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From National Monopoly to Multinational: Consequences for work in the Public Services in Europe

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Abstract

Since the 1990s, a large number of public service providers operating in networks —which had been nationally-bound entities largely owned and controlled by the State at least since the post war period— embarked on aggressive internationalization strategies. This expansion was a consequence of organisational reform that had started in the 1970s, particularly policies of privatisation, sector liberalisation and the liberalization of national Foreign Direct Investment regimes. This article examines the recent organisational transformations of public service providers, particularly those based in the European Union, which have been at the forefront of this development. Public service provider transformation, including internationalization, has significant consequences for work inside these organisations, and it is these consequences that are discussed here, with particular focus on electricity, telecommunications and postal services.

Keywords: public services, internationalization, privatization, work, trade unions.

Resumen

Desde los años 90, un gran número de proveedores de servicios públicos que operan en redes —que históricamente a nivel nacional habían sido pertenecientes y controladas por el Estado al menos desde la post-guerra— se embarcaron en estrategias agresivas de internacionalización. Esta expansión fue consecuencia de la reforma organizativa desde la década de los 70, en particular las políticas de privatización, liberalización sectorial, y la liberalización de los regímenes de Inversión Directa Extranjera. Este artículo examina las recientes transformaciones organizativas de los proveedores de servicios públicos, especialmente de aquellos ubicados en la Unión Europea, que han estado a la vanguardia de este desarrollo. Centrándose en los sectores de electricidad, telecomunicaciones y servicios postales, se analizan las consecuencias de estos cambios para el trabajo dentro de estas organizaciones.

Palabras clave: *servicios públicos, internacionalización, privatización, trabajo, sindicatos.*

1. Introduction

From the post war period, and sometimes, even earlier, public service providers operating in networks —water and sewage, electricity, gas, telecommunications, postal services and transportation— were associated with the provision of fundamental public services at the national or local level. These services were provided by a group of workers who enjoyed significant job security and strong unionisation. Over the last two decades, however, the organisation of public service providers has been subject to dramatic and complex change. Policies of privatisation, liberalisation and deregulation introduced by most governments around the world profoundly affected the ownership, management and the overall *raison d´être* of these public service providers. Since the end of the twentieth century, many of these organisations, once part of the public administration, responsible for delivering services to a nationally-bound public, have embarked on aggressive expansion activities abroad. The upshot is that, at the beginning of the twenty first century, formerly national-bound public service providers emerged, perhaps surprisingly, as some of the world's largest Multinational Corporations, with European Union-based public service providers leading the pack: Électricité de France, France Télécom, RWE, E.On, Suez-Electrabel, Deutsche Telekom, Deutsche Post, Telefónica, Telecom Italia, Enel-Endesa, Vivendi, Veolia, National Grid, British Energy, Cable and Wireless, Vattenfall, Telia Sonera and EDP, to name but a few.

Cross-border activity of public services operating in networks (henceforth public network services) is not unprecedented. During the nineteenth century, it was common for private investment to finance and build infrastructure, as well as offer technical services abroad (Millward, 2005). However, the twentieth century saw the gradual encroachment of the State into the regulation and ownership of most of these services in many countries (Aharoni, 1986), or private domestic ownership under public regulation, as in the case of the United States (Galambos, 2000) and in a few European countries, such as the electricity sector in Belgium and Spain. There were a host of justifications for State intervention, the most important being economic (natural monopoly, externalities, market failure and public good arguments), political (national defence and attempts to reduce foreign dependence in terms of primary resources and technology), social (welfare and cohesion) and environmental. The main triggers for renewed internationalization of public network services were the liberalisation of Foreign Direct Investment (FDI) regimes, privatisation and sectoral liberalisation programmes.

This recent transformation of public network services from nationally-bound organisations to multinationals is attracting attention from researchers (Clifton, Comín and Díaz-Fuentes 2007; Hausman, Hertner and Wilkins, 2008; UNCTAD 2008), and raising many new questions which will occupy scholars for many years to come. In this paper, only a brief sketch can be provided of why and how public network services have been transformed, and what consequences this may have for work in these sectors. Section one synthesises briefly the transformation of public network services from the post-war period to the end of the twentieth century, setting the stage for the internationalization of public network services, which is analysed in section two. Section three synthesises some of the most recent research on the consequences of public network services transformation for work, focusing on telecommunications, electricity and postal services, and poses some questions for future research. Whilst these three sectors share many technical and economic characteristics, and have undergone similar organisational and regulatory reform, there are also important differences in terms of the specific services, their market dynamic and structure, the extent of regulatory reform, and work organisation, as shown in Table 1.

Table 1. Comparison of technological, economic, regulatory and labour features of the Public Services

	Telecommunications	Electricity-Gas	Post
Technological change	Significant service innovations	Few service innovations	Few service innovations
Market dynamic	Growing markets	Stagnant domestic markets – growing in emerging economies	Stagnant markets
Product	Complex services (fixed, mobile, internet, multimedia)	Simple: commodity	Simple service
Demand	End business customers	Intermediate industrial users	End business customers
Regulation	Entire industry regulation: access network, long distance network, distribution	Regulation of non- competitive sectors: transport and distribution networks	Direct control and ownership of non-competitive sub-sectors
Liberalisation	1998 or earlier	Delayed to July 2004	Still ongoing in 2008
Labour capital intensity	Intermediate revenue per employee and per assets	High revenue per employee and per assets	Lowest revenue per employee and per assets

In terms of work organisation, postal service companies are highly labour intensive and represent some of the world's largest companies, however, in terms of revenue, their ranking is much lower. For instance, in 2007, US Postal Service was the world's third largest employer (800,000), whilst its revenue ranked only at 46; Deutsche Post was the eighth world employer (475,000) whilst revenues ranked at 55; La Poste ranked at 33 (300,000) for employees, but at 239 for revenue and Royal Mail Holdings ranked 45 for employees (212,000) but at 361 in terms of revenue. European and US telecoms are much less labour intensive: AT&T ranked 31 in terms of employees (309,000) and at 29 in terms of revenues; Telefónica ranked at 43 (250,000 employees) and at 76 for revenues; Deutsche Telekom ranked 46 for employees and 64 for revenues. Electricity companies are the least labour intensive industries: their ranking of employees is below that of their revenue. For instance, in 2007, in terms of revenue, E.On ranked at 53 ($81 billion) but its 87,000 staff is not sufficient to be ranked for employees. A similar observation can be made about EDF (ranking 63 with $74 billion and 159,000 staff), RWE (105 with $57 billion with 64,000), Suez (106 with $57 billion and 193,000), Enel (124 with $48 billion and 73,500) and Endesa (258 with $26 billion and 27,000). Taking the median of revenue per employee in 2007 of the largest companies in the world by sector, the corresponding figures for electricity and gas were $997,000; telecommunications $ 416,000, and postal services $117,000. These figures correlate with revenues per asset which are for electricity and gas $2 million, telecommunications $814,000 and postal services $ 100,000. This has consequences for the work organisation of each sector, since they represent low, intermediate and high intensity, respectively.

2. Public services and work: from State to Market

From the post war period, a consensus prevailed in most countries world-wide that providers of public network services —postal services, telecommunications, railways, local bus transportation, water and sewage, electricity and gas— exhibited national monopoly characteristics due to their high fixed, sunk costs, as well as significant network externalities. The optimum solution would be organisation as a monopoly, usually owned and run by the State. The key reasons for State ownership were technological and economic, not ideological (Millward, 2005), and public ownership was adopted by most governments around the world (Toninelli, 2005), with the exception of the United States, which generally opted for domestic private ownership under government regulation (Galambos, 2000). Increased State intervention was also justified by the need to integrate the national systems (electricity and telecommunications), as well as interest in taking control of strategic resources like coal and oil. Some of the sectors, particular in transport and communications, were regarded as key in the defence of the national interest, whether physically (railways, ports) or psychologically both under dictatorship but also in democracies (radio, television). It was also generally accepted that these network industries were characterised by market failure: State intervention was necessary to ensure the development of the network promoted social cohesion and economic growth.

Organised in this way, in the Western European context, these industries were generally conceived of as being «public services»: «public» not only because they were usually managed and owned by the State, but also, because the services they provided were understood as being essential, so their proper provision was in the public and the national interest. The development of these networks evolved in parallel with an emerging Welfare State in Europe, and their development was supported by policies such as cross-subsidisation of domestic calls using international tariffs, public service obligations and universal service. Of course, the first two decades after the war were characterised by strong and stable economic growth in Europe accompanied by low levels of unemployment. Keynesian-inspired economic policies of active intervention to promote full employment were applied successfully. From the point of view of the work in these public services, labour was generally associated with high levels of unionisation, job stability and collective bargaining, with relatively good employment terms and better working conditions than many other workplaces (EIRO, 2005).

The so-called «golden age» of economic growth with full employment ended in 1970s when, in the shadow of the first petroleum crisis, it was definitively recognised that the gold-dollar standard, already abandoned by Nixon in 1971, could not be reestablished. Floating exchange rates replaced fixed ones, and the dominant view on economic policy priorities shifted substantially. Out went Keynesian policies prioritising full employment, to be replaced by the need to stabilise inflation and wages. Keynesian-inspired policies that actively promoted the State's capacity to intervene to correct market failures were exchanged for a new neo-liberal orthodoxy based in the discipline of market to resolve economic and political problems. Economic growth continued, but at a slower rate, in a more instable manner than the post war years, whilst unemployment grew. This new scenario characterised by instability led to a fundamental rethinking of the traditional «triangular» organisation of labour-government-firm as conceived by Dunlop (1958) in his classic work on industrial relations. As part of this shift from the 1980s, systematic policies to privatise public network industries were introduced in Europe, by the Thatcher administration in the UK (even earlier in the South American countries under dictatorships sponsored by the US government and some academics) and, during the next decade, by other governments in Western Europe[10]. Privatisation was a particularly popular solution in the post cold war in transition economies´ efforts to restructure to market economies.

Privatisation of public network services was justified by two major arguments: firstly, technological change was understood as weakening the case for natural monopoly; secondly, the vision of the purpose of public service providers had changed, from a broad socio-economic rationale, to a much narrower microeconomic search for firm efficiency. At the same time, from a macroeconomic perspective, privatisation was a prescription for developing and emerging economies experiencing foreign and fiscal deficit. In these cases, the privatisation of monopolies was one way to maximise revenue rendering efficiency and technology secondary (Ramamurti, 1999).

In theory, privatisation, liberalisation and deregulation are all separate economic policies with differing objectives. In the European context, the European Commission enjoys competence to promote liberalisation and deregulation, in pursuit of a Single Market, but sustains a neutral stance on ownership. Though distinct policies in theory, in practice, there was a strong correlation between privatisation, deregulation and liberalisation in the case of the public network services (Clifton, Comín & Díaz-Fuentes, 2003). Put simply, many governments used privatisation to facilitate liberalisation and vice versa. Sectors were also deregulated, and then, re-regulated, since, during the period, a huge number of new regulatory agencies were formed to oversee the transition of ownership and management (Thatcher, 2007).

From the 1990s to around 2005, the privatisation of public network services across Europe —particularly telecommunications and electricity— made up for more than two thirds of the overall income from privatisation for governments (Clifton, Comín & Díaz-Fuentes 2006). However, even by the beginning of the twenty first century, though privatisation policies had significantly changed the profile of ownership, there still remained a lot of public ownership and even direct and indirect control so the effects of privatisation were quite uneven. Many firms were partly private and partly public; others were largely private though the State still had the privilege of intervention through «golden shares». Business groups close to the government sometimes enjoyed privileged positions on the board. Questions could be raised as to the quality of corporate governance. Contrary to what is often assumed about the reach of privatisation, even in 2008, the results are still quite mixed, with sectoral patterns. Whilst privatisation was deep in the financial, banking and manufacturing sectors, it had far less reach in the public service network sectors in most countries. So, despite the fact that revenue from privatisation sales of Europe's public network services has been critical for overall privatisation revenues of individual governments, there still remained significant pockets of public ownership at the beginning of the twenty first century.

10 See Bel (2006) who points to earlier privatisations in Nazi Germany.

The transformation of public network services has been affected by the EU sectoral liberalisation directives. Generally speaking, liberalisation has been earlier and quicker in the telecommunications sector, whilst there has been foot dragging in electricity and the postal services.

3. The rise of the new public service Multinationals

As a result of privatisation programmes of public network services abroad (though not necessarily at home) and the liberalisation of FDI regimes (at home and abroad), many public network services embarked on aggressive internationalization activities from the middle of the 1990s. Cross-border activities were pursued by State-owned and private public service providers alike. Firms were attracted by opportunities to serve new markets abroad through foreign government's privatization programmes encouraged by international financial institutions which prescribed this as a solution for emerging and transition economies, as well as ´pushed´ abroad by the encroaching effects of competition at home due to liberalisation.

Traditionally, Multinationals and public service providers had been largely perceived as organisations evolving in separate, not to say antagonistic, economic, social and ideological spheres. Whilst Multinationals were associated with privately owned, profit-maximising behaviour, eager to expand aggressively abroad, public services were conceived of as being locally or nationally based entities providing welfare, development and defence, subject to state regulation and, often, ownership. The rise of former public service providers —Électricité de France, France Télécom, Deutsche Telekom, Deutsche Post, Endesa, E.On, Enel, British Energy, Vattenfall, Teléfonos de México, Singtel, Gazprom and so on— to become the leading Multinationals world players was dramatic. Whereas most firm internationalization from the 1950s was dominated by the manufacturing, oil and financial sectors, very often originating from the United States, this new and emerging phase of internationalization was occurring in the services, and originated in multiple countries, particularly, but by no means exclusively, in the EU and the North American Free Trade area, though the so-called translatins have emerged in Latin America and in Africa (UNCTAD, 2008).

From the 1990s, trends in FDI underwent significant change. First, the dominance of these flows from the United States was replaced by Europe as the leading source (with other important activity in other regional zones around the world). Second, services, including public services, became the upcoming sector experiencing FDI, encroaching on the former dominance of the industrial sector (UNCTAD, 2004). Put simply, if the archetypal transnational corporation in the mid C20th was an industrial firm based in the United States, such as Ford in the 1950s, and Toyota in the 1980s, at the beginning of the C21st, the new Multinational prototypes could be Vodafone, Électricité de France or Deutsche Post World Net. Today, there are an important number of Multinationals in the services, many of which have their home country in Europe, as shown in Table 2.

The internationalization of public network service is still recent and ongoing. These changes in their organisation merit attention in terms of the way work is being transformed. However, there is still little research on even the general phenomenon of the internationalization of public service networks, on what has happened and why, with some important exceptions, particularly the work of the UNCTAD-DITE (United Nations Conference on Trade and Development-Division on Investment, Technology and Enterprise Development), which has stressed service internationalization (UNCTAD, 2004) and public service infrastructure internationalization (UNCTAD, 2008). There is less research on the socio-economic consequences of public network services internationalization on work in these organisations. Of course, there is a large literature on Mergers and Acquisitions (M&A) in general, which are generally associated with a «rationalisation» of organisational structure leading to layoffs and relocation. Whilst incoming «greenfield» FDI into a country is often perceived as positive for employment, FDI flows away a country are seen as negative, since, whilst capital flows are liberalised and global, labour markets are relatively immobile. Nevertheless, recent research on the effects of Multinationals on labour claims predictions about a «lowest common denominator» effect, whereby firms relocate where labour conditions are worst, and may seek exploitative practices, are over simplistic (Flanagan, 2007). Since financial flows are highly mobile and labour is not, basic questions for work include numbers of job losses and, beyond this, which version of work organisation will prevail in the face of M&A —that of the home organisation, the host organisation, a mixture of both or an entirely different model imported from elsewhere (Almond and Ferner, 2006). Conceivably, M&A could bring both positive and negative changes for work organisation, so the net effect needs assessing.

Table 2. Major Public Service Multinationals ranked by foreign assets in the top 100 UNCTAD World Investment Report 1998-2008

Enterprise	Country	Sector	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	TNI
Vodafone	UK	Tel.					1	1	2	2	2	2	7	87.1
EDF	France	E.G.W.						30	18	12	20	10	9	32.4
Telefónica	Spain	Tel.			52	30	9	14	28	36	33	53	11	45.0
E.On	Germany	E.G.W.					23	20	12	13	16	16	12	42.7
Deutsche Tel.	Germany	Tel.						5	56	14	13	17	13	50.0
France Tel.	France	Tel.							9	10	10	11	15	48.7
Suez	France	E.G.W.			13	19	15	11	23	11	15	16	19	75.2
RWE Group	Germany	E.G.W.			66	66	61	22	13	15	14	13	22	50.1
Deutsche Post	Germany	Transp.					64	41	43	42	44	35	28	34.3
Veolia	France	E.G.W.								37	46	56	52	55.9
Endesa	Spain	E.G.W.							45	53	52	51	54	43.3
Vivendi	France	E.G.W.	77	80	53	47	4	4	14	20	22	54	59	55.4
Liberty Global	US	Tel.										61	67	96.5
National Grid	UK	E.G.W						50	68	68	66	99	76	40.7
TeliaSonera	Sweden	Tel.											78	69.0
Singtel Ltd	Singapore	Tel.						68	70	66	73	82	99	67.1
AES Co	US	E.G.W.				71	63	38	42	60	62	71		73.7
Telecom Italia	Italy	Tel.							67	24	35	31		72.7
Duke Energy	US	E.G.W.							86	77	93	95		18.3
Verizon	US	Tel.					58	95	74	82	89			6.1

Sources: Elaborated by the authors based on UNCTAD (1990-2008)
E.G.W. Electricity, Gas & Water, Tel. Telecommunications, Transp. Transportation
TNI Transnationality Index.

4. Working in the new public service Multinationals

Work in the public network services has been transformed as these organisations are changed by privatisation, liberalisation, deregulation and, most recently, internationalization. Analysis of these processes and their consequences is highly complex, while their consequences on work are nuanced, depending on a host of factors, such as differences in the national, sectoral, policy and technological contexts (Hermann and Verhoest, 2008). With this complexity in mind, this section modestly attempts to take a «snap-shot» view of the impact of public service transformation on work, particularly for electricity, telecommunications and postal services, using the latest empirical findings published by specialist organisations such as the European Industrial Relations Observatory (EIRO), and the International Labour Organization (ILO), as well as European research projects such as Privatisation of Public Services and the Impact on Quality, Employment and Productivity (PIQUE), as well as annual reports of the firms. Before proceeding to the sectoral analysis, four generalisations are made.

Firstly, there is an inevitable «lag» between events and academic analysis. Because the systematic privatisation of public services took place first in the UK, and later on in most other European countries in the 1990s, the first analyses of the effects of privatisation on labour and job quality followed these national experiences (starting with the UK then spreading to other countries). Research often took the form of country case studies. As national experiences accumulated, more comprehensive empirically based comparative analysis was produced at the regional and global level. In the same way, since it was only from the late 1990s that public service networks embarked on internationalization, there is, as a consequence, still little work on the consequences for work. A huge research gap is being opened up by public service transnationalization.

Second, and related to this, the task of analysing the consequences of restructuring on work in the public services is quite daunting and expensive: often, it is left to institutions such as the EIRO, the ILO, the European Foundation for the Improvement of Living and Working Conditions, Public Service International and Public Service International Research Unit (PSIRU) to undertake this research. Many of these institutions are backed by organized labour which is principally interested in how unionism is affected by restructuring. The key challenge here is that one of the main trends in the restructuring of public service networks is that recent transformations generate more work done outside unions, or outside the traditional unions. Working conditions beyond the union are not the priority for union «insiders» and there is a danger that these workers will «fall off the radar» from research agenda. Put simply, the increasing number of non-organised workers is falling through the research net.

Thirdly, now there is more research on the consequences of privatisation, liberalization and deregulation on work in the public services, some generalizations become possible. It can be argued generally that these policies seek to increase firm efficiency through cost reductions, higher performance in terms of profits, revenues or productivity per employee, a more efficient use of human and capital resources and via the prioritisation of profit-making objectives rather than broader socio-economic targets that characterised post-war management of public service providers. As a consequence, these policies often herald labour cutbacks and the introduction of new, flexible forms of work organisation (de Luca, 1997). Privatisation itself is often associated with a weakened labour organisation and a fragmented collective bargaining arrangement. This said, it has to be remembered that the impact of privatisation is not inevitable or homogenous across countries or sectors, EC liberalization Directives are usually unevenly transposed by Member States, regulation takes different forms and so forth, so consequences on work of these polices will differ.

Fourthly, there is a methodological challenge related to identifying causality. Conceptually, privatisation, liberalisation, deregulation and internationalization are all different policies based on diverse economic theories. Often, however, as mentioned, these policies become interlinked: for instance, many EU governments used privatization in order to better adjust for liberalization requirements. Thus, one of the challenges of producing a comprehensive study on the consequences of public service transformation on employment is the task of unravelling the «separate» consequences of different public policies, in addition to explaining the role of technological change.

In what follows, the main findings of major studies of the consequences of public service transformation for work are synthesised for electricity, telecommunications and postal services. A cross-country sectoral approach is adopted, justified on the grounds that each sector comprises a particularly large technological system, telecommunications being particularly exposed to dramatic technological change (Information and Communication Technologies associated to internet, mobile telephony, digitisation, broadband communication and so on) in contrast to the more stable technological bases of the other sectors such as electricity and postal services. In addition, EC sectoral liberalisation directives have played a key role in the re-shaping of these sectors. As mentioned, though privatisation, deregulation and liberalisation are separate policies, there was significant correlation between these three policies in the evolution of European public services. The preferred route, therefore, is to explore changing employment patterns within a sector, whilst keeping in mind differences in national institutions.

Electricity

By the turn of the twenty first century, the electricity sector in the EU was undergoing significant market reform and, though this is still ongoing, it is clear that liberalisation of electricity markets will proceed at a much slower speed than that achieved in the telecommunications sector during the 1990s. Privatisation has made important incursions into parts of this sector, though public ownership remains dominant in many Member States. Nevertheless, incentives for management have changed, and this can be seen in the recent «adventures» of electricity providers abroad, both privately owned, such as E.On, RWE, Suez, National Grid, as well as those where State ownership is still significant, such as EDF, Vattenfall, Enel and Gaz de France. Interestingly, at the end of the 1990s, many European-based electricity firms started out with strong interests in new markets both in the rest of Europe and beyond (Latin America, Asia and Africa). In recent years there has been major retreats from the non-European markets for several reasons, including financial crisis, political instability, lack of profitability and so on (Hall, 2007). In the contemporary period, waves of M&A have resulted in the concentration of large electricity firms inside Europe, giving rise to «European» electricity firms with «European» workforces. Thomas (2007) stated market liberalisation in the European Union would result in the concentration of the «seven brothers», but, in 2008, there were actually only six large companies left. Helm (2007) argues a new global «energy paradigm» has emerged in the first years of the twenty first century: the 1990s agenda of privatisation, liberalisation and deregulation is being replaced by new concerns about «energy security» and «climate change». Certainly, EU governments and firms have cited «security» as justifications for blocking M&A in this sector in the recent period, whilst the trend to defend «national champions» continues (Clifton and Díaz-Fuentes, 2010).

In their worldwide study of the transformation of public utilities and its impact on employment, the ILO (2003) argued that, in Western Europe, technological change in the electricity sector was the main cause of job losses before the onset of the passing of the first EC liberalising Directive in 1996. After the passing of the Directive, job cuts were used to reduce costs and make firms more competitive: over 250,000 jobs were lost between 1990-8 in the region. Since then, privatisation and M&A have brought about further job cuts. However, most of these have been brought about by voluntary methods, not outright dismissals, financed by income derived from productivity gains after restructuring. Despite these changes, on balance, the EIRO (2005) concludes that industrial relations and employment conditions are healthy in the electricity sector when compared with the other public service sectors (except for telecommunications, which is also positive). Industrial conflict is not common: typically, levels of unionisation and collective bargaining in this sector are the highest in the country and wages are above the national average, whilst employment terms and working conditions are reported to be better than in many other workplaces. There are three convincing explanations for this. Firstly, as pointed out by Brandt and Schulten (2007: 95) labour costs in the electricity generation segment are less significant in overall costs than in many other service sectors (in contrast to postal or telecoms). Secondly, the deepening liberalisation project of the EC is being partly blocked by certain firms and Member States, so, deeper reform may yet come. Thirdly, in technological terms, electricity is fundamentally different to telecommunications. In the electricity sector, huge investments are still needed in order to enter the market, thus new, smaller entrants may be still prohibited from entering on cost grounds.

The UNCTAD´s list of the 100 world's top non-financial Multinationals in terms of foreign assets in 1995, there were no entries for electricity firms (UNCTAD, 1995). By 2007, there were eleven: eight were EU-based (Électricité de France, RWE Group, E.On, Suez, Enel-Endesa, Vattenfall, National Grid and Fortum); two were in the United States (AES Corporation and Duke Energy), and one in China, CLP Holdings (UNCTAD, 2008). In a decade, electricity firms, led by EU-based firms, have emerged as some of the world's largest Multinationals. The UNCTAD calculates a transnationality index, based on foreign assets, sales and employment at home and abroad, in order to signal the extent to which a firm is «transnational». However, this measurement does not help know where this transnational activity is actually occurring. In order to know where a firm is activity beyond its home borders, annual reports of the companies are needed. As a general trend, it is interesting that the vast majority of workers employed by EU-based electricity Multinationals are working inside Europe. The RWE Group employs over 38,000 workers in Germany and over 25,000 abroad, of which one half of which are in the UK, with the Czech Republic and Hungary accounting for most of the rest (RWE Group, 2007: 92). E.On employs around 87,000 of which one half is outside Germany but still in Europe. The main exception is the 3,000 workers employed in the USA[11]. EDF employs around 159,000 people, two thirds of which are based in France. Worker numbers outside Europe are being reduced as EDF withdraws from many of its ventures[12]. Water, gas and electricity Multinational Suez is perhaps the most international of the four. However, in 2007, at least 130,000 of its 193,000 workers were based in Europe (around half of which

11 Information on E.On was extracted from the firm website «e.on key figures» at http://www.eon.com/en/karriere/17298.jsp.

12 Information on EDF is based on the firm website, EDF Human Resources Division at http://rh.edf.com/the-edf-group/edf-human-resources-98014.html.

were based in France), with roughly 1,500 in the USA; 2,000 in Latin America, 4,000 in Asia and 3,000 in Africa.[13]

In the face of M&A, many firms attempt to secure job security: for instance, when Vattenfall Europe was created after a merger, dismissals were excluded until 2007. However, increasingly, electricity companies are turning to outsourcing which means an erosion of collective bargaining, since small subcontractors can evade sectoral agreement by registering in different sectors. Thus, M&A seem to be associated with collective bargaining fragmentation. Given the trend towards the consolidation of huge European electricity firms, one future area of research could be the extent to which work in public service networks is being «Europeanised». Another question is how to research the impact of M&A on work when these last only for a short period.

Telecommunications

More than any other of the public network services, telecommunications has been dramatically transformed since the 1970s because of far-reaching technological change. EU telecommunications have also been liberalised quicker and earlier than the other public network services under consideration, with liberalisation from 1998. Privatisation has also been deepest in this sector and in many countries the telecommunications incumbent has been fully privatised. In comparison to electricity, far less investment is needed to enter in certain parts of the markets, even though the incumbent has held onto its privileges wherever possible. Many national market structures comprise one dominant company and a number of smaller operators in terms of traffic and employment. Telecommunications firms have also been leaders and gone furthest in the recent internationalisation drive.

Among the world's top 50 non-financial Multinationals, five are new EU telecoms which emerged since 2002 (Vodafone, Deutsche Telekom, France Télécom, Telefónica and Telecom Italia). From 2000 to 2007, Vodafone ranked either first or second amongst the world's top non-financial Multinational in terms of foreign assets ($126.2 billion in 2006); followed by Telefónica ($101.9 billion); Deutsche Telekom ($93.5 billion); France Télécom ($90.9 billion). There were several other telecoms companies included in the top 100[14]. In the equivalent ranking of 1994, there were just four,

13 Information on Suez extracted from the firm website www.suez.com

14 Liberty Global ($25.5 billion), TeliaSonera ($23.3 billion), SingTel ($18.7 billion); Telenor ($17.5 billion), KPN ($14.9 billion), BT ($13.6 billion), Verizon ($10.7 billion), SES ($10.6 billion), Telecom Italia ($9.9 billion). Two companies, Hutchison (($ 70.7 billion) and Vivendi ($28.4 billion) were also included, both classified as versified activities including telecoms.

ranking below the top 50, three of which were based in the United States; ITT, (53), AT&T (56), C&W (80), and GTE (83).

As for EU-based electricity Multinationals, the vast bulk of employees of telecommunications Multinationals with a home in one EU Member State are in Europe. Of France Télécom´s 189,000 employees in 2007, 90 percent are based in Europe (60 percent in France and 30 in the rest of Europe), and the remaining 10 percent in the rest of the world (France Télécom, 2007: 79). Telecom Italia employed around 83,000 staff at the end of 2007, of which 80 percent where based in Italy, and 20 percent abroad, located in Europe and South America. Telefónica is an exception to the rule both in terms of capital investment and workforce: of its approximately 250,000 employees in 2007, around 164,000 were based in Latin America and only 82,000 in Europe (Telefónica, 2007: 26). Vodafone has around 61,000 employees, 51,000 of which were outside the UK (UNCTAD, 2007), but the majority of which are in Europe.

Restructuring in the telecommunications industry resulted in the loss of thousands of jobs. As in the case of electricity, the trend is for job cuts to be made on a voluntary basis, and negotiated consensually. Yet, overall, employment in the telecommunications sector grew between 1993 and 2004 in most European countries (EIRO, 2007). This reveals the contradiction of restructuring in this sector: whilst dramatic job cuts are made at the former telecommunications incumbent, new jobs are created as markets are liberalised and new entrants sprout up. This leads to an important pattern for labour relations in terms of unionisation: the establishment of a dual market. In the case of Spain, for instance, sixty per cent of the workforce employed by the former monopoly Telefónica is unionised, compared to twenty per cent of the rest of the workers in this sector (Traxler, 2007). This dual labour market is common across Europe: when former monopoly providers dominate the telecommunications sector in most countries, there tends to be a continuity of the traditional model of trade unionism, paralleled by new entrant firms with much lower unionisation levels. Thus a polarisation of industrial relations is widespread (Traxler, 2007). Reinforcing this trend is the phenomenon of outsourcing. Outsourcing and contracting out are very common in the telecommunications sector, especially for network maintenance. This is particularly relevant in Spain, Hungary, Italy and the Netherlands. In Spain, for instance, Telefónica replaced its employees (via early retirement) by around 16,000 outsourced workers. Industrial conflict in the telecommunications sector is not common, but has, on occasions, been significant in recent years. One example is the Spanish case, especially in the firms which resulted from spin-offs from Telefónica, such as the dispute caused by the restructuring of Sintel (EIRO, 2000). In Germany, strike action was taken by Deutsche Telekom workers over the outsourcing of some 50,000 workers to T-Service in July 2007 (Dribbusch, 2007).

Postal Services

Reform of the postal services sector is still largely in transition. In the first few years of the twenty first century, this is characterised by partial liberalization, greater competition, and a mix of private and public postal service providers. The first stage of liberalisation led to an increasing number of private providers who emerged by winning significant shares of high value-added services not covered by the post office monopoly. The post office itself also expanded the range of services offered, entering financial, insurance and other services in addition to the traditional ones. From 1997, after the European Directive was approved, national post offices were restructured, this sometimes involving privatisation. A further Directive followed in 2002. Though postal service firms are huge employees, internationalization of EU based firms has been very limited, with the exception of Deutsche Post World Net AG, as shown in table 3.

Table 3. Top seven largest postal enterprises in terms of revenue and employees (2007)

Enterprise	Home Country	Global 500 rank	Employees	Revenues in dollars (millions)
Deutche Post	Germany	55	475,100	90,472
US Postal Services	US	83	785,929	74,778
United Parcel Service	US	142	425,300	49,692
FEDEC	US	214	238,935	35,214
La Poste	France	239	299,110	31,947
Poste Italiane	Italy	348	155,100	23,518
Royal Mail Holdings	UK	446	212,000	18,841

Source: Global 500 (Fortune 2008).

The qualitative and quantitative consequences of restructuring of the postal sector on labour are significant and complex. In general, reform has been gradual, and made in consultation with the trade unions. Restructuring meant massive job cuts in the sector, though these were not evenly distributed across the EU. A recent study shows job losses in the incumbent amounted to between 15 and 45 percent in Austria, Belgium, Germany and Sweden, but were insignificant in Poland and the UK (Brandt and Schulten, 2007).

In most EU countries, the organization of the postal sector is divided between the incumbent, which still dominates the market, and a number of new private entrants who have made inroads into particular segments of the market. In the incumbents, trade unionism remains strong, though this has been accompanied by a gradual, (usually) non-conflictive policy of redundancies as well as an erosion of employment conditions, such as the reduction of the number of employees with civil service status, the introduction of dual or multi-tier wage structures (between non-civil and civil servants, or between those employed before and after reform), and a progressive dissolution of public sector agreements in favour of firm-level ones (Brandt and Schulten, 2007). In contrast, union density is either very low or non-existent in the new private postal operators, whilst working conditions and wages tend to be inferior to those inside the incumbent. Often, only a minority of workers in the new private sector enjoy collective bargaining, such as the white collar workers in express

delivery services, while the majority of workers are self-employed, working short but highly flexible hours with relatively low pay for the sector.

Employment in the postal services sector has also changed qualitatively. Demands for functional and temporal flexibility are on the rise, for example, there is more use of shift and part-time work. Increasingly, recruits with better educational qualifications are being sought, as the nature of work demands ICT skills. There is also an increase in the use of atypical contracts such as temporary agencies (Regalia, 2007). On the other hand, some postal service providers have tried to boost worker motivation by reducing the number of short-term contracts by promoting open-ended contracts to improve worker motivation, such as in the Royal Mail (UK) and La Poste (France). Finally, it is important that most reform is still to come, as the EC plans full liberalization of this sector by 2013.

5. Conclusions

Each of the sectors under discussion has their own internal logic, partly explained by technological change, though these were mediated by country determinants. A number of commonalities, however, link all sectors, in terms of their organisation and regulatory framework. The unbundling of postal and telecommunication services delivered by the traditional PTT has been more complex than predicted: new links are emerging, for instance, between e-mail, postal services and logistics. The combined effect of privatisation, liberalisation, deregulation and internationalization has reduced the size of the traditional country incumbent (former monopoly) in almost all cases, though many European firms have tried to soften job cuts with voluntary approaches. New employment contracts offered by the new entrant firms are often of a lower quality and less permanent than in the incumbent. This leads to employment fragmentation in each of the sectors considered, and the creation of a «two-tier» workforce (Hall, 2006). At the same time, collective bargaining in the former monopoly becomes more complex, as new workers are often hired under different legal structures than the original ones. A trend that is emerging, as emphasised here, is that the workforces of the new public network service Multinationals are European, though some firms have now a more globalised workforce, such as Telefónica and Suez. It is of great interest to know the consequences of this «Europeanisation» and «globalization» on the workforce.

There are some barriers to future research on these phenomena. One advantage of the reports produced by institutions such as the EIRO, the European Foundation for the Improvement of Living and Working Conditions, and the ILO is the availability of comparative cross-country and sectoral data. The accumulated experience of European public network services facing privatisation, liberalisation, deregulation and, most recently, internationalization, and the consequences of these transformations for employment and job quality, are beginning to be visible. However, there are still many unknown aspects of the consequences of industrial restructuring for job quality. First, there is a logical tendency for institutional publications to pay particular attention to the consequences of change from a tradition industrial relations perspective (rate of unionisation, collective bargaining arrangements and so forth). This is important, since, in all the sectors studied, there is —to a greater or lesser extent— a trend whereby new entrants are not unionised, or only weakly unionised. Hence it is here where greater problems with job quality may exist, but it is also precisely here that less research is done, as this less directly affects the interests of institutional stakeholders. It is important to learn more about employment experiences in these new entrant firms. Whilst many reports state employment conditions are worse, it would be of interest to know more about work intensity, stress, flexible work arrangements and so on in the unionised and non-unionised segments of the sector (PSIRU, 2006).

The other barrier is the geographical reach of research organisations. Regional organisations, such as EIRO, are limited to focusing exclusively on their own region. European research and funding will focus on the effects «inward» effect of FDI upon employment and job quality (that is, towards an EU Member State). For instance, when Arabic, Russian, Latin American or Chinese FDI is made into European-based public utilities, the effects on job quality will be deemed of interest to the EU. Little attention, however, will be placed on the consequences of the «outward» flow of FDI by an EU-based public network service beyond Europe. What, for instance, is the consequence of Spanish Telefonica's investment decision to provide fixed and mobile telecommunications services to the Latin American market? When European firms transnationalise to Africa, Asia or Latin America, what is the consequence for employment practice in those regions? The same question could be asked in another situation, when European firms then proceed to abandon less developed countries in the face of economic crisis, as has occurred in recent years. When the object of study goes beyond the frontiers of Europe, this will need to be taken up for study by an international organisation, such as the ILO or the United Nations Conference on Trade and Development.

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