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The Janus Face of Europeanisation:

Explaining Cross Sector Differences in Public Utilities

Abstract

Although policymakers broadly sought to liberalise network based utilities, a more detailed look at privatisation pathways reveals a heterogeneous picture and remarkable sector specific differences. This paper examines why efforts among political actors to privatise public utilities differ so greatly in the telecommunications, postal, and railway sectors. By estimating probit models, it is demonstrated that firm characteristics and sector specific EU integration account for cross sector differences in the material privatisation. More specifically, governments dispose of the most efficient firms first to maximise revenues from privatisation sales with presumably low political costs. Regulations at the European level pushed governments to privatise their national postal providers, while privatisation in the telecommunications sector seems to be a global trend. In the railway sector, exceptional clauses and regulations have rather decelerated privatisation.

Introduction

Privatisation has become a worldwide phenomenon in recent decades (OECD 2003). While privatisation programmes were applied to the industrial sector in the beginning, network based utilities such as telecommunications, railways, electricity, water, and postal services have been more and more integrated into this reform process (Schneider *et al.* 2005). Although policymakers broadly sought to liberalise network based utilities, a more detailed look at privatisation pathways reveals a heterogeneous picture and strong sector specific differences. In the telecommunications sector, the privatisation process has progressed to a remarkable extent. In most countries, governments have partly or completely divested themselves of their big national telecommunications provider (Thatcher 2004). In contrast, the privatisation efforts in the railway and postal sectors are proceeding comparatively slowly. The majority of postal and railway service providers are still state owned.

This evidence raises the question of why efforts among political actors to privatise public utilities differ so greatly across sectors. Why have governments launched significant privatisation programmes in the telecommunications sector while not pursuing similar initiatives to retreat from the delivery of postal or railway services? **(← p. 547)**

Political science research typically asks why countries privatise at all or which factors account for cross national differences in privatisation. Socio-economic problem pressure and fiscal distress are seen as driving forces behind privatisation (Schneider *et al.* 2005, Schneider and Häge 2008, Boix 1997, Zohlnhöfer *et al.* 2008, Zohlnhöfer and Obinger 2006, Levi-Faur 2004). Although these factors explain national privatisation pathways, they do not answer the question of why governments choose to sell some public utility providers but not others.

It is argued that governments not only consider macroeconomic variables, but also firm-specific characteristics, such as the company performance, when planning the privatisation of public enterprises. One main objective of privatisation is maximising revenues (López-de-Silanes

1997: 965, Zohlnhöfer and Obinger 2006, Boycko *et al.* 1996). To achieve this objective, governments should privatise the most profitable and efficient firms first and sell the high valued "family silver" (Arin and Okten 2003, Zohlnhöfer and Obinger 2006). Furthermore, this study focuses on the sector specific influence of the European Union on privatisation. Starting in the end of the 1980s, the EU passed numerous sector-specific regulations in the telecommunications sector and later on in the railway and postal sector to establish an internal market by liberalising network based utilities (Thatcher and Coen 2008). Even though EU legislation does not directly demand the transfer of ownership to the private sector it indirectly pushes privatisation processes since it abolishes the rights of member states to maintain public utility monopolies (Thatcher 2004). Privatisation efforts should differ depending on the sector-specific regulations at the European level. Even though the privatisation of network based utilities might generally be promoted by European legislation, the scope and intensity should vary between sectors.

This paper examines the telecommunications, postal, and railway sectors as the main network based utilities at the national level. The (former) monopolistic companies in these sectors have typically been among the largest national public enterprises. The sample includes 62 firms in 21 OECD countries. The period of observation starts in 1980, i.e. before major privatisation programmes were launched and ends in 2008. For the quantitative empirical analysis, information from both national governments and individual companies was compiled. Therefore, a completely new data set is provided containing information that has not been available to the public.

The findings suggest that firm-specific factors indeed help to explain the different privatisation efforts across sectors. Governments sell the most efficient companies first to gain high privatisation revenues with low political costs. Additionally, financial distress increases the pressure on governments to privatise in the first place. Astonishingly, the influence of European

legislation varies strongly across sectors. In the postal sector, material privatisation seems to be triggered by European legislation while in the telecommunications sector, the regulations at the European level rather explain the timing of privatisation than the implementation of privatisation itself and both, EU member and non-member states have privatised their former monopolistic companies. In **(← p. 548)** contrast, in the railway sector, certain EU regulations have even decelerated the privatisation of national railway service providers.

This paper is organised as follows. The next section summarises the literature on the determinants of privatisation. Section three illustrates the theoretical framework and discusses the hypotheses. Methodological issues and data measurement are addressed in section four while section five presents the empirical results. Finally, section six outlines this study's conclusions.

Brief Literature Review

Explaining privatisation has drawn the interest of economists as well as political scientists. The political science literature emphasises domestic and external factors as being relevant for the timing and the extent of privatisation processes. One of the first international comparative studies was provided by Boix (1997). Among a sample of OECD countries, he found that right-wing parties are more inclined to privatise compared to left-wing parties. More recently, however, Zohlnhöfer and Obinger (2006) showed that the influence of party differences was especially relevant in the 1980s and has decreased over time. Furthermore, using a sample of 14 European and 21 OECD countries, they determined that institutional pluralism negatively affects privatisation. In two large samples of 34 and 49 countries, Bortolotti et al. (2003) stated that slow economic growth encourages a state's retreat from the delivery of telecommunication services and that the liquidity of stock markets and a government's credibility are associated with high privatisation proceeds. Brune et al. (2004) support the proposition that international

institutions and economic problems trigger privatisation, based on a sample of 96 countries that have received IMF support. Moreover, several studies identify budget deficits as putting pressure on governments to divest shares (Zohlnhöfer *et al.* 2008). In a sample of 20 OECD countries between 1970 and 2000, Schneider and Häge (2008) found that European integration accelerated the reduction of public involvement in the infrastructure sectors among EU member states. Having conducted one of the few empirical studies analysing spatial interdependences, Meseguer (2004) showed that privatisation efforts in Latin American countries were a result of rational learning from regional experiences.

By contrast, economists tend to focus on firm characteristics and economic variables. One important motive that this literature emphasised in favour of privatisation was the performance of public enterprises (Boycko *et al.* 1996). Some authors have argued that governments seek to get rid of highly inefficient firms to ease public budgets (Bortolotti and Siniscalco 2004). A contrasting argument claims the most efficient companies are sold to maximise public revenue (López-de-Silanes 1997, Dinc and Gupta 2011). The empirical findings are ambiguous. Clarke and Cull (2002) stated that poor performing Argentine banks were more likely to be privatised than their better performing counterparts. In contrast, Dinc and Gupta (2011) showed that profitable firms in India's manufacturing and non-financial service sector were more likely to be privatised quickly. **(← p. 549)** This is sustained by Gupta et al. (2008) who found strong evidence that the Czech government first privatised high performing firms with large market shares, assuming its objective was to maximise revenues from the sale.

This brief review reveals several drawbacks. Political scientists mainly focus on domestic and international influences and typically do not consider firm specific characteristics when analysing the determinants of privatisation. However, explanatory variables at the national and international level cannot explain why some network based utilities have been privatised while others remained under public control. The empirical economics literature, on the other hand,

focuses on economic variables and firm-specific characteristics and typically does not pay close attention to regulations at the European level. Additionally, the majority of the studies examine efficiency as an outcome of privatisation rather than as a determinant (Megginson *et al.* 1994, Sheshinski and López-Calva 2003). Moreover, most quantitative empirical studies concerned with network based utilities only deal with the telecommunications sector. The postal and railway sectors and, in consequence, differences among the public utility sectors are hardly addressed. One reason for this is the poor data availability for postal and railway providers particularly during periods when the companies were still owned by the government.

Theory and Hypotheses

Governments who are planning to privatise public enterprises must select the companies to be divested. "[O]ne of the ultimate aims of privatizing state-owned firms is to raise revenue for the government" (Chong and Galdo 2006: 461, López-de-Silanes 1997: 965). To realise this objective, governments will primarily choose companies that are attractive to private investors who, in turn, are usually interested to invest in high performing companies to maximise profit (Gupta *et al.* 2008: 187). When the company's shares are highly valued assets, the proceeds arising from privatisation sales are also assumed to be high. To maximise revenues from privatisation, governments might therefore prioritise privatising those firms which exhibit attractive performance records (Dinc and Gupta 2011: 249, Megginson and Netter 2001).

Governments might also seek to establish an "equity culture". If the "privatization procedure involves transferring equity shares to citizens, the government is likely to privatize the best (most profitable) firms first so that the shares transferred to the citizens are valuable, thereby building political support for the government" (Gupta *et al.* 2008: 184). The political risk and costs for a government are high when selling public shares of inefficient firms to small investors and citizens who might run the risk of losing money. Furthermore, the divestment of network

based utilities is often associated with a broad political discussion about the consequences of privatisation for consumers and employees. Governments should therefore privatise firms where the probability is high that privatisation will lead to the intended results of generating public support for privatisations (Biais and Perotti 2002). **(← p. 550)**

This leads to the hypothesis that governments tend to privatise high performing companies first, since the objective of raising revenues with low political costs can best be realised.

Furthermore, the pressure on governments to privatise might depend on the national financial situation. In times of fiscal austerity, the drive to maximise revenue should be especially dominant as privatisation can be used to reduce public budget deficits (Viani 2007). The divestment of public shares is often a fast and easy way to raise revenue for governments facing severe financial constraints. Other policy instruments used to deal with financial distress, such as expenditure cuts or tax increases, are associated with higher political costs. Furthermore, these policy instruments often only take effect in the long-run. Implementing privatisation policy might therefore be one strategy to achieve fiscal objectives (Li and Xu 2002, Zohlnhöfer and Obinger 2006). It is assumed that a high public deficit burden increases governments' "desire to maximize current revenue from privatization sales" (Viani 2007: 182). The network based utility sectors offer a particularly high potential of alleviating financial distress, since the formerly monopolistic companies are typically among the largest public enterprises.

Governments are also restricted by institutional constraints. In European countries, the institutional environment of public utilities is highly influenced by the European regulatory framework. Legislation at the European level is assumed to promote the privatisation process. The public utility sectors were typically controlled by public monopolies organised as administrative bodies or public enterprises throughout the post-war period. This implies that they have access to the public budget (soft budget constraints) and are not subject to the same rules as private companies. Guaranteeing special rights is not compatible with European

legislation which aims at liberalising network-based utilities (Scharpf 1999). Furthermore, the divestment of public shares seems to be the only way to make public utility providers competitive in the new liberalised environment. Therefore the regulations at the European level might have propelled the privatisation process of member states even though the disposal of public shares was not directly demanded by EU policies (Schmidt 2002, Gilardi 2005, Schneider 2001, Schneider and Häge 2008, Thatcher 2004).

In the telecommunications sector, the liberalisation process was ushered in by the Green Paper in 1987 (COM/87/290). The 1987 Green Paper opened a Europe-wide debate on the regulatory framework with the goal of adapting it to the single market requirements and to completely open up the market to competition. Prepared by resolutions of the European Parliament in 1993 and 1995, a further landmark was the directive 96/19/EC, which committed member states to fully liberalise telecommunications and networks by 1998.

Similar to the telecommunications sector, a Green Paper in 1991 (COM/91/476) was issued for the postal sector to promote the liberalisation and free competition of this market to the largest possible extent. One further step towards a free market for postal services was the directive 2002/39/EC, which included further measures for a gradual and controlled market opening. The full accomplishment of the internal market for postal services was scheduled for 2009. **(← p. 551)**

With regard to railway services, the European Union remained inactive for a long time (Knill and Lehmkuhl 2007). A judgment of the European Court of Justice forced the Commission to harmonise and liberalise the transport sector. One response to this move was directive 91/440 EEC. It ensured the independence of management for railway undertakings, stipulated the separation of railway operations and infrastructure from the provision of transport services, and required separate accounting. However, the liberalisation of railway services shows much less progress compared to the telecommunications and postal sectors. The directive 95/18/EC in

1995 even defined very specific technical and operational requirements for rail services, which consequently created barriers for new market participants.

In sum, this leads to the following hypotheses: Governments will privatise highly profitable companies first to raise revenues at presumably low political costs (H1). The divestment of public enterprises is more likely in times of fiscal austerity, when governments are forced to rein in the public budget (H2). A government's decision to privatise is accelerated by the EU regulatory framework (H3).

Concepts and Data

Privatisation in this contribution refers to the material dimension of privatisation. Material privatisation denotes the partial or complete selling of public shares to private investors and therefore a shift from public to private ownership. However, network based utilities are affected by a further dimension of privatisation: formal privatisation. The concept of formal privatisation denotes the transformation of a departmental agency of a ministry or a public corporation into a state company that is subject to private law, such as a joint stock company (Thynne 1994). Privatisation within network based utility sectors often began with a restructuring process, transforming administrative bodies or public corporations into joint stock companies (i.e. formal privatisation), which typically paved the way for the divestment of public shares (i.e. material privatisation).

The sample includes all (former) monopolistic enterprises operating in the telecommunications, railway, and postal sectors in 21 OECD countries[1]. It contains both firms that have been privatised and those that have remained public. Overall, 62 companies are included. Official government documents were requested to obtain privatisation and efficiency data. Financial

[1] Australia, Austria, Belgium, Canada, Denmark, Finland, France, Greece, Germany, Ireland, Italy, Japan, the Netherlands, Norway, New Zealand, Portugal, Spain, Sweden, Switzerland, the United Kingdom, United States.

data was taken from annual reports, Thomson Datastream, the International Telecommunication Union, the World Bank International Railways Database, and the International Postal Union. Additionally, data from the companies themselves was requested, particularly for the period when the companies were fully state owned. Based on this information, a completely new database was generated. **(← p. 552)**

Material privatisation is measured by a binary choice variable coded 0 when a company is fully state owned and 1 if a company's material privatisation process has begun. The companies are considered until the event happens, i.e. until the material privatisation process starts. Once the divestment of shares has begun, the company is excluded from the data set. To test whether firm efficiency, public deficit, and European legislation influences the probability of material privatisation, I estimate probit equations using a standard maximum likelihood procedure. Ordinary probit or logit rests on the assumption that the observations are temporally independent. However, the probability of material privatisation is not equal at any point in time but increases over time. Therefore, ordinary probit or logit would be misleading and the standard errors underestimated. I follow the procedure suggested by Beck et al. (1998) in order to deal with time dependence. Beck et al. (1998) show that binary time series cross section data is identical to grouped duration data. They suggest estimating the models including cubic splines, as natural cubic splines capture the time dependence. The estimated coefficients of the cubic splines can be used to trace out the path of duration dependence. In comparison to time dummies, cubic splines have the advantage of providing a more parsimonious strategy. I alternatively included t, t^2, and t^3 as a cubic polynomial approximation in the estimations (Carter and Signorino 2010).[2]

[2] The results for the substantive variables do not differ from those reported.

Furthermore, all equations were estimated with robust standard errors clustered by country to deal with within country error correlation. The cumulative standard normal density (probit) is given as:

$$P(Y=1) = \int_{-\infty}^{t} \frac{1}{\sqrt{2\pi}} \; e^{-\frac{z^2}{2}} dt = \Phi(z)$$

with the following index function:

$$z = \beta_1 + \beta_2 X_{ki} + \ldots + \beta_k X_{ki}$$

The index function is the underlying latent index of preferences for P(Y=1).

I measure a company's performance by its sales efficiency. The sales efficiency refers to the sales revenue per employee. Sales revenue data were then deflated using the GDP deflator (Megginson *et al.* 1994, D´Souza *et al.* 2005). Model 1 and 3 -5 test the effect of the level of sales efficiency on the probability of privatisation while model 2 includes the first difference of the sales efficiency variable. The extent of financial distress is captured by an average of the adjusted annual deficit (government primary balance) as a percentage of GDP in the three years before the start of the material privatisation (Armingeon *et al.* 2011).

Public deficit and firm efficiency are endogenous to privatisation since privatisation is assumed to affect a firm's efficiency as well as the deficit. However, the companies are only considered until the start of the material privatization process. In addition, the firm efficiency and public deficit variable are **(← p. 553)** time-lagged by one year. This is an appropriate procedure to deal with potential endogeneity.

Policy making at the European level is taken into account with several dummy variables. A first dummy variable simply measures EU membership (model 1 and 2). Since the influence of European integration might vary across network based utilities, a second set of dummies is included (model 3 to 5). The dummies equal 1 as of the year in which the first sector specific EU regulation fostering the liberalisation of public utilities was adopted and when the company

is liable to the respective legislation. Otherwise they equal 0. The following initial points of sector specific EU regulation are included in the empirical analysis: for the telecommunications sector, the Green Paper in 1987 (COM/87/290), which promoted the liberalisation of the telecommunications market. For the postal sector, the 1991 Green Paper (COM/91/476), which outlined the path to liberalisation and free competition in this field. For the railway sector, the directive 91/460/EC stipulating requirements for the railway providers similar to private companies.

Furthermore, I include a comprehensive set of political and economic control variables that were discussed in the research literature to determine the extent and timing of privatisation policy. The openness of the economy as an indicator of global integration is measured by the sum of imports and exports in relation to GDP. According to the efficiency hypothesis, a highly open economy should be associated with a reduction of public involvement in economic affairs (Garrett and Mitchell 2001). Leftist governments are assumed to engage less in privatisation policy. The higher the percentage of cabinet seats controlled by leftist parties, the lower the probability of material privatisation should be (Boix 1997). The level and growth of GDP indicate a country's economic situation. High GDP growth should go hand in hand with fewer privatisation initiatives due to the relatively low economic pressure (Bortolotti and Siniscalco 2004). Finally, the probability of material privatisation should be lower when public utility services are protected by the constitution, since an amendment of the constitution would be necessary (Schmitt and Obinger 2011). The measurement for all variables is described in the appendix (table A1).

Empirics

Description

The following figure illustrates the material privatisation process. The horizontal line displays the time axis and the vertical axis the cumulative number of countries that have begun the divestment of shares.

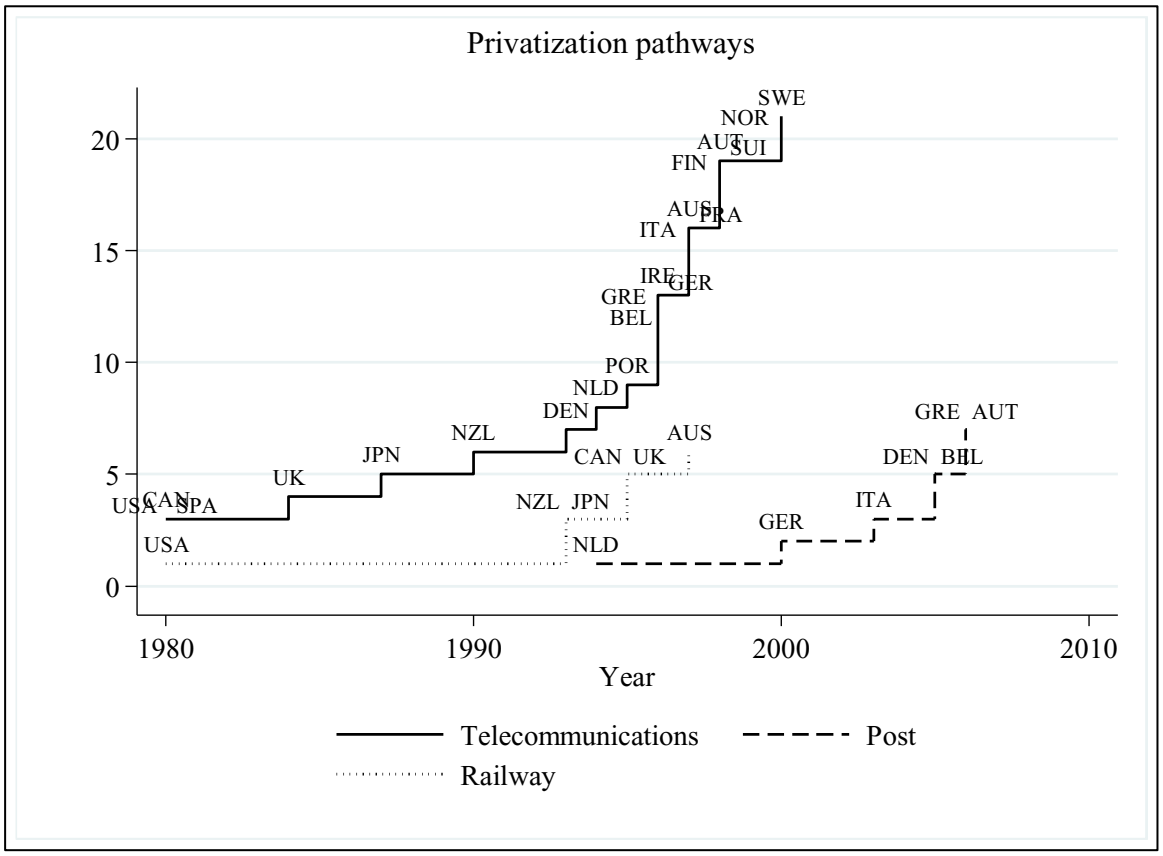

Figure 1: Privatisation pathways in 21 OECD countries (← p. 555)

The figure shows that the telecommunications sector is by far the sector where privatisation has advanced the most. Common law countries, such as Great Britain und New Zealand, privatised their national telecommunications providers very early while countries such as the German speaking nations did not start the material privatisation process until 1996. By 2000, the material privatisation process had begun in all 21 OECD countries, and by now, some **(← p. 554)** states have retreated completely from service delivery by divesting all public shares. In

contrast, railway and postal service providers have been privatised to a much lesser extent and the privatisation of these sectors also began later. Precisely, only seven out of 21 countries have divested public shares in the postal sector and only the Netherlands entirely sold its former postal provider. In the railway sector, the extent of material privatisation is similarly low but the divestments started earlier. English speaking countries have been among the first countries that sold their railway operators.[3] However, in most countries the railway operator is still fully owned by the government.

Figure 2 displays the sector specific privatisation trends inside and outside the European Union. The vertical axis shows the number of companies privatised as a percentage of the total number of firms operating in the respective sector separated by members and non-member states of the EU. The figure shows that in the postal sector only EU member states have privatised their national postal provider. In contrast, the material privatisation process in the railway sector was mostly implemented by non-member states of the EU. In the telecommunications sector, governments in all countries under investigation have begun to sell the national telecommunications provider. However, it seems that non-member states are the early birds when it comes to the privatisation of telecommunication services. The figure supports the notion that privatisation processes differ between members and non-members of the European Union. Moreover, the influence of the European integration process seems not to be uniform across all public utilities.

In the next section, I will estimate probit equations to analyse the impact of firm efficiency, public deficit, and European legislation on the probability of material privatisation when holding all alternative factors constant. **(← p. 555)**

[3] Some countries, such as the UK and New Zealand, have at least partly revoked their privatization decision.

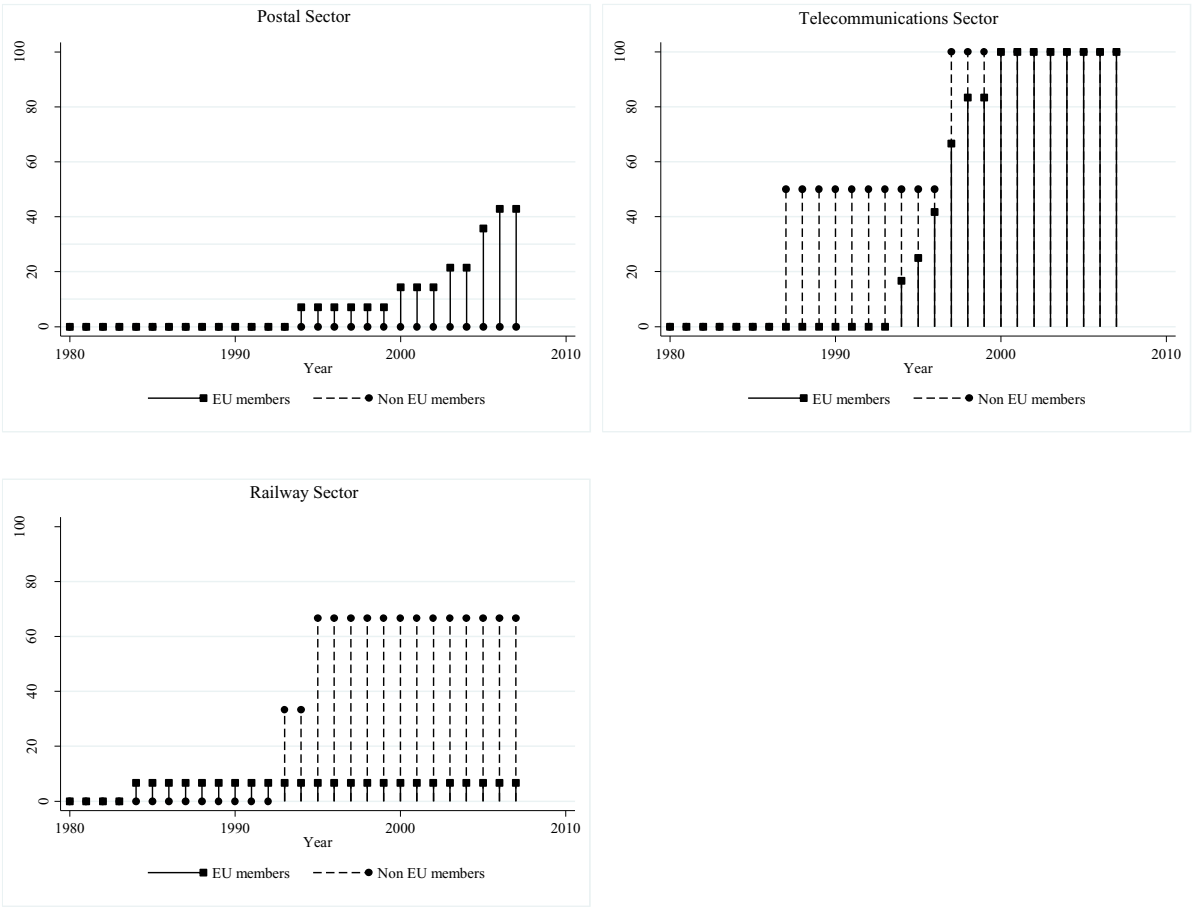

Figure 2: Privatisation trajectories inside and outside the European Union

Estimation results

Table 1 presents the results of the probit equations. Model 1 and 2 tests the hypotheses including a dummy for EU-membership. Model 1 estimates the effect of the lagged level of sales efficiency (model 1) while model 2 includes the first differences for the firm efficiency variable. Model 3 to 5 differentiates the impact of European integration by sector.

Table 1: Probit Models – Determinants of Material Privatisation (Maximum Likelihood Estimation) (← p. 557)

Dependent variable: Material Privatisation[a]					
Independent variables	(1) Level	(2) Difference	(3) Telecom	(4) Post	(4) Railway
Firm Efficiency	6.41e-06*** (1.39e-06)		4.88e-06*** (1.48e-06)	7.51e-06*** (1.65e-06)	6.33e-06*** (1.49e-06)
Δ Firm Efficiency		1.56e-05** (7.22e-06)			
Deficit	.089** (.045)	.060* (.034)	.092** (.047)	.097** (.048)	.085* (.051)
GDP per capita (log)	-.727** (.333)	-.034 (.395)	-.362 (.441)	-.808** (.370)	-.958** (.410)
GDP growth	-.004 (.033)	-.018 (.033)	-.0001 (.034)	.0002 (.032)	-.012 (.037)
Openness	-.003 (.004)	-.0001 (.003)	-.003 (.003)	-.003 (.004)	-.0004 (.004)
Leftist Government	-.007** (.003)	-.005** (.002)	-.007** (.003)	-.007*** (.003)	-.006** (.003)
Constitutional Protection	-.088 (.090)	-.070 (.062)	-.065 (.067)	-.101 (.092)	-.137 (.104)
European Union	.107 (.219)	.063 (.168)	.710*** (.187)	.497** (.228)	-.942* (.519)
Wald Chi2	41.82***	42.56***	166.702***	52.03***	73.95***
N	1199	1192	1199	1090	1199

Note: standard errors in parentheses; *** z<0.01, ** z<0.05, * z<0.1; All time variant variables are lagged by one year. In all models, two cubic splines are included, the coefficients of the cubic splines are suppressed to conserve space; a: material privatisation equals 0 when the government is 100% state owned and 1 in the year when material privatisation starts; in all following years, the company is excluded from the data set.

The empirical findings clearly sustain the assumption that governments consider microeconomic factors when privatising public enterprises. A firm's efficiency is a crucial variable when analysing the determinants of material privatisation. In models 1, 3, 4 and 5, the coefficient is positive and significant at the 1% level. The probability of privatising a public utility company is higher when the sales efficiency is high. When turning the efficiency from the minimum to its maximum, the probability of material privatisation is about 50% higher. Using a three year average lagged level of efficiency turns out to be statistically significant at the same level as the reported coefficients. In model 2, using first differences, the coefficient is also positive and statistically significant. When a firm increases the sales efficiency, the divestment of shares becomes more likely. Governments planning to privatise public enterprises choose the most efficient firms first. For example, the German government generated about US$ 12.5 billion for divesting 26% of the highly **(← p. 556)** profitable Deutsche Telekom AG. The divestment of efficient companies implies that the objective of raising revenue can best be served. What happens when governments have to get rid of inefficient firms is illustrated by the actual development in Greece and the reunification in Germany in 1990. Private investors were neither interested in the ailing firms of the former German Democratic Republic nor are willing to pay high privatization prices for the Greek state owned companies. In Greece, the expectations of revenues for 2012 had to be scaled down from 14 bn. to 5.4 bn. US-Dollar and the privatisation in Eastern Germany generated 130 bn. of liabilities instead of 390 bn. US-Dollar in revenue.

Furthermore, when governments seek to promote an equity culture by establishing low priced shares, they could not take the political risk of divesting public shares from highly inefficient firms to small investors who might actually be worse off after privatisation. A further rationale for privatising efficient firms is that the likelihood of negative consequences for consumers and employees of privatised companies decreases with the firm's efficiency (Megginson *et al.* 1994).

As expected, the public distress influences the probability of material privatisation. The coefficient of the public deficit is positive and statistically significant. A high deficit makes the privatisation of formerly monopolistic companies **(← p. 557)** more likely. Governments apparently use privatisation to contain public budgets. For example, after 1990 the German government launched privatisation programmes to finance reunification. Privatisation is often not as unpopular as expenditure cuts or tax increases (Zohlnhöfer *et al.* 2008).

The empirical results regarding the European Union's influence are rather astonishing. In model 1 and 2 which included a general EU membership variable, the coefficient turns out to be positive but statistically insignificant. However, model 3 - 5 notably shows that this overall result is misleading. In fact the influence of European integration varies across sectors. In the postal sector, the coefficient is positive and statistically significant. The results suggest that privatisation in the postal sector is driven by the European regulatory framework. Only European Union members have privatised their postal service providers while non-member states make no move to privatize their postal provider. The European legislation required the introduction of competition in the postal sector. This puts governments under pressure to completely restructure their postal provider which in European countries traditionally have been organized as public administrative bodies or public corporations with special rights and monopoly status. The notion predominates that a restructuring process needs to be accompanied by a change of ownership and that privatisation is necessary to keep up in a competitive market. Even though the divestment of public shares is not required for the corporatisation, the market orientated EU legislation indirectly creates incentives for material privatisation.

The liberalisation of the telecommunications market fostered by the European legislation seems to forward the privatisation of telecommunication services. However, when analysing the influence of the European Union in greater detail by examining the impact of the most important

sector specific EU regulations[4], it is revealed that the likelihood of material privatisation of the telecommunications provider in European member states is only significantly higher from 1996 to 1998. This coincides with the adoption of directive 96/19/EC in 1996, which committed the member states to fully liberalise telecommunications and networks by 1998 and which has been one important landmark for the liberalisation of the telecommunications market in the EU. In all other years, being member of the EU does not alter the likelihood of material privatisation. This indicates that the EU legislation rather influences the timing of privatization than explaining whether privatisation was implemented at all. This goes along with figure 2 which shows that non-member states have privatised the telecommunications services even earlier than member states.[5] Privatisation seems to be a highly attractive strategy in all countries irrespective of whether a country is an EU member or not. Apparently, the reform policies in the telecommunications sector were "the effects of a global chain reaction" and not so much the result of Europeanisation (Schneider 2001: 73). In some countries the resistance to privatisation by trade unions in particular has been quite strong. Some authors argue that governments have used European initiatives to justify and legitimate policy change and to refute the fears and arguments of the opponents (Thatcher 2004: 304) instead of being forced by them.[6] Moreover, "public ownership prevented cross-shareholdings, made it difficult to value the **(← p. 558)** operators and appeared to render decisions vulnerable to 'political influence'" (Thatcher 2004: 300). Privatisation seems necessary to make the telecommunications companies

[4] Dummies account for the most important sector specific EU legislation. The dummy equals 1 in the year of adoption of a certain legislation and in the years after the adoption and when a company is operating in an EU-member country. The following legislation has been included: the Green Paper in 1987 (COM/87/290) that promoted the liberalization of the telecommunication market and the directive 96/19/EC concerning the implementation of full competition of telecommunications and networks by 1998.

[5] One reason for the early privatisations in non-European countries might be that the PTT system has no tradition in non-European countries and governments did not have to disentangle the administrative organized postal and telecommunications services first when privatising telecommunications services.

[6] It might be countered that technological progress in the telecommunications sector is responsible for the differences across sectors. Besides of the problem to measure sector specific technological advance, I argue that technological progress is a preceding variable influencing the firm's efficiency rather than directly altering the likelihood of privatisation. Nevertheless, I estimated the models including dummies for the most important innovations which, however, do not influence the probability of the company's divestment.

competitive and not to fall behind in the international markets, particularly since some important non-European telecommunications providers have always been private (e.g. AT&T in the U.S.) or were privatised earlier (such as NTT in Japan).

In the railway sector, the probability of divesting public shares is lower for EU countries than for non-EU countries. The coefficient is statistically significant and negative at the 1% level. The EU's endeavour to force the liberalisation of railway services is weak compared to the telecommunications and postal sectors. Some EU directives even protected existing companies by establishing formidable requirements for new market participants (e.g. directive 95/18/EC in 1995). EU legislation still allows that some member states keep some protectionist measures for the national railway operators such as restrictions on network opening. Additionally, various exception clauses in EU legislation regarding public transport subsidies exist (e.g. the Altmark ruling of the European Court of Justice). Overall, in contrast to the regulations in the postal and telecommunications sector the European legislation does not create strong incentives to privatise the national railway provider. In fact, coordination problems between the member states, exceptions for the (former) monopolistic companies and existing barriers for new market entrants might rather decelerate privatisation processes and account for the empirical finding in the railway sector.

The results of the control variables show that the constitutional protection of public utilities does not influence the probability of material privatisation. However, formal privatisation often paved the way for material privatisation among network based utilities. When using formal privatisation as the dependent variable, the constitutional protection variable turns out to be significant. Public utility services are typically protected by the constitution (if at all) when an administrative body is responsible for the service provision. In this case, the constitution must be amended to transform an administrative body or a public law company into a joint stock company (i.e. formal privatisation). When it comes to the divestment of shares, the

constitutional reform has typically already been finalised. Moreover, a high level and growth of GDP tends to decrease the probability of material privatisation. The study also reveals an overall stable negative effect for a left-leaning government in power. This is an interesting result since previous research challenged partisan effects or only has found an influence of the governmental ideology for some time periods (Zohlnhöfer *et al.* 2008, Schneider *et al.* 2005). The coefficients of the further control variables are not statistically significant.

Conclusion

When analysing the privatisation of public utilities, the political science literature has typically been concerned with the factors driving privatisation **(← p. 559)** and accounting for cross-national differences. However, the question of why the privatisation pathways look so different across sectors has hardly been addressed. This paper examined why governments sold some public utility providers while others remained under public control. The sample included all former monopolistic companies in the telecommunications, postal, and railway sectors and covers the main privatisation period from 1980 to 2008.

By estimating probit models, it was demonstrated that firm characteristics and sector specific EU integration account for cross sector differences in the material privatisation of public utilities. More specifically, governments dispose of the most efficient firms first to maximise revenues from privatisation sales with presumably low political costs. High performing companies are attractive to private national and international investors, and the negative consequences of divestment for consumers and employees are expected to be comparatively low. Second, the influence of European integration on national privatisation efforts varies between different sectors. Regulations at the European level forced governments to privatise their national postal providers. Up to now, only members of the European Union have begun the material privatisation process in this area. In contrast, exceptional clauses and regulations

have decelerated rather than backed the state's retreat from the direct delivery of railway services. In the telecommunications sector, privatisation seems to be a global trend and the legislation at the European level rather influences the timing of privatisation than explains why governments privatised at all. Divestment of the national telecommunications provider has paid off in almost all countries. This evidently shows that the European Union's influence has to be considered by sector and that it does not necessarily push all privatisation processes. Only in the postal sector has the EU clearly supported privatisation processes. Third, privatisation is one governmental instrument to quickly gain revenue in times of financial distress. This is well illustrated by the recent developments in Greece where a huge privatisation programme has been launched as an attempt to counter a financial collapse.

This study shows that despite numerous studies dealing with privatisation, a sector specific analysis and a closer look at surrounding disciplines enhances the understanding of privatisation processes. Privatisation is not a homogenous phenomenon. Only the simultaneous evaluation of political, microeconomic, and macroeconomic factors allows for a comprehensive assessment of privatisation processes. **(← p. 560)**

References

Arin, Kerim P. and Cagla Okten (2003). 'The determinants of privatization prices: evidence from Turkey', *Applied Economics,* 35: 12, 1393-1404.

Armingeon, Klaus, Philipp Leimgruber, Michelle Beyeler and Sarah Menegale (2011). *Comparative Political Data Set 1960-2006*.

Beck, Nathaniel, Jonathan N. Katz and Richard Tucker (1998). 'Taking Time Seriously: Time-Series-Cross-Section Analysis with a Binary Dependent Variable', *American Journal of Political Science,* 42: 4, 1260-1288.

Biais, Bruno and Enrico Perotti (2002). 'Machiavallian Privatization', *American Economic Review,* 92: 1, 240-258.

Boix, Carles (1997). 'Privatizing the Public Business Sector in the Eighties: Economic Performance, Partisan Responses and Divided Governments', *British Journal of Political Science,* 27, 473-496.

Bortolotti, Bernardo, Marcella Fantini and Domenico Siniscalco (2003). 'Privatisation around the World: Evidence from Panel Data', *Journal of Public Economics,* 88, 305-332.

Bortolotti, Bernardo and Domenico Siniscalco (2004). *The Challenges of Privatization. An International Analysis,* Oxford: Oxford University Press.
Boycko, Maxim, Andrei Shleifer and Robert Vishny (1996). 'A Theory of Privatisation', *The Economic Journal,* 106, 309-319.
Brune, Nancy, Geoffrey Garrett and Bruce Kogut (2004). 'The Privatizations by Shares in the World Economy: Credible Ideologies and International Financial Institutions', *IMF Staff Papers,* 54, 195-219.
Carter, David B. and Curtis S. Signorino (2010). 'Back to the Future: Modeling TIme Dependence in Binary Data', *Political Analysis,* 18, 271-292.
Chong, Alberto and Virgilio Galdo (2006). 'Streamlining and Privatization Prices in the Telecommunications Industry', *Economica,* 73, 461-484.
Clarke, George R:G: and Robert Cull (2002). 'Political and Economic Determinants of the Lieklihood of Privatizing Argentine Public Banks', *Journal of Law and Economics,* 45: 1, 165-197.
D´Souza, Juliet, William L. Megginson and Robert Nash (2005). 'Effect of institutional and form specific characteristics on post-privatization performance', *Journal of Corporate Finance,* 11, 747-766.
Dinc, Sedar and Nandini Gupta (2011). 'The Decision to Privatize: Finance and Politics', *The Journal of Finance,* LXVI: 1, 241-269.
Garrett, Geoffrey and Mitchell (2001). 'Globalization, government spending and taxation in the OECD', *European Journal of Political Research,* 39, 145-177.
Gilardi, Fabrizio (2005). 'The Institutional Foundation of Regulatory Capitalism: The Diffusion of Indenpendent Regulatory Agencies in Europe', *The ANNALS of the American Academy of Political and Social Science,* 598, 84-101.
Gupta, Nandini, Jhon C. Ham and Jan Svejnar (2008). 'Priorities and sequencing in privatization: Evidence from Czech firm panel data', *European Economic Review,* 52, 183-208.
Knill, Christoph and Dirk Lehmkuhl (2007). 'An alternative route of European integration: The community's railways policy', *West European Politics,* 23: 1, 65-88.
Levi-Faur, David (2004). 'On the "net impact" of Europeanization: The EU's Telecoms and Electricity Regimes between the Global and the National', *Comparative Political Studies,* 37: 1, 3-29.
Li, Wei and Lixin Colin Xu (2002). 'The Political Economy of Privatization and Competition: Cross-Country Evidence from the Telecommunications Sector', *Journal of Comparative Economics,* 30, 439-462.
López-de-Silanes, Florencio (1997). 'Determinants of Privatization Prices', *Quarterly Journal of Economics,* CXII: 4, 965-1025.
Megginson, William L., Robert C. Nash and Matthias Van Randenborgh (1994). 'The Financial and Operating Performance of Newly Privatized Firms: An International Empirical Analysis', *The Journal of Finance,* 49: 2, 403-452.
Megginson, William L. and Jeffry M. Netter (2001). 'From State to Market: A Survey of Empirical Studies on Privatization', *Journal of Economic Literature,* 39, 321-389.
Meseguer, Covadonga (2004). 'What Role for Learning? The Diffusion of Privatisation in OECD and Latin American Countries', *Journal of Public Policy,* 24: 3, 299-325.
OECD (2003). *Privatising State-owned Enterprises. An Overview of Policies and Practices in OECD-Countries,* Paris: OECD.
Scharpf, Fritz W. (1999). *Regieren in Europa: effektiv und demokratisch?,* Frankfurt: Campus.
Schmidt, Vivien A. (2002). 'Europeanization and the mechanics of economic policy adjustment', *Journal of European Public Policy,* 9: 6, 894-912.

Schmitt, Carina and Herbert Obinger (2011). 'Constitutional Barriers and the Privatization of Public Utilities in Rich Democracies', *World Political Science Review,* 7: 1.
Schneider, Volker (2001). Institutional Reform in Telecommunications: The European Union in Transnational Policy Diffusion. In: Maria G. Cowles, James Caporaso and Thomas Risse (ed)^(eds), *Transforming Europe. Europeanization and Domestic Change*. Ithaca: Cornell University Press, 60-78.
Schneider, Volker, Simon Fink and Marc Tenbücken (2005). 'Buying Out the State? A Comparative Perspective on Privatization in Infrastructures', *Comparative Political Studies,* 38: 6, 704-727.
Schneider, Volker and Frank M. Häge (2008). 'Europeanization and the Retreat of the State', *Journal of European Public Policy,* 15: 1, 1-19.
Sheshinski, Eytan and Luis F. López-Calva (2003). 'Privatization and its Benefits: Theory and Evidence', *CESifo Economic Studies,* 49: 2, 429-459.
Thatcher, Mark (2004). 'Winners and Losers in Europeanisation: Reforming the National Regulation of Telecommunications', *West European Politics,* 27: 2, 284-309.
Thatcher, Mark and David Coen (2008). 'Reshaping european regulatory space: An evolutionary analysis', *West European Politics,* 31: 4, 806-836.
Thynne, Ian (1994). 'The incorporated Company as an Instrument of Government: A Quest for a Comparative Understanding', *Governance,* 7: 1, 59-82.
Viani, Bruno E. (2007). 'Monopoly rights in the privatization of telephone firms', *Public Choice,* 133, 171-198.
Zohlnhöfer, Reimut and Herbert Obinger (2006). 'Selling Off the "Family Silver": The Politics of Privatization', *World Political Science Review,* 2: 1, 29-52.
Zohlnhöfer, Reimut, Herbert Obinger and Frieder Wolf (2008). 'Partisan Politics, Globalization, and the Determinants of Privatization Proceeds in Advanced Democracies (1990-2000)', *Governance,* 21: 1, 95-121.

Appendix

Table A1: Measurement and Sources of the Variables

Variable	Description	Source
Privatisation	Equals 0 when company is 100% state owned and 1 when material privatisation starts; in all following years the company is excluded	Own data source
Firm efficiency	Revenue per employee, deflated using the GDP deflator	Own data source
Deficit	Cyclically adjusted annual deficit (government primary balance) as a percentage of the GDP	Armingeon et al. (2011)
Openness	Sum of exports and imports as a percentage of GDP	Armingeon et al. (2011)
Constitution	0=no constitutional protection, 1=legislative competence, 2: parliamentary reservation; 3=, supply guarantee, 4=in-house production	Own data source based on Schmitt and Obinger (2011)
GDP per capita (log)	Real GDP per capita	Heston et al. (2009)
GDP growth	Growth of real GDP	Heston et al. (2009)
Leftist government	Cabinet seats of leftist parties as a percentage of total cabinet posts (weighted by days)	Armingeon et al. (2011)
EU membership	EU membership (1=yes; 0=no)	Own assessment
EU sector variables	EU membership and operating in the respective sector (1=yes; 0=no)	Own assessment

(← Table A1 p. 563)