099)**
<b>Hours Lost</b>	.010	-.028	-.008	-.118	.303	-.576
	(.039)	(.040)	(.030)	(.143)	(.620)	(.583)
<b>Growth</b>	.091	.008	.052	.039	-.885	.123
	(.055)	(.053)	(.043)	(.222)	(.881)	(.842)
<b>Constant</b>	5.76	4.22	8.55	6.65	-2.51	100.8
	(.613)***	(.656)***	(.489)***	(2.78)**	(9.88)	(10.52)***
<b>Adjusted R<sup>2</sup></b>	.684	.641	.786	.240	.870	.557
<b>N</b>	17	16	17	16	17	17

<sup>1</sup> OLS coefficients with standard errors in parentheses

<sup>2</sup> Prais-Winsten coefficients with standard errors in parentheses

\*\* .01 < p ≤ .05, \*\*\* p ≤ .01; two-tailed

**Table 3. Privatization and Labor Tension1**

	<b>Employees<sup>1</sup></b>	<b>Hours Lost<sup>2</sup></b>	<b>Hours Lost<sup>2</sup></b>	<b>Raises<sup>1</sup></b>
<b>State</b>	.009	.042	.030	.010
	(.001)***	(.005)***	(.008)***	(.046)
<b>Profitability</b>	-.003	.832	.373	.591
	(.019)	(.175)***	(.290)	(1.06)
<b>Unemployment</b>	.068	-.077	-.752	2.24
	(.023)**	(.173)	(.216)***	(1.03)*
<b>Party</b>		2.42		
		(.477)***		
<b>Constant</b>	8.68	3.85	14.85	-23.53
	(.273)***	(2.44)	(2.75)***	(12.65)*
<b>Adjusted R<sup>2</sup></b>	.995	.981	.807	.137
<b>N</b>	16	16	16	14

<sup>1</sup> OLS coefficients with standard errors in parentheses

<sup>2</sup> Prais-Winsten coefficients with standard errors in parentheses

\*\* .01 < p ≤ .05, \*\*\* p ≤ .01; two-tailed

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