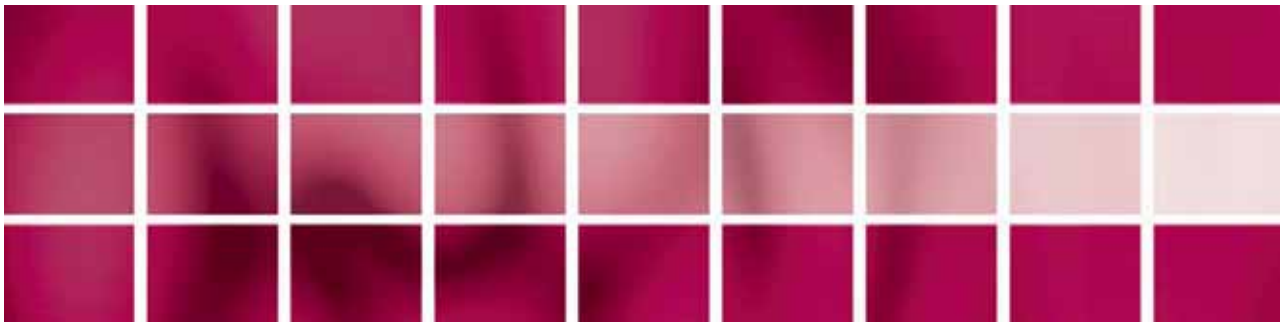
POLICY PAPER 3



PRIVATISATION OF PUBLIC SERVICES AND THE IMPACT ON QUALITY, EMPLOYMENT AND PRODUCTIVITY

PRIVATISATION OF PUBLIC SERVICES AND THE IMPACT ON EMPLOYMENT AND PRODUCTIVITY

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This paper is the third of a series of Policy Papers from the 6th Framework EU-funded research project PIQUE (Privatisation of Public Services and the Impact on Quality, Employment and Productivity). It is based on two research reports – one on the impact of liberalisation and privatisation on employment and the other one on the impact on productivity – carried out during the second phase of the project. The research covers six countries (Austria - AT, Belgium - BE, Germany – GE, Poland - PO, Sweden – SW and the United Kingdom - UK) and four sectors (electricity, postal services, local public transport and health care/hospitals) which in the last 20 years have witnessed a greater or lesser degree of liberalisation or privatisation. The full reports are available to download from *www.pique.at*.

1. THE ISSUES

Some very strong claims are made of the enhanced benefits to the public services enjoyed by European citizens as a result of privatisation and liberalisation. The introduction of competition and the allocation of resources by markets and in the interests of private shareholders are claimed to improve efficiency of service delivery, allow service delivery to take place at a lower cost, and hence to improve productivity and allow for better service quality at the same level of inputs.

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These productivity gains are supposed to be transformed into higher levels of outputs and greater societal wealth, thereby raising overall living standards and enabling higher consumption levels and greater consumer choice. The growth of the market sphere is in turn supposed to lead to higher employment. The European Commission therefore asserted in its 2003 *Green Paper on Services of Public Interest* that the impact of market opening on net employment in the network industries has been broadly positive: 'Job losses, particularly amongst former monopolies, have been more than compensated for by the creation of new jobs thanks to market growth.'

In a similar vein, Copenhagen Economics (2005) argues that market opening in the EU-15 network industries has succeeded in increasing productivity. As network industries provide crucial inputs for production in all other sectors of the economy, market opening, according to this view, has led to significant spill-over effects to the rest of the economy, contributing significantly to the overall economic gains in terms of welfare, consumption and employment. The authors estimate that the knock-on effect of lower input prices from electricity and telecommunications will create an additional 500,000 jobs in Europe. There have, however, been few critical assessments of the validity of such assumptions.[1] The PIQUE project aims for such an evaluation with respect to employment, productivity and – at a later stage – service quality. Yet it also goes beyond the aforementioned claims by looking beyond network industries and including other public-service sectors in the analysis. In addition, PIQUE attempts, as far as the data allow us to do so, to be more specific and to account for the different timing of liberalisation and privatisation processes in the different countries – this is especially important for productivity, where short-term changes have to be disentangled from long-term trends - and for the different degrees of competition and changes in ownership structures.

In some cases, such as the UK electricity sector, there was a clear timetable for both privatisation and liberalisation and it is possible to identify distinctive pre- and post-privatisation and -liberalisation periods, even if there may still be some debate over the timescale over which these processes can have an impact on employment and productivity. In other sectors and countries – local transport in Austria and Germany for example – the process has been much less clear-cut and it is difficult to argue that there has been any significant moves towards a more privatised or liberalised sector, certainly when looking at the sector as a whole from a national perspective. As Policy Paper 1 tries to summarise, in these countries there has been a 'limited' or 'very limited' move to more competitive markets accompanied by limited or moderate increases in private ownership (see Table 1).

The hospital sector is one where it is also very difficult to identify a key point in time when privatisation or liberalisation has been introduced or implemented in any kind of systematic way on a national basis. There have certainly been trends to make greater use of the private sector in some areas, with the outsourcing of non-clinical services, such as cleaning and catering, but only in Germany has there been a significant and identifiable trend to privatisation of hospitals themselves (we therefore occasionally use the terms 'commodification' and 'marketisation' rather than 'liberalisation' and 'privatisation' to indicate a significant shift in the development). It is also important to note that even where there has been a formal process of liberalisation – such as the implementation of legislation to allow new companies to enter a market – this does not necessarily mean that there has been a real transformation from a single supplier to a competitive market. In several instances, the key privatisation periods took place in the mid to late 1990s. There are exceptions, principally of the electricity sector in the UK, where the most rapid changes took place between 1990 and 1996, and of local transport in the UK and Sweden, where the main developments took place in the mid-1980s (bus transport in Sweden and outside London in the UK).

[1] Notable exceptions are Mehmet Ugur (2007) as well as Raffaele Doronzo and Massimo Florio (2007).

For employment, Eurostat data and national data for the sectors and countries under investigation allow us to analyse roughly a ten-year period reaching from the mid-1990s to 2005. For productivity data is only available for somewhat broader sectors but in turn available data reach as far back as 1970.

2. THE COUNTRIES AND SECTORS

There are also some differences in the general economic performances of the target countries that may have had important consequences for the liberalisation process. Since 1995 all six countries have seen steady economic growth with annual percentage increases in real GDP averaging between 1.5% (Germany) and 4.6% (Poland). Austria and Belgium both saw GDP growth average 2.2% while it was higher in the UK (2.8%) and Sweden (3.0%). From 1995 five of the six countries experienced overall employment growth ranging from 3.8% in Germany to 12.2% in the UK, with Sweden (7.3%), Austria (7.6%) and Belgium (9.9%) in between. Poland was the only country to register a fall in employment (-4.7%). Across European economies in general there has been a trend towards greater use of part-time employment. Austria, Belgium, Germany and Sweden saw an increase in the part-time rate of between 4% and 8% since the mid-1990s.The UK stands out as having a part-time rate of around 25% in the past ten years, while in Poland the proportion of part-time has been comparable low with about 11%.

The experience of liberalisation and privatisation varies from country to country and from sector to sector. Here we show a summary chart outlining the major tendencies across the six countries broken down by major liberalisation and privatisation processes, with significant dates included where they can be identified. We then describe the detailed developments and employment outcomes in each of the four sectors, electricity, post, local transport and health.

Table 1: Sector trends in liberalisation and privatisation in six EU economies

		Austria	Belgium	Germany	Poland	Sweden	UK
Electricity	**Lib**	Limited (1999)	Very limited (2000)	Limited (1999)	Strong (1999)	Moderate (1996)	Strong (1990)
	Priv	Substantial increase (1988)	Moderate increase (nrd)	Substantial increase (1985)	Substantial increase (2008)	Substantial increase (1995)	Very strong increase (1990)
Postal services: letter and direct mail market	**Lib**	Limited (1998?)	Limited (1998)	Rather limited (1989)	Very limited (1991)	Moderate (1991)	Rather limited (1998)
	Priv	Substantial increase (2006)	Substantial increase (1998)	Strong increase (1989)	Marginal increase (nrd)	Limited increase (1994)	Limited increase (2001)
Local public transport	**Lib**	Limited (nrd)	Very limited (2002)	Rather limited (nrd)	Limited (nrd)	Strong (1985)	Strong (1985)
	Priv	Limited increase (nrd)	Very limited increase (2002)	Moderate increase (nrd)	Limited increase (nrd)	Strong increase (1985)	Very strong increase (1985)
Hospitals	**Lib**	Limited (nrd)	Limited (nrd)	Moderate (nrd)	Limited (nrd)	Very limited (nrd)	Very limited (nrd)
	Priv	Limited increase (nrd)	Moderate increase (nrd)	Strong increase (nrd)	Limited increase (nrd)	Very limited increase (nrd)	Limited increase (nrd)

Lib = Liberalisation; Priv = Privatisation; nrd = no relevant date

3. EMPLOYMENT IN THE LIBERALISED SECTORS

The evidence presented below focuses on the development of employment numbers in the sectors included in the PIQUE project. In order to ensure comparability, data is primarily drawn from Eurostat and here from structural business statistics (SBS). These data are available covering the sectors looked at in the PIQUE project.[2] The disadvantages of this data are that the information on forms of employment is limited and that data are not available for all countries for the same years, although in most cases they cover the mid-1990s to 2005 (this is why we compare yearly averages rather than total employment reduction in the tables below). Eurostat-SBS data has therefore been complemented by additional data from national data sources. If available for the sectors under investigation we use national Labour Force Survey Data, but for some countries we rely on alternative national data sources.[3] Due to different methods of collecting data, LSF data tend to show lower employment numbers than SBS-data. But with few exceptions (e.g. postal sector in Germany) they still show the same development.[4] In the case of electricity, we use a study on employment effects commissioned by the European Commission (ECOTEC 2007).

Electricity

Despite significant variations between countries and between data sources, the electricity sector has experienced a substantial loss of employment since the mid-1990s. Within the EU-15 total losses amount to 246,000 jobs between 1995 and 2004 (Ecotec 2007). In relative terms the reduction between 1995 and 2004 amounts to between a quarter and a third of the previous employment levels (if we stretch the period to the early 1980s, the fall in employment in the UK would even amount to 50%). Losses of 30% and more were recorded in Germany (Ecotec), Sweden (Ecotec), between 20% and 30% in Austria (Eurostat-SBS, national data source and Ecotec), Belgium (Eurostat-SBS and Ecotec) and the UK (national data source and Ecotec). Poland stands out in this comparison as the country with the smallest decrease in employment (9% between 1995 and 2004).

Table 2: Employment change in electricity

	Eurostat-SBS*	National data sources**	**ECOTEC (1995-2004)**	
	Yearly averages %	Yearly averages %	Yearly averages %	Total reduction%
Austria	-2.4	-2.3	-2.6	-24
Belgium	-2.4	-	-2.4	-22
Germany	-2.8	-0.6	-3.7	-34
Poland	-1.1	-2.3***	-1	-9
Sweden	-0.8	-1.4	-3.6	-33
UK	-1.6	-3	-3.1	-28
EU-15			-3.4	-31

*Eurostat-SBS : AU & BE: 1995-2005; PO & UK: 1996-2004; SE: 1997-20004; GE: 1998-2004. **National Data Sources: AU Labour Force Survey - 1995-2006; BE Data Warehouse Social Security – 1997-2004; GE: Labour Force Survey - 1995-2005; SE: Register based labour market statistics – 1995-2006; Poland: Central Statistical Office – 1996-2006; UK: Annual Business Inquiry - 1998-2005. ***Electricity, gas, steam and hot water supply.

[2] Electricity (NACE 401), Post and courier activities (641), Other scheduled passenger land transport; taxi operation; other land passenger transport (6021 to 6023), Health and Social Work (85) and hospital activities (8511).

[3] Austria & Germany: Labour Force Survey; Belgium: Data warehouse Social Security; Sweden: Registerbaserad arbetsmarkandsstatitik (Register based labour market statistic); Poland: Central Satistical Office (Employment in National Economy); UK: Annual Business Inquiry.

[4] While SBS data is based on interviews with company representatives, LFS data is based on interviews with workers.

With the exception of Poland all countries have experienced an increase in part-time employment. In Austria the part-time rate increased from 3.5% to 9.4%, but in all countries the proportion of part-time in the electricity sector is still well below the percentages for each economy as a whole. In Poland the proportion of part-time workers in the sector actually fell according to Eurostat data between 1996 and 2004/5.

A report by Ecotec Consulting (2007) carried out for the European Commission has revealed a shift in job patterns with a decline in technical and maintenance staff (often through outsourcing) and an increase in legal, marketing and sales staff as companies devote more resources to winning customers from other companies. This partly explains the increase in the proportion of women in the industry in some countries, from 24% to 27% in the UK and from 24% to 28% in Sweden, for example.

Postal services

In postal services there is also a strong tendency towards employment reductions since the mid-1990s but the picture is less clear than in electricity. There are countries with a sharp fall in employment, some with a less strong but still significant reduction and at least one country with a substantial increase in employment. Reductions of 20% and more have been recorded in Austria and Sweden (according to Eurostat-SBS data and data from national sources). Germany has experienced a substantial reduction according to national labour force survey data covering the period from 1995 to 2005 (-15%) but an equivalent increase according to Eurostat-SBS data for the shorter period from 2000 to 2004(+15%).[5] In Belgium employment reduction was somewhat less than 10% and in the UK there is an employment increase of more than 10% (in both cases according to Eurostat-SBS data and data from national sources). For Poland data is only available for the broader post and telecommunication sector but, despite a dramatic increase in telecommunication activities caused by a spread of mobile phones and Internet, employment according to the Polish Central Statistical Office still decreased by 11% between 1996 and 2005.

Table 3: Employment change in postal services

	Eurostat-SBS*	National sources**	National sources**
	Yearly averages %	Yearly averages %	Total reduction (1996/7/8-2004/5)
Austria	-3	-2	-15
Belgium	-1	-1	-8
Germany	+3.9	-1.3	-12
Poland* **	-1.7	-1.2	-11
Sweden	-2.3	-2.0	-20
UK	+ 2.4	+1.7	12

*Eurostat-SBS: AU 1998-2005; BE 1996-2005; GE 2001-2004; PO 1995-2005; SE 1993-2004; UK 1997-2004. **National sources: AU Labour Force Survey - 1995-2005; BE: Data Warehouse Social Security - 1997-2004; GE Labour Force Survey – 1995-2005; PO: Central Statistical Office – 1996-2005; SE: Register based labour market statistics – 1995-2006; UK: Annual Business Inquiry -1998-2005. ***Post and telecommunication sector.

In addition to employment cuts, countries for which data is available also show a substantial increase in atypical forms of employment. The largest increase in part-time employment was recorded in Germany. Here the number of part-time workers in postal services has more than doubled since 1995. A lot of the newly created part-time jobs are furthermore marginal part-time positions including only a few hours of work per week. Data from the German post

[5] According to Labour Force Survey data employment still decreased by 3 percent. While the Labour Force Survey shows a persistent downward trend, the Structural Business Survey shows significant fluctuations with substantial increases and significant reductions over the four-year period covered by the data.

regulator for the German letter market show that while the majority of the workforce employed by the incumbent Deutsche Post AG still has a full-time job (33.3% are part-time and 4.1 marginal part-time), its competitors mainly employs part-time workers (more than 80%) and among them the majority (59.4%) as marginal part-time workers (Brandt/Drews/Schulten 2007). Hence while the total number jobs in the German letter market was more or less stable between 1999 and 2004, the amount of employment measured in full-time-equivalents has actually decreased by 10% over the same period (ibid). Germany is followed by Belgium, where the number of part-time workers has doubled, and the UK, where it increased by 45%. In Austria the growth in part-time jobs reached 28%. In Poland the increase in the broader post and telecommunication sectors amounted to 73%.

For Austria and Germany there is also data available for the proportion of self-employment. In Germany the number of self-employed workers in postal services grew by more than two and a half times between 1995 and 2005. In Austria the number increased by four and a half times over the same period. Despite the dramatic increase in part-time jobs and self-employment, the resulting proportion of atypical forms of employment lies within the range of the proportion for the national economies pointing to an adjustment of public sector employment relations to private sector conditions (Schulten/Brandt/Hermann 2008).

Table 4: Part-time and self-employment change (%) in postal services

	Part-time employment		Self-employment	
%	Increase 1995/6-2004/5	Change per year	Increase 1995-2005	Change per year
Austria	28	2.5	350	35.0
Belgium	50	7.1		
Germany	109	10.9	171	17.1
Poland*	73	8.1		
UK	45	6.4		

Source: Austria & Germany: Labour Force Survey; Belgium: Data Warehouse Social Security; Poland: Central Satistical Office (Employment in National Economy) UK: Annual Business Inquiry. *Data for Poland refers to the Post and telecommunications sector.

Local public transport

In contrast to electricity and postal services, employment in local public transport has tended to show increases over the past ten years. According to Eurostat data, yearly employment growth since the mid 1990s was between 2% and 4.5%[6]; according to national data sources, the increase is somewhat smaller, ranging from 0% to 3.5%.[7] The national data sources also reveal a major increase in part-time employment. The number of part-time employees doubled in Austria and Germany and part-time growth was 37% in Belgium.[8] However, in all countries the level of part-time working as a proportion of total public transport employment is still low compared to the national average level.

Health care/hospitals

As in local public transport, employment growth in health care and social work has generally been positive, ranging from 17% to 36% since the mid-1990s. The exceptions are Sweden, where employment increased only gradually in the past ten years, and Poland, where it fell by 35% over

6 Austria 1995-2006; Belgium 1995-2005; Germany 2001-2005; Sweden 1996-2004; UK 1998-2005.

7 Austria 1995-2006; Belgium 1997-2004; Germany 1995-2005; Sweden 1995-2006; UK 1998-2005.

8 For time periods covered by national data see footnote 7.

the same period. However, if we look at national data on hospital employment, the numbers were more or less stable in Austria while they declined substantially in Sweden (-18% between 1995 and 2005) and significantly in Germany (-7% between 1995 and 2005) and Poland (-6% between 2001 and 2005).

The share of part-time work in health care and social work ranges between 20% to 50% of total employment across the six countries and is therefore not only much higher than in the other three sectors looked at but in several countries also lies above the national averages. The exception again is Poland, where part-time work is still relatively rare. Self-employment grew rapidly in Austria, moderately in the UK, Germany and in Poland, while in Sweden and Belgium it has remained on a low level. Temporary employment is highest in Sweden and Germany; with Poland starting to catch up in recent years. Temporary employment in the health and social work sectors of Belgium, UK and Austria, in contrast, is relatively low and stable.

4. DRIVERS OF EMPLOYMENT CREATION

There are many drivers of employment growth, and while outsourcing has certainly had an impact on the employment structure in public services, the positive employment effects of resulting lower input prices on the wider economy are difficult to prove. There are several reasons for this.

First because, rather then falling steadily and uniformly in response to liberalisation and privatisation, energy prices – a key ingredient of consumer prices - have fluctuated significantly over the past ten years. So while there may have been savings for large customers and for small enterprises and some private households, electricity prices have also increased in part as a result of the rent taking consequences of liberalisation and privatisation. The positive impact of lower prices for large costumers can thus be offset through many private households having less money to spend, thereby rendering neutral the net effect on employment.

Second, there are many other factors that have an impact on employment levels aside from liberalisation and privatisation, including general economic growth, the impact of new technology, and political decisions at national and European level and regulatory developments. The impact of new technology is particular important. This has been especially true of electricity and postal services, but also in local public transport and hospitals, where technological innovation has enabled employers to save jobs. It is particularly difficult to disentangle the impact of new technologies and the impact of liberalisation and privatisation in the sectors studied here.

We cannot therefore attribute all the employment losses recorded in some of the sectors under investigation to liberalisation and privatisation (we would need sufficiently long data from before and after liberalisation and privatisation to get a clearer picture). We can, however, conclude that liberalisation and privatisation in these sectors have certainly not led to employment growth as argued by liberalisation and privatisation supporters.

5. DRIVERS OF LABOUR PRODUCTIVITY

One argument for privatisation and liberalisation is that this marketisation drives rising productivity as a result of the combination of the discipline of competitive markets with the pressures on profit-making organisations to deliver ever greater returns to their shareholders. Privatisation and liberalisation involve a shift in priorities with cost reduction and profit-maximisation emerging as central goals, in contrast to a set of broader social and political objectives that might characterise nationalised companies, municipally-owned and run services

or those run by other public and/or voluntary sector organisations. In the short term, then, the impact of privatisation and/or liberalisation is likely to increase gross value added and labour productivity as former publicly owned providers are given more freedom over their human resource policies as well as how, where and when they finance new investments.[9]

Productivity can be measured in a number of ways. It is the level of output produced for a given level of inputs. Labour productivity is one of the most common ways of looking at productivity, analysing changes in output in terms of labour inputs. The definition of output itself can vary. In the PIQUE report on productivity the focus was on the internationally comparable data developed by the European Commission-financed EU KLEMS project where output is defined as gross value added. Labour productivity in a given sector is therefore the level of gross value added divided by the number of hours worked.

Labour productivity levels vary, then, according to the movement of the two variables: the level of value added and the number of hours or size of the workforce. Rising labour productivity can be the result of higher outputs from the same number of workers working the same number of hours, or of the same level of outputs being generated by workers working a lesser number of hours.

The major reductions in employment in the electricity sector thus increased labour productivity in the short term. It certainly appears that this labour shedding was enabled by the marketisation process. However, what is more interesting is to ask whether private ownership and open markets produced an appreciable shift in productivity trends over the medium and longer term. If this were so, a further question would then arise as to whether any shift in productivity growth were enough to compensate for what might be seen as any potential negative outcomes in terms of employment levels, working conditions and quality of service.

The EU KLEMS data used in this labour productivity analysis cover electricity (or electricity, gas and water) and the broader industrial sectors of inland transport and post and telecommunications. Although these latter two are wider than the focus of the PIQUE project, they are the best available in terms of long-term, comparable statistics and do provide some indication of developments in as far as the aim was to try to identify significant shifts in productivity growth, shifts that would be expected to register in data for the broader industrial sectors.

In the electricity and gas sectors in the six countries average annual labour productivity increases between 5-6% over the three decades for which data is available. It is important to bear in mind that the electricity sector has seen some of the more significant changes in technology of the sectors covered in the PIQUE study, although not in all countries. In Poland there has been virtually no shift away from coal-fired electricity production; while there have been some changes, in the balance of fuel sources in Austria, hydro-electric power is still the main source. In contrast all the other countries have seen major shifts in production with Sweden, Germany and Belgium all increasing significantly the share of nuclear power in electricity production from the mid-1970s.

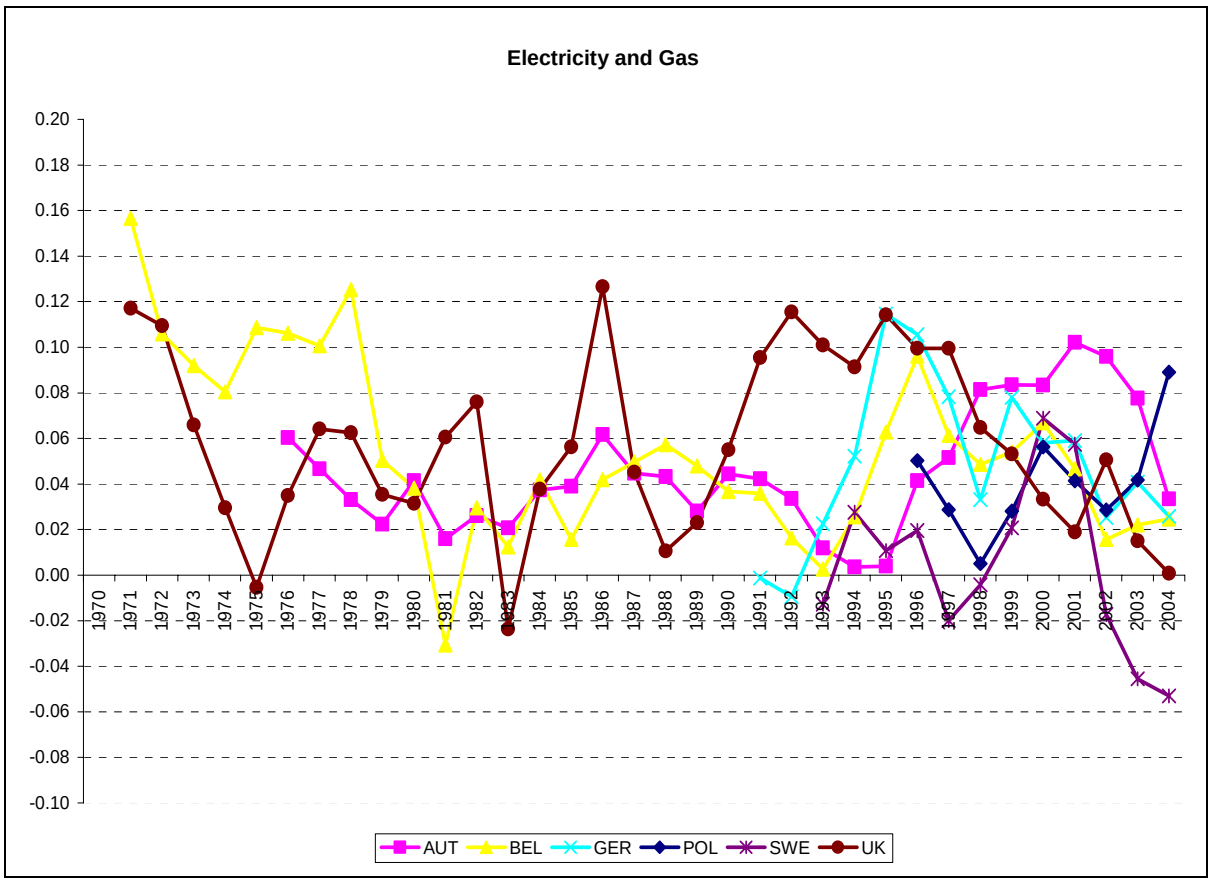
The high Belgian labour productivity rates in the 1970s are explained by the shift from coal to nuclear. These major changes will have contributed to higher productivity in these countries over the period but all pre-date any moves towards privatisation or liberalisation. However, in the UK the big technological change followed privatisation as companies chose to concentrate new investment in gas-fuelled power stations and the share of production coming from gas rose from less than 2% in 1990 to 35.5% in 2006. While a publicly-owned industry might have moved in the same direction, the speed and scale of change in the UK were almost certainly enabled by investment decisions being made in a privatised, competitive environment. In the UK the

[9] Value added refers to the additional value created in the production process.

strongly cyclical variations in labour productivity up to 1989 reflected wider national economic performance, investment shifts and industrial conflicts while the higher levels in the 1990s reflect the shift from coal to gas in the context of marketisation.

In Austria and Sweden, in contrast, the cases of higher and lower than the 'norm' productivity since roughly 1999-2000 both appear to follow or accompany the marketisation process. In Poland this is also the case. A provisional conclusion here is that technological changes to the sector have had the biggest impacts on labour productivity and that an examination of the comparative productivity rates suggests little support for the universal thesis that marketisation itself has helped drive longer term higher productivity.

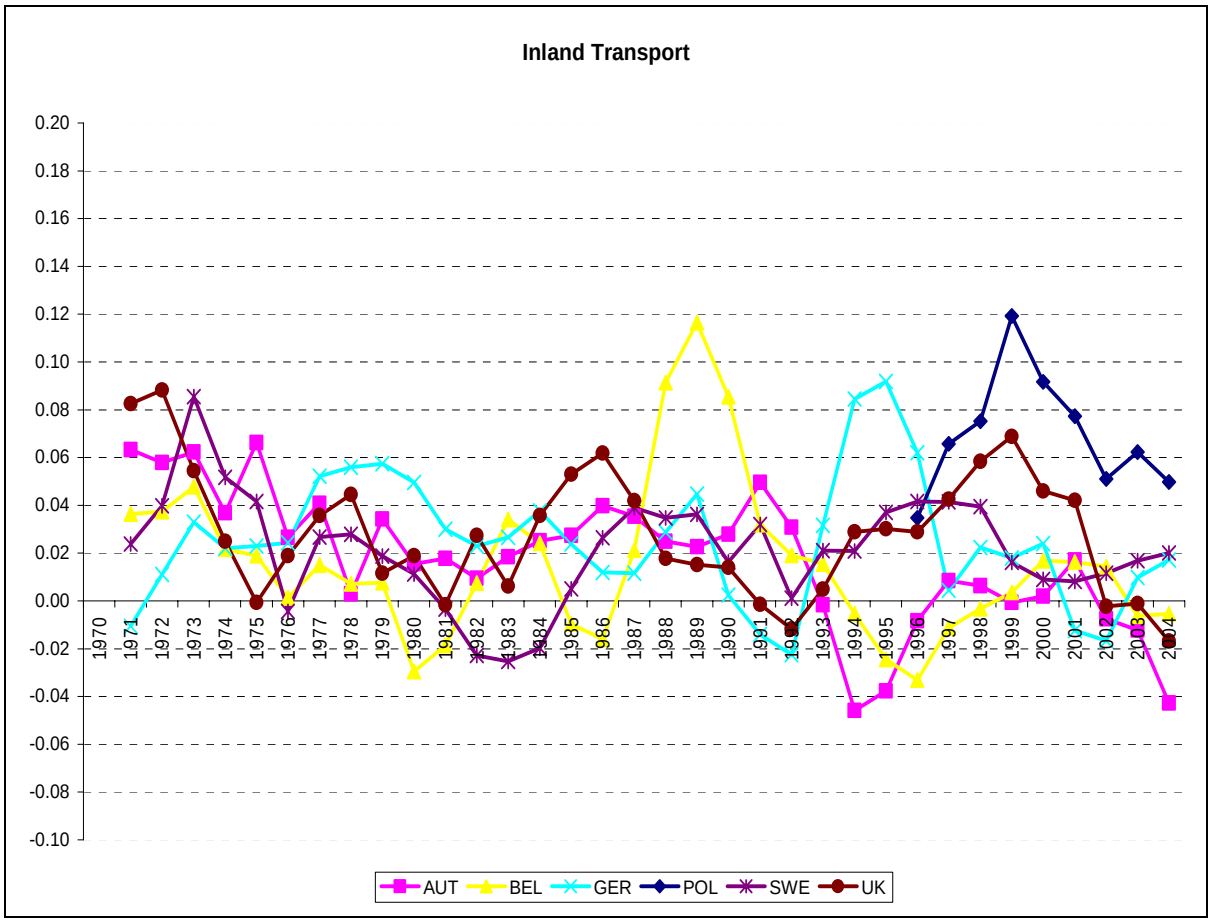
Figure 1: Comparative labour productivity in the electricity and gas sector, 1971-2004



AUT= Austria, BEL= Belgium, GER=Germany, POL=Poland, SWE=Sweden, UK= United Kingdom. Calculations based on EU KLEMS (2007).

In inland transport annual comparative labour productivity rates in 1971 ranged between -0.1% and +8% and in 2004 between -0.4% and +5%. The overall trend is thus downwards over time. In this sector, too, it is quite difficult to read out the different contributions of local bus and underground public transport services from those of the railways, road haulage and the growing taxi industry. The brief 'above the trend' exceptions of Belgium from 1987 to 1991, Germany from 1993 to 1996 and the UK from 1996 to 2001 occurred many years before commodification in the case of Belgium, many years afterwards in the case of the UK, and were only located close to a commodification transition moment in Germany. While in Austria the below the trend results of 1993 to 1996 preceded its transition moment by several years. Here too the evidence that commodification and the different forms of resource allocation it involves have played a role in raising long-term labour productivity above the international trend is non-existent or weak.

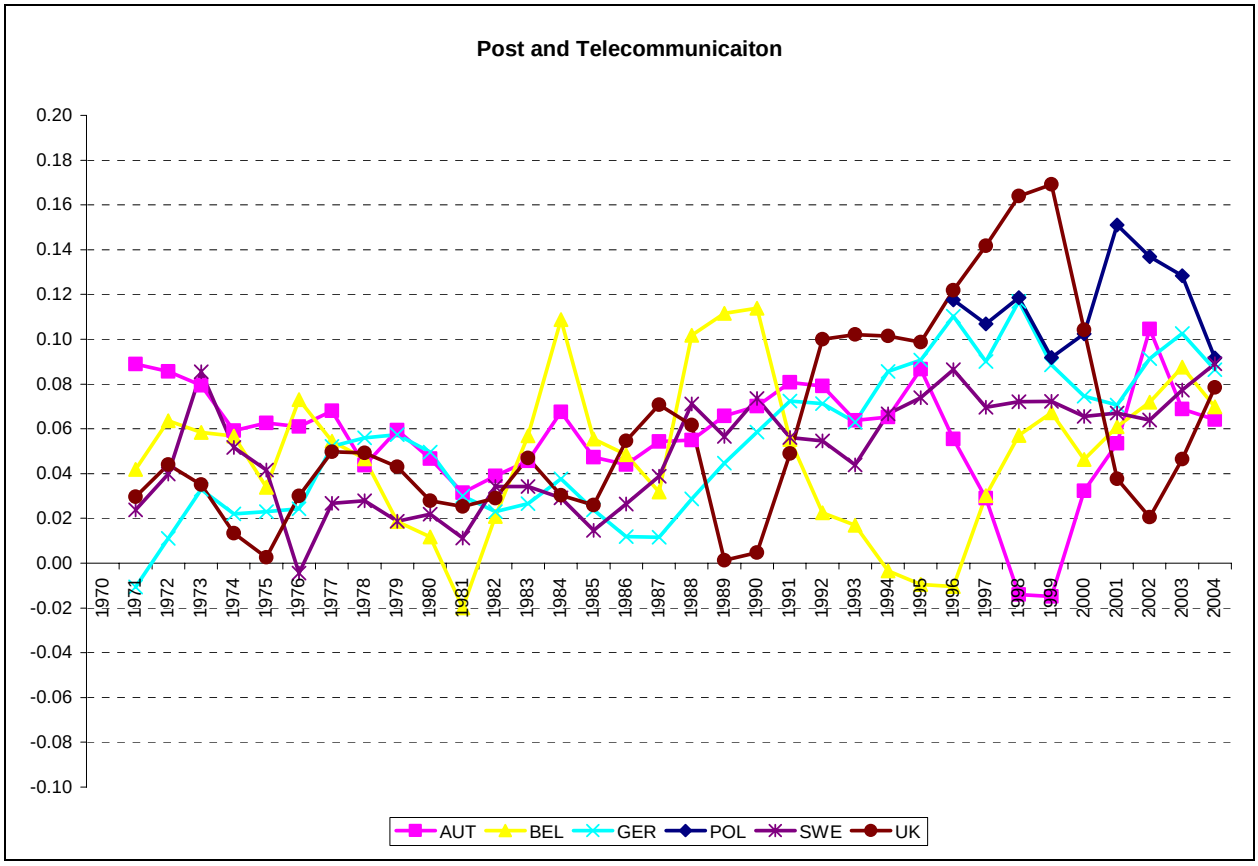
Figure 2: Comparative labour productivity in the Inland Transport sector, 1971-2004



AUT= Austria, BEL= Belgium, GER=Germany, POL=Poland, SWE=Sweden, UK= United Kingdom. Calculations based on EU KLEMS (2007).

In the post and telecommunications sector there was a fairly stable level of annual labour productivity increases at around 4% in the 1970s and 1980s, but then in the following fifteen years levels generally moved upwards to roughly 8% a year. These general increases can be assumed to be largely the result of the revolution in telecommunications that dramatically increased that part of the sector's revenues. Belgian productivity rates both exceeded the trend in 1988-1991 and fell well below it from 1992 to 1998. In the UK above the trend results from 1991 to 2000 also appear to be linked to developments in telecommunications rather than in the postal service. Yet by the end of the period, almost regardless of the different national pathways towards commodification in both telecoms and postal services, the levels of annual labour productivity appear to converge. A tentative conclusion here is that labour productivity in this sector is significantly driven by common, globalised technologies rather than by the processes of commodification.

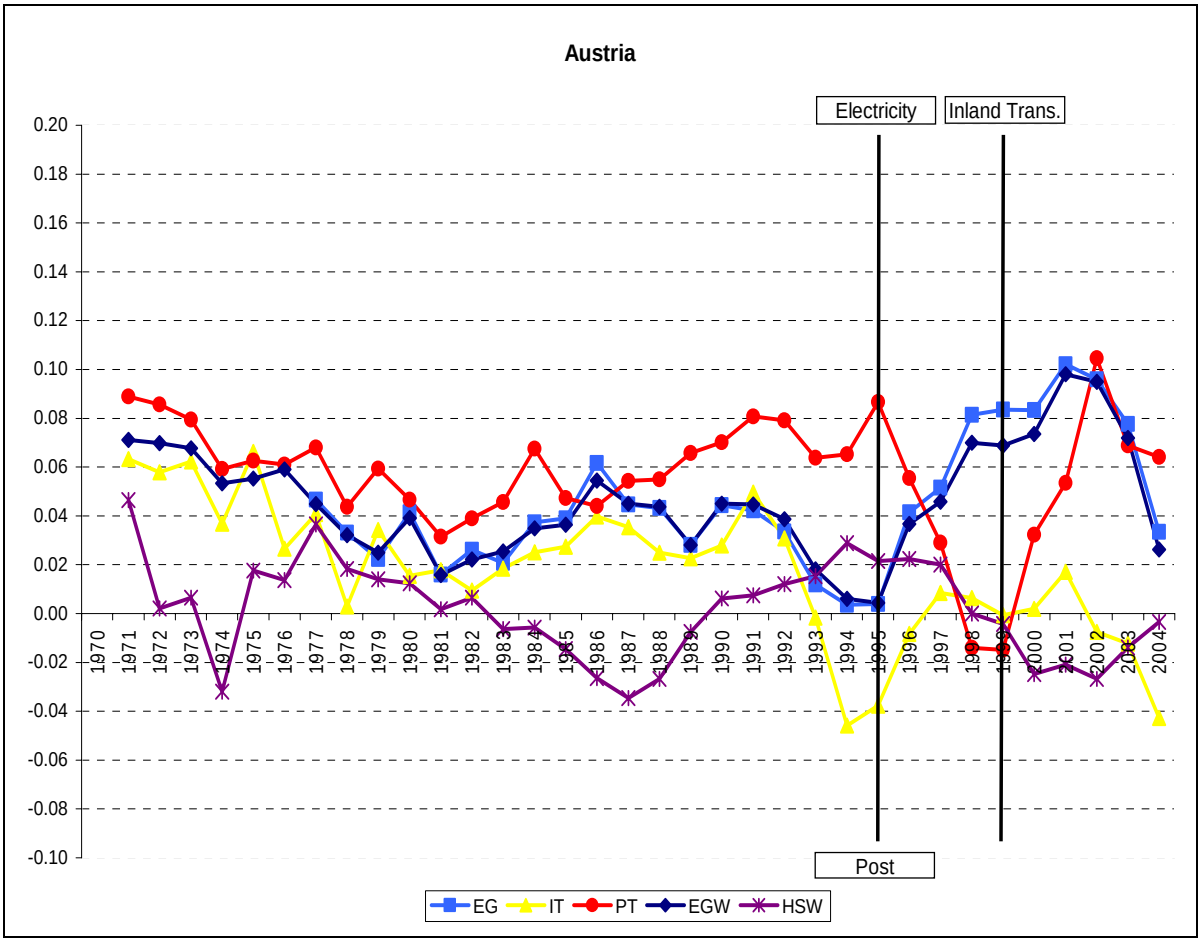
Figure 3: Comparative labour productivity in the post and telecommunications sector, 1971-2004



AUT= Austria, BEL= Belgium, GER=Germany, POL=Poland, SWE=Sweden, UK= United Kingdom. Calculations based on EU KLEMS (2007).

Reviewing the evidence by country over the long term (from 1970) raises doubts about clear differences between 'before and after' marketisation periods. In Austria the annual rate of increase in labour productivity (measured by the real value added per hour worked) in all four sectors was higher in 1971 (1977 start date for electricity and gas) than it was in 2004. In the electricity sector, however, falling productivity levels from 1986 turned around between 1995 and 2001 before plunging again between then and 2004. In post and telecommunications, in contrast, the same 1995 commodification transition moment was followed by a sharp decline in productivity to 1999 and then an equally sharp increase before settling close to the historic level of between 6% and 8% per year in 2003 and 2004. Labour productivity in inland transport appears to have declined nearly continuously up to the transition moment of 1999, and then after a brief recovery to have resumed its downward direction. The labour productivity levels in the health and social work sector[10] were generally lower than in the three others, and hovered around no net increase throughout the period.

Figure 4: Evolution of Austrian sector labour productivity, 1971-2004 (three-year averages)

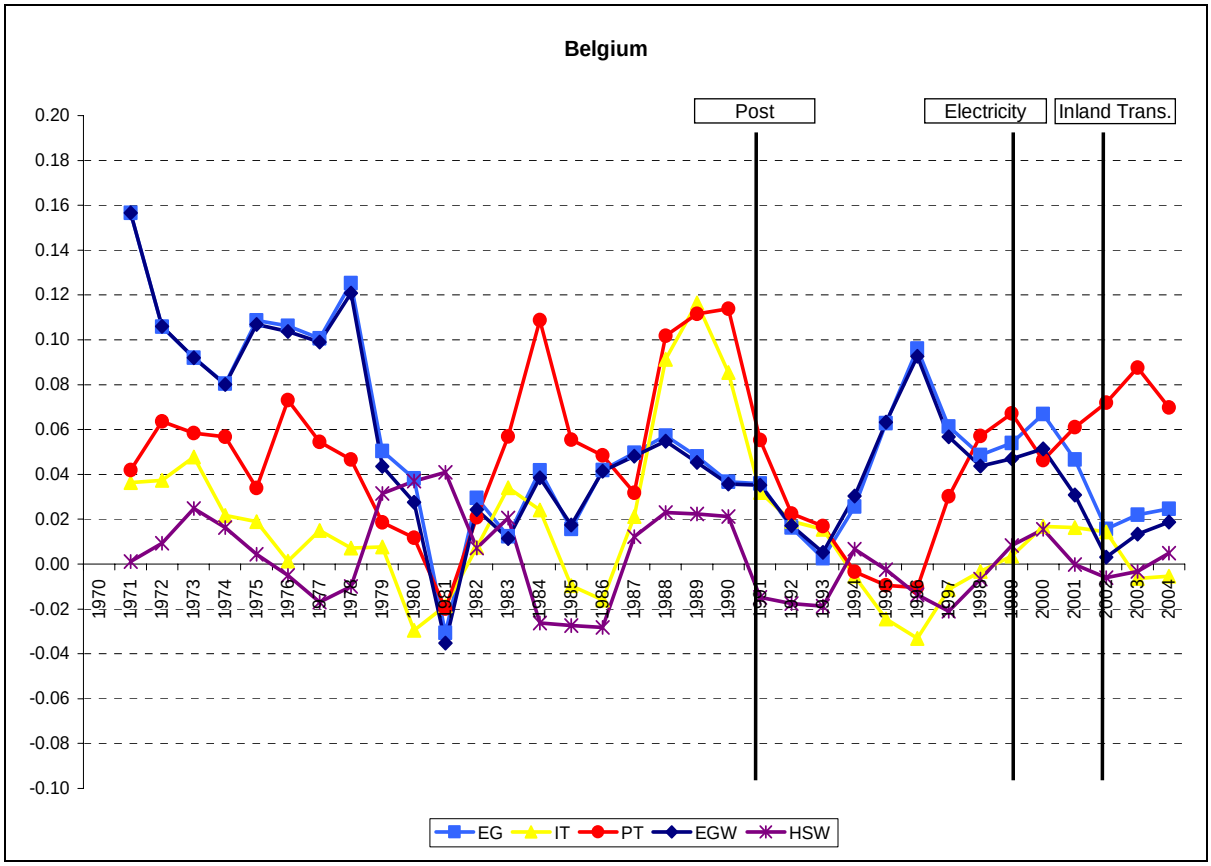


EG= Electricity and Gas, IT= Inland Transport, PT= Post and Telecommunications, EGW = Electricity, Gas and Water Supply, NSW= Health and Social Work. Authors' calculations from EU KLEMS (2007).

[10] Labour productivity is much more difficult to assess in health and social work across all countries because of the difficulties in establishing estimates of value added that are independent of the inputs. Annual productivity changes are thus almost always shown at or close to 0. We will not, therefore, comment separately upon this sector in the other different countries described below.

In Belgium the long run view shows that while three sectors display lower annual productivity increases at the end of the period than at the beginning, the post and telecommunications sector ends the thirty-year period somewhat higher. The very high levels of electricity and gas productivity at the start of the period are clearly linked to the transition to nuclear power, but the commodification transition year, 1999, does not appear to have (at least to date) triggered a trend change. In post and telecommunications a period of rising labour productivity prior to the transition moment of 1991 was followed by a decline before a nearly continuous recovery set in from 1996. In inland transport the very limited commodification initiated in 2002 is perhaps too recent to expect any evidence of change in long-term trends and there is not any.

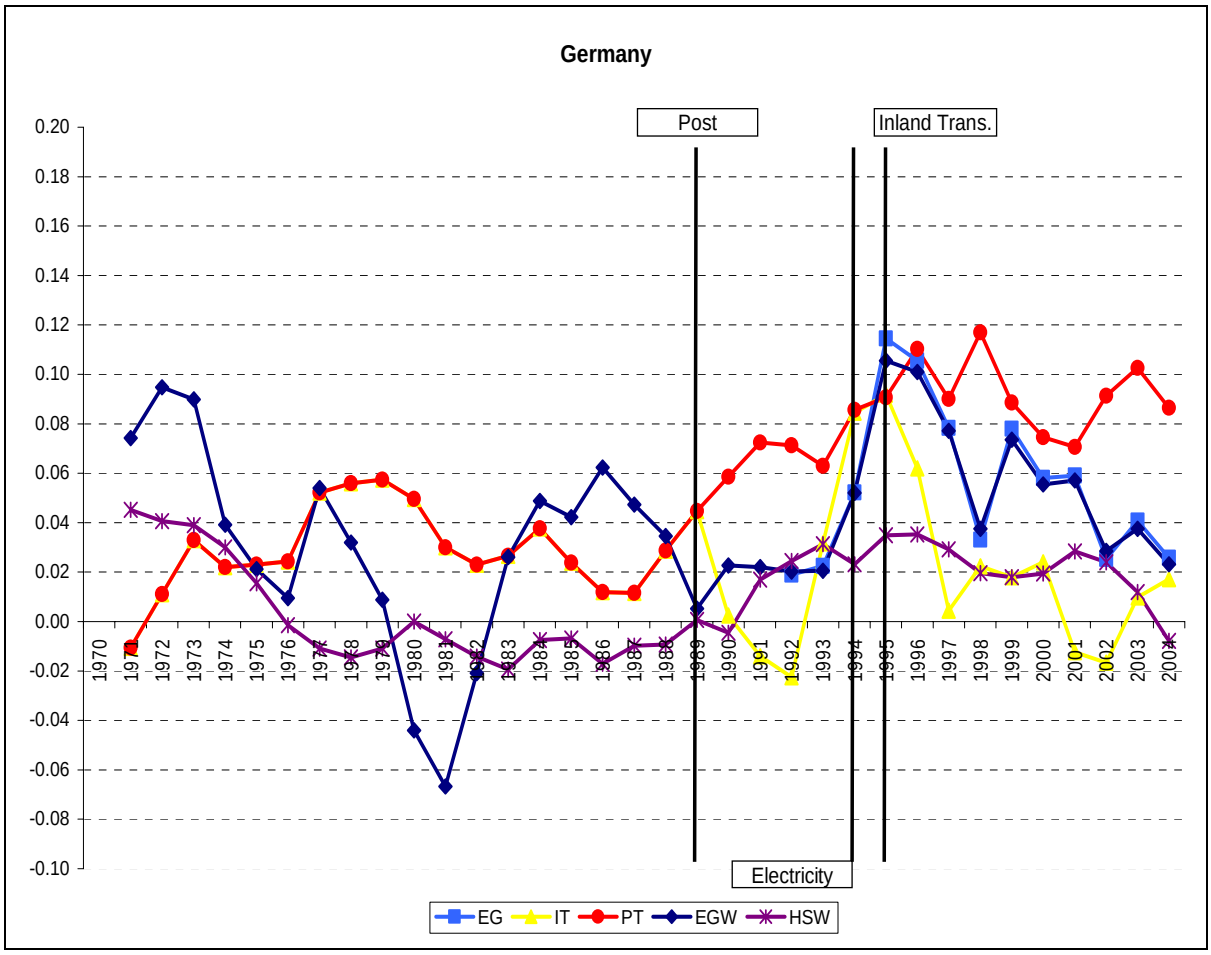
Figure 5: Evolution of Belgian sector labour productivity, 1971-2004 (three-year averages)



EG= Electricity and Gas, IT= Inland Transport, PT= Post and Telecommunications, EGW = Electricity, Gas and Water Supply, NSW= Health and Social Work. Authors' calculations from EU KLEMS (2007).

In Germany[11] the overall levels of labour productivity in the four target sectors show a similar pattern to that of Belgium: annual labour productivity growth is higher at the end of the period in post and telecommunications, while in the other three sectors it is lower. In electricity and gas rising productivity from 1992 remains at or above the commodification transition period 5% level until 2001 before falling to between 2% and 4% from 2002. In post and telecommunications, in contrast, annual productivity increases were continuously above the 1990 transition year level right through until the series end in 2004. In inland transport a rise in annual labour productivity up to the 1995 transition year was followed by a major decline and a recent small recovery.

Figure 6: Evolution of German sector labour productivity, 1971-2004 (three-year averages)



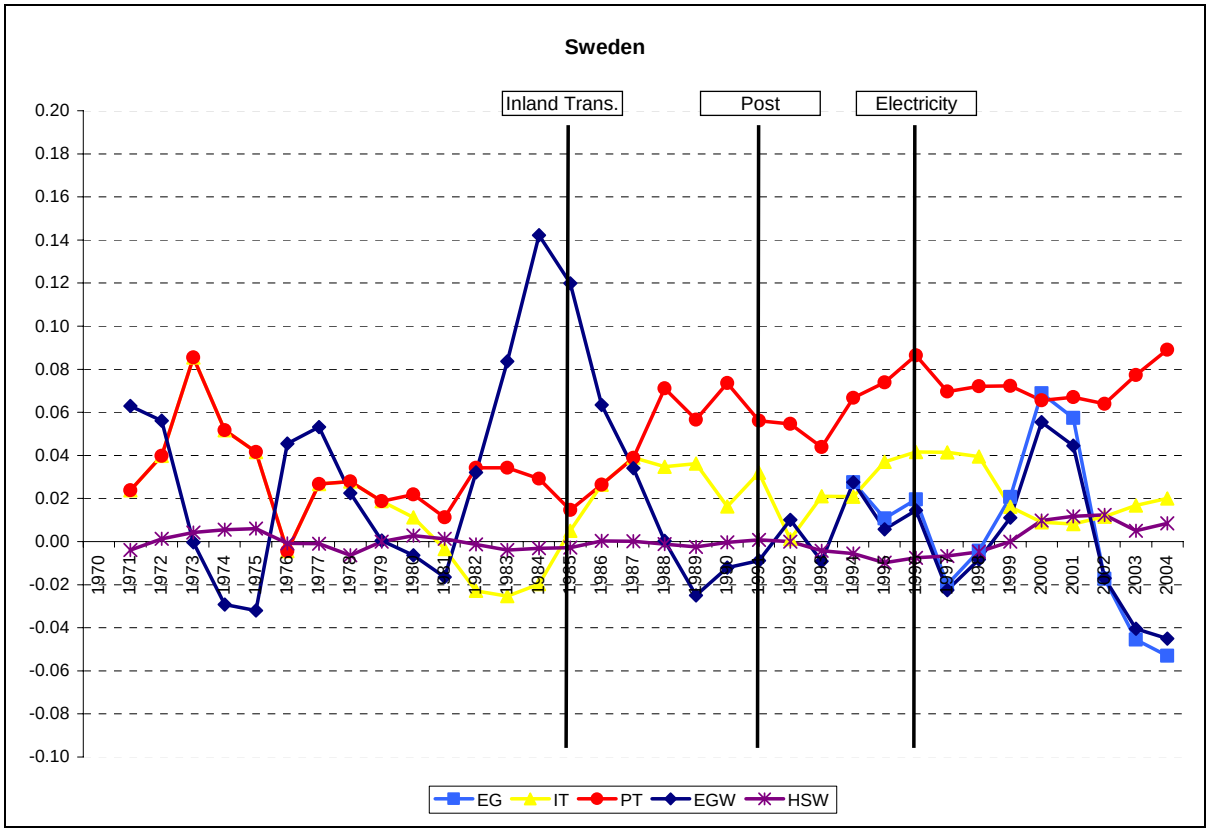
EG= Electricity and Gas, IT= Inland Transport, PT= Post and Telecommunications, EGW = Electricity, Gas and Water Supply, NSW= Health and Social Work. Authors' calculations from EU KLEMS (2007).

The much shorter timescale (from 1997) for Polish data makes it impossible to draw any firm conclusions across the three sectors, with only electricity looking to be on an upward trend by the end of the period.

[11] The data series only go for post-unification Germany to 1990 for inland transport and to 1992 for electricity and gas. The data before 1990 refers to West Germany alone.

In Sweden the thirty year overview also suggests a rising annual labour productivity trend in post and telecommunications with similar or slightly lower rates between the beginning and the end of the period in the other sectors. In electricity and gas the commodification transition year 1996 was followed by strong productivity increases between 1999 and 2001, but then by falling labour productivity between 2002 and 2004. In post and telecommunications, by the transition year of 1991 annual labour productivity growth had nearly tripled from around 2% a year in the ten years before 1986. Thereafter it stayed above 6% from 1994 onwards. In inland transport the 1985 commodification transition period heralded a 20-year period in which annual labour productivity increases ranged between nought and 4% a year, compared to the 1981-1984 years when labour productivity actually fell.

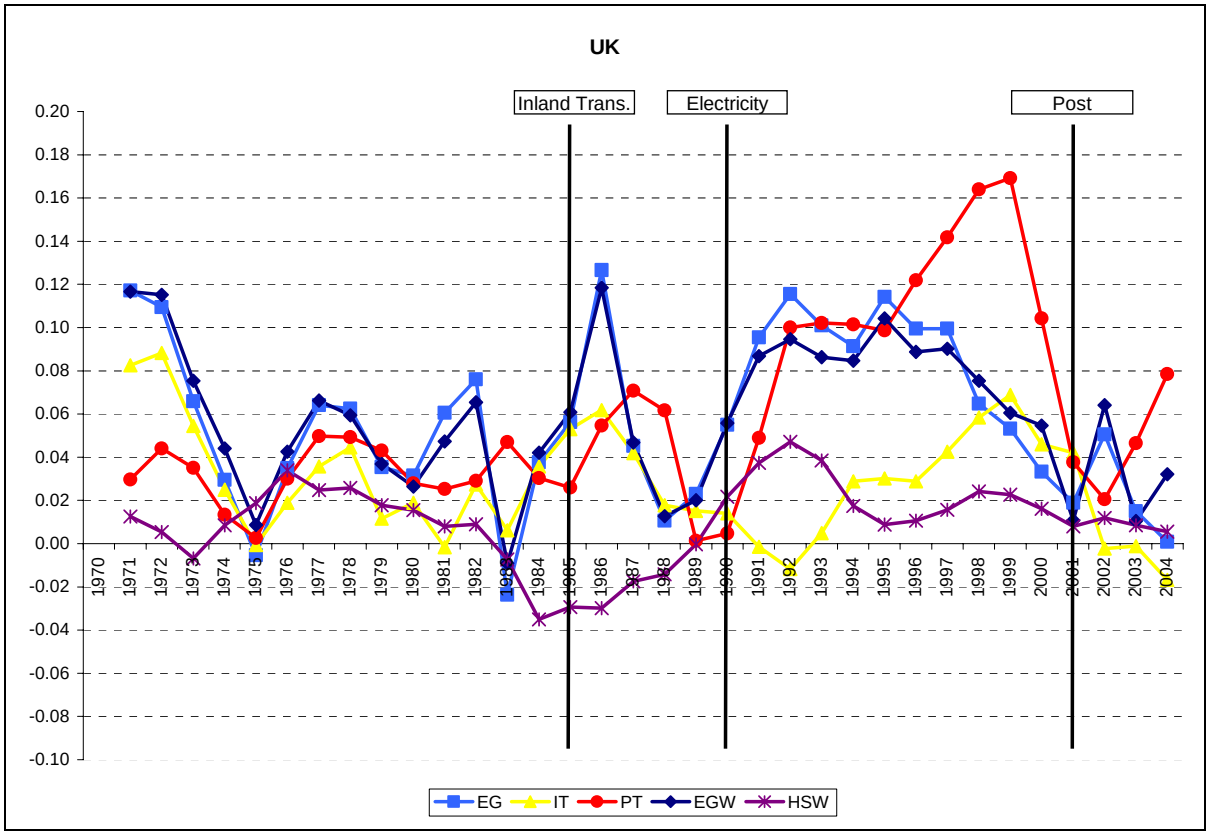
Figure 7: Evolution of Swedish sector labour productivity, 1971-2004 (three-year averages)



EG= Electricity and Gas, IT= Inland Transport, PT= Post and Telecommunications, EGW = Electricity, Gas and Water Supply, NSW= Health and Social Work. Authors' calculations from EU KLEMS (2007).

In the UK the levels of annual labour productivity increase in the four sectors reveal the same pattern: with the exception of post and telecommunications, the other sectors display higher annual rates of productivity growth at the beginning of the period than they do at the end. In electricity and gas the 10% per year levels of the early 1970s are achieved again immediately following the commodification transition year of 1990, but then from 1998 fall back to the 1975-1990 average 5% level. In post and telecommunications an average productivity rise of around 4% per year prior to 1989 is followed in the decade from 1991 by levels often more than three times as high.[12] The postal services commodification transition year of 2001 follows two years of declining sector labour productivity, and in turn is followed by a recovery of productivity between 2002 and 2004. Local public transport's moments of commodification are shown in 1985, and there is no clear change in labour productivity before and after that. However from 1994 there is a period in which labour productivity in the sector recovers the levels of the 1970s before falling back again in the early 2000s.

Figure 8: Evolution of UK sector labour productivity, 1971-2004 (three-year averages)



EG= Electricity and Gas, IT= Inland Transport, PT= Post and Telecommunications, EGW = Electricity, Gas and Water Supply, NSW= Health and Social Work. Authors' calculations from EU KLEMS (2007).

[12] Driven largely by job-shedding in British Telecommunications PLC, but also by the increasing value of the market. The decisive commodification moment in UK telecoms occurred in 1984 when BT was privatised.

6. DECOMPOSING LABOUR PRODUCTIVITY

Our final review of the evidence involves decomposing the identified labour productivity into its two component parts: an increase in value added or a decrease in hours worked. How and why productivity increases is, of course, just as important as the magnitude of any increase. A common method of measuring productivity is to divide output by the size of inputs to find the amount of output produced by each unit of inputs. We have defined labour productivity above, therefore, as the amount of value added produced by the labour input measured as the number of worked hours spent in productive activity. Labour productivity, then, is determined by both output and labour input: an increase in output will increase productivity, while a rise in employment will lower productivity. It is therefore possible to have a net productivity increase/decrease without a change in the volume of labour (and number of hours worked). To examine the sources of productivity change it is therefore necessary to decompose productivity growth into its two component parts.

Our detailed analysis of productivity decomposition is provided in Table 5 below. This compares the growth of productivity, value added and employment in the pre- and post-privatisation/liberalisation periods. In some countries and sectors it is difficult to identify precise marketisation transition years, so, as with Figures 4-8 we have heuristically selected the most relevant date for privatisation or liberalisation in order to be able to compare the pre- and post-privatisation/liberalisation (pre-P/L and post-P/L) periods. The figures in the table are calculated by taking the mean values of variables of interest in the pre- and the post-P/L periods. The post-privatisation or -liberalisation period clearly runs up to the end of the data series, so to make the comparison more coherent we have selected an equal number of years prior to the marketisation transition year on which to base the pre-P/L period.

In Austria both the electricity and gas and post and telecommunications sectors showed productivity increases before and after the designated commodification year. In the pre-commodification period, almost 100% of productivity growth recorded was derived from growth in value added. In the post-commodification period, on the other hand, 20% of the productivity growth has come from falling employment. In this sector labour productivity growth is positive for virtually the whole of the period from 1976 to 2003 with only two years of nil growth in 1977 and 1981. There was no sharp increase in labour productivity growth, however, until the mid-1990s, when such an increase coincided with the only sustained period of employment decline over the period. This fall in employment could be associated with the opening of the electricity market to competition but the available data is for too short a period to provide conclusive evidence of an upward shift in productivity growth.

The figures for the Austrian post and telecoms sector are similar. In the pre-commodification period, while productivity growth resulted wholly from value added growth, in the post-commodification period employment cuts contributed 19% of the total 53% rise in labour productivity, roughly 40% of productivity growth. The Post and Telecommunications sector shows a sustained growth in value added and labour productivity right up until 1998, when there are two years of nil growth in value added and labour productivity declines as employment increases. Value added growth subsequently recovers while labour productivity growth shoots up as employee numbers are cut more sharply than any other time in the 30-year period.

In Belgium positive productivity and negative employment growth were recorded in both pre- and post-commodification periods in electricity and gas. However, while value added was nearly the sole cause of productivity gains before 1995, subsequent employment cuts generated over 70% of productivity growth.

In Germany in the period before 1994 employment in the Electricity, Gas and Water sector remained nearly stable while labour productivity was generated by increased value added. Thereafter, in contrast, job cuts in the broader sector made up half of the 53% rise in labour

productivity, and the same proportion of the slightly larger 56% rise in labour productivity in electricity and gas on their own. A similar picture occurs in both inland transport and post and telecommunications: before their respective commodification years there was growth in both labour productivity and employment, while subsequent job cuts made up 100% of labour productivity gains in inland transport and 25% of gains in post and telecoms. Value added growth in post and telecoms shows a sustained period of growth towards the end of the period – at or around 6% from 1998 while labour productivity growth has stayed above 4% since 1990 and reached 10% in the middle of the decade, when it coincided with several years of employment decline.

In Poland, where comparable data is only available after 1995, more than 50%, 30% and 10% of productivity in Electricity and Gas, Inland Transport, and Post and Telecommunications industries respectively were due to sector employment reductions.

In Sweden the picture in the electricity, gas and water sector is one of substantial labour productivity growth driven largely by labour force reductions in the period prior to 1996, followed by employment increases that are largely responsible for falls in labour productivity, since value added also declines slightly. In Post and Telecommunications growth in labour productivity was at or above 4% a year for most of the 30-year period, with notable falls below this level only in 1976 and 1992-93. Labour productivity growth has been at or above 5% since 1997, and the cuts in employment that were an important factor in this growth in the early 1990s and again at the end of the period, contributed roughly one quarter of this in the post-commodification period.

In the UK the electricity and gas and the inland transport sectors recorded positive growth rates in productivity and negative growth rates in employment both before and after commodification. In the Electricity and Gas sector the contribution of employment decreases to productivity growth was 50% before the commodification year and 64% afterwards. Its annual growth in value added is steady after 1990, but mainly at a low level – around 2% ranging up to 4%. This compares to significant fluctuations in the pre-1990 period. Labour productivity growth is at a higher level after 1990 (averaging 6.7% a year compared to 3.9% between 1975 and 1989) largely as a result of sharp falls in employee numbers (exceeding 4% a year in the seven years 1991-1997).

What conclusion can we draw from these labour productivity decomposition analyses? Our hypothesis was that if the new methods of resource allocation within a sector that had experienced marketisation were stimulating increased efficiencies, then they would increase the output or service provision at a faster rate than before commodification. What we find is that out of the fifteen sectors in five countries (excluding Poland, which does not have 'before commodification' data with which to make the comparison), just one third (five) display higher value added growth in the post-commodification period, while over two thirds (eleven) show higher levels of employment decrease.

We can see, therefore, that the main driver of post-marketisation labour productivity increases was a relative employment decrease, rather than an increase in the long-term value added created within the sector. This finding corresponds with the decline in employment presented in the first part of this paper.

Table 5: Labour productivity decomposition (%) before and after key commodification dates

Country	Sector	Pre-Commodification Period	L/Prod	V/Add	EMP	Post-Commodification Period	L/Prod	V/Add	EMP
Austria	EG	1985-94	33	34	1	1995-04	61	47	-14
	IT	1993-98	-23	-17	6	1999-04	-6	0	5
	PT	1992-97	61	59	-3	1998-04	53	33	-19
Belgium	EG	1993-98	40	28	-12	1999-04	45	13	-32
	IT	1999-01	14	46	32	2002-04	-24	-22	2
	PT	1977-90	55	50	-5	1991-04	38	37	-1
Germany	EGW	1983-93	30	30	-1	1994-04	53	27	-26
	EG	1983-93	n.a.	n.a.	n.a.	1994-04	56	28	-28
	IT	1985-94	10	15	5	1995-04	14	0	-14
	PT	1975-88	21	30	9	1989-04	70	52	-18
Poland	EG		n.a.	n.a.	n.a.		41	16	-26
	IT		n.a.	n.a.	n.a.		85	53	-32
	PT		n.a.	n.a.	n.a.		110	97	-13
Sweden	EGW	1987-95	24	5	-19	1996-04	-11	-2	9
	IT	1971-84	19	27	8	1985-04	22	21	-1
	PT	1977-90	42	51	9	1991-04	68	50	-18
UK	EG	1975-89	39	20	-19	1990-04	67	24	-43
	IT	1971-84	39	14	-25	1985-04	26	21	-5
	PT	1997-00	143	173	31	2001-04	35	32	-3

Note: Period shows the years for which the mean growth levels of labour productivity, value added, and employment are calculated and shown as percentage change.
Legend: L/Prod = Labour productivity, V/Add = Value added, and EMP = Employment.
Industries: EGW= Electricity, Gas, and Water Supply, EG= Electricity and Gas, IT= Inland Transport, PT= Post and Telecommunications.
Source: Authors' calculations based on EU KLEMS (2007)

7. CONCLUSIONS

The commercialisation, liberalisation and privatisation or marketisation of public services aims to introduce the benefits of competition to the resource allocation process. However, there are some major doubts as to the feasibility of dismantling monopoly public services whose characteristics include the necessity to provide national services. Evidence from the UK electricity sector, where we noted that privatisation went furthest and most rapidly, is that after an initial expansion from one provider to dozens, a major concentration process has ensued. These market reforms did not automatically result in a sustainable competitive market structure. Out of the 70 British companies in the supply segment, only six have a market share of more than 5% while three of them supply almost 65% of the electricity consumed in the UK.

Thus although in this case formal liberalisation and privatisation processes were completed, this did not necessarily lead towards a significantly more competitive market structure. More generally, across most of the sectors and countries studied we conclude that these market reforms have not uniformly delivered the transparent competitive environments that the textbook examples suggest are necessary for the consumer to maximise benefits from the transition.

In addition to different outcomes with respect to the extent of private ownership and competitive market structures, liberalisation and privatisation processes also vary in time. For productivity it was particular important to get an indication of medium and long-term trends to see to what extent changes at or around the time of liberalisation and/or privatisation could be identified as marking a break in those trends. This approach was also important for establishing whether the impact of private ownership and/or increased competition had shifted industries onto higher growth trends and had not simply produced short-term fluctuations in productivity. In this context our research revealed a paucity of publicly available datasets that would be required to validate the claims of significant public benefits of marketisation.

There is clearly a significant adjustment process here with a social cost to privatisation and liberalisation that we cannot assume is simply compensated for by increases in employment across the wider economy, particularly as it is difficult to prove the theory that more competition in one sector can lead to positive employment effects in other sectors. Any general claims about the positive economic effects of privatisation and liberalisation should be tempered with an acknowledgement of these social costs and a better attempt made at a broader evaluation of these processes that takes account of a wider range of factors and assesses developments over the medium to long term and not just in the light of short-term radical restructuring.

The balance of evidence suggests that liberalisation and privatisation have been primarily associated with employment reductions rather than with employment creation and that, at the same time, employment within the target sectors has become increasingly part-time, often having greater recourse than when they were publicly delivered services to self-employed, and perhaps also temporary, workers. Further, we could not find evidence suggesting that marketisation itself has driven any significant long-term upward shifts in the levels of added value produced in the target sectors. Instead, it appears that the drivers of increased added value primarily arise by changes in technologies and the rate of growth (and demand level) in the overall economy. Yet if liberalisation and privatisation had a significant impact on productivity, the more efficient resource allocations mainly stem from job reductions.

Where evidence existed or could be inferred on productivity it was not conclusive. It shows that the implementation of privatisation and liberalisation does not automatically lead to marked shifts in long-term productivity trends although there are cases, such as electricity privatisation and liberalisation in the UK, where the data do reveal significant short-term changes. The evidence from other countries and sectors is less compelling but this may also be due to the fact

that the processes of privatisation and liberalisation have not been carried out so comprehensively or there is a very limited period of time over which to assess their impact.

This means that generalised statements about the potential positive impacts of liberalisation on productivity should be strongly qualified not only in relation to the different effects that might arise from variations in country characteristics but also in as far as any real productivity changes can be disentangled from simple cuts in employee numbers and/or technological change. It may also be that changes in employment might be the more immediate results of organisations reacting to a perceived need to cut costs as a short-term response to increased competition and do not reflect the longer-term need to provide effective and efficient services with a well-trained and well-rewarded workforce. This is a potential contradiction in employer strategies that will be explored in more detail in the company case studies that form another part of the PIQUE project.

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PIQUE, 2008

PROJECT INFORMATION

The PIQUE project ("Privatisation of Public Services and the Impact on Quality, Employment and Productivity") explores the impact of liberalisation and privatisation strategies in public services on employment, working conditions, labour relations, productivity and service quality. Focussing on the sectors of postal services, local public transport, electricity and healthcare/hospitals, the research covers six European countries: Austria, Belgium, Germany, Poland, Sweden and the UK.

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