Titel/Title: **The Diffusion of Privatization in Europe: Political Affinity or economic competition?**

Autor*innen/Author(s): Carina Schmitt

Veröffentlichungsversion/Published version: Postprint

Zeitschriftenartikel/Journal article

The author can be contacted at:
carina.schmitt@uni-bremen.de

THE DIFFUSION OF PRIVATIZATION IN EUROPE: POLITICAL AFFINITY OR ECONOMIC COMPETITION?

Abstract

Privatization has spread around the globe. While a number of studies find empirical evidence for the diffusion of privatization it remains unclear what the relevant linkages between states are. This paper analyses whether it is economic competition or political affinity that influences the diffusion of privatizing public utilities. The sample includes telecommunications, postal, and railway providers as the main network-based utilities operating at the national level in 15 European countries from 1980 until 2007. The results of the spatial regressions clearly show that governments follow each other for economic reasons. Trading partners strategically interact when privatizing their national public-utility providers, for example, to form strategic cross-border company alliances and to avoid competitive disadvantages in the global market. This applies particularly to economies that are highly integrated in the international market. Surprisingly, political and ideological similarities do not seem to matter for the diffusion of privatization.

Keywords: Privatization, Diffusion, Europe, Public Utilities, Spatial Interdependencies

INTRODUCTION[1]

Privatization has spread around the globe, particularly from the 1990s onwards (Bortolotti et al. 2003). With the emergence of neoliberal ideas, public enterprises were no longer regarded by governments as effective instruments for responding to market failure and, as a result, have been widely privatized (Bortolotti and Siniscalco 2004). Today, privatization is considered "an established policy" in the OECD world (Meseguer 2009, 111). Network-based utilities have also been affected by market-oriented policies. With the privatization and market orientation of the former public monopolies, the inward looking public-utility providers often have been transformed into multinational corporations operating across borders.

When explaining the timing and the extent of privatization, the existing research literature has focused extensively on domestic and external determinants. Right-wing governing parties, a high level of public debt and an institutional arrangement with a low number of veto points are assumed to accelerate the privatization process. Furthermore, international factors such as globalization and Europeanization, as well as technological progress, are seen as fostering the retreat of the state (Boix 1997; Bortolotti and Siniscalco 2004; Schneider and Häge 2008). More recently, however, more and more scholars have argued that governments choose privatization strategies because of their dependence on the policy choices of others. Research on privatization focusing on interdependencies concluded that privatization has "diffused rather than [been] reproduced independently as a discrete event in each country and sector" (Levi-Faur 2005, 28). Governments emulate the strategies adopted by similar countries (Fink 2011; Schmitt 2011),

[1] I thank Herbert Obinger, Peter Starke, Laura Seelkopf, Julian Schuessler, Sonja Kovacevic and the three anonymous referess for their helpful comments and suggestions

succumb to international coercive pressure of their reference group (Henisz, Zelner, and Guillén 2005) or learn from regional experiences (Meseguer 2004, 2009).

Despite a number of studies that have found empirical evidence for the diffusion of privatization it remains unclear what drives the diffusion of privatizing public utilities. Is it economic competition or rather political affinity that matters for the diffusion of **(← p. 615)** privatization? Do countries influence each other because of their economic and competitive strategic behaviour or because of their political and ideological similarities? What do the relevant linkages between states look like? Furthermore, it is highly underexposed to what extent national characteristics shape the importance of policy diffusion (Neumayer and Plümper 2012). Do governments respond to the diffusion of privatization depending on their ideological position or depending on the openness of their countries' economies?

This article addresses these questions by analyzing the diffusion of privatization in the telecommunications, postal, and railway sectors, the main network-based utilities operating at the national level in 15 European countries. The (former) monopolistic companies in these sectors were typically among the largest national public enterprises. The period of observation starts in 1980, i.e. before major privatization programs were launched, and ends in 2007. For the spatial regression estimations, information from both national governments and individual companies was compiled. A completely new data set is provided that contains information that has not been available to the public.

The paper contributes to the literature in the following ways. First, the article considers whether the importance of diffusion is conditioned by the ideological position of the government or by the openness of the economy. For example, it might be assumed that left-wing governments are more reluctant to adopt market-oriented policies than their right-wing counterparts. Second, the

existing quantitative literature mainly focuses on the transfer of ownership (i.e. material privatization). However, concerning network-based utilities two forms of privatization have to be considered: *formal privatization* involving the transformation of the public entity into a joint-stock company without changing the ownership structure as well as *material privatization* involving the sale of shares to private buyers. This paper explicitly takes both forms into account. Third, due to the lack of existing data, a new database is presented including information directly solicited from enterprises and national ministries. The results clearly support the finding that governments follow each other for economic reasons. Trading partners strategically interact when privatizing their national public-utility providers in order to form strategic cross-border company alliances and to avoid competitive disadvantages in the global market. This applies particularly to economies that are highly integrated in the international market and therefore vulnerable to international influences. Surprisingly, political and ideological similarities do not seem to matter for the diffusion of privatization.

This paper is structured as follows. The following section points out the concept of privatization and the privatization process in European countries in the last decades. In the next section the hypotheses are discussed and afterwards the methodology and data is described. Subsequently, the empirical results are presented.

THE PRIVATIZATION OF PUBLIC UTILITIES IN EUROPE

In network-based utilities, two forms of privatization have to be distinguished: formal and material privatization. With regard to formal privatization, two sub-types of formal privatization exist despite national differences. The first type refers to the transformation of a departmental agency as

a part of a ministry (e.g. the Direction Générale des Télécommunications in France) into a public corporation (e.g. France Télécom) that is subject to special or public law. While a departmental agency does not have its own legal personality and is subordinated to a ministry, a public corporation is an autonomous public body with its own legal status and a partial commercial structure. Public corporations **(← p. 616)** operate at arm's length of the government. Although a law or statute often defines the objectives of a public corporation, it has more autonomy in its day-to-day operations than a departmental agency (Berne and Pogorel 2006). They finance themselves through loans or capital allotments and they apply a financial accounting system. The second type of formal privatization is the transformation of a public corporation into a state company subject to private law, such as a joint stock company (e.g. British Telecom plc). A state company then is subjected to the same rules as private companies. In contrast to public corporations or departmental agencies, state companies are only responsible for the well-being of the enterprise itself and are typically oriented towards profit maximization. The company is led by a fully responsible central management. State companies have their own assets and liabilities and cover the expenses completely on their own. The enterprise is (at least theoretically) faced with hard-budget constraints and therefore might fail. The influence of the government is indirect and limited by the shared ownership. The transformation of a departmental agency into a public corporation, as well as the change of a public corporation into a state company, implies a move towards organizational forms more closely resembling those used in the private sector. It is crucial to note that before the public enterprises are formally privatized it is not possible to sell shares and therefore to start material privatization. Figure 1 illustrates the conceptualization of formal and material privatization. The influence of political actors is the most direct in a departmental agency via numerous formalized instruments. The possibilities of political actors to be engaged with the company's operations

decrease and become more indirect with each privatization step until all public shares are divested to private investors.

Figure 1: Concept of Formal and Material Privatization

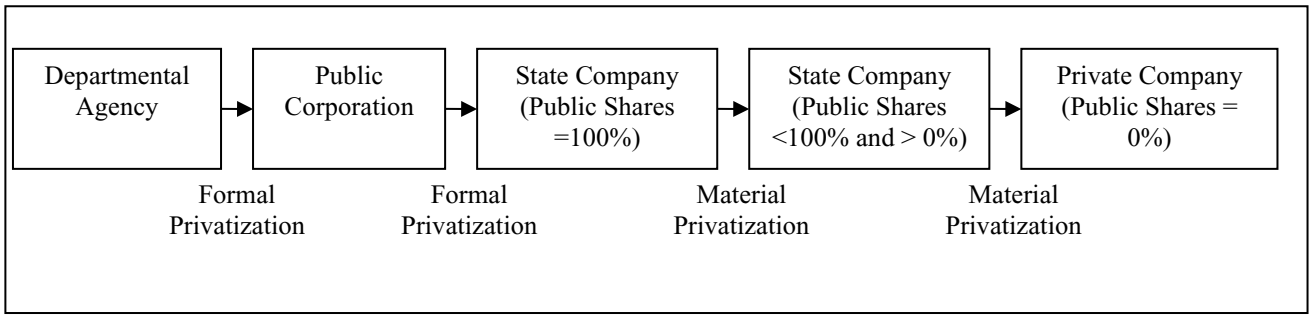


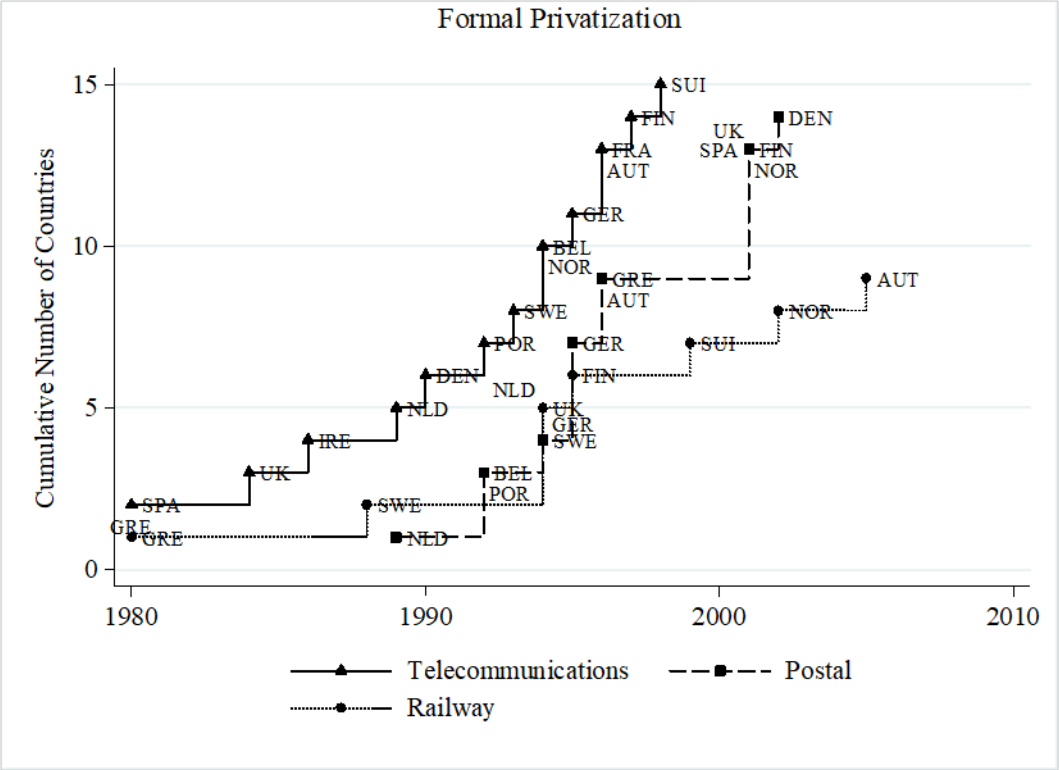
Figure 2 illustrates the formal and material privatization dynamics in 15 European countries. The y-axis shows the cumulative number of countries that have transformed their public-utility providers into joint-stock companies or that have started material privatization.

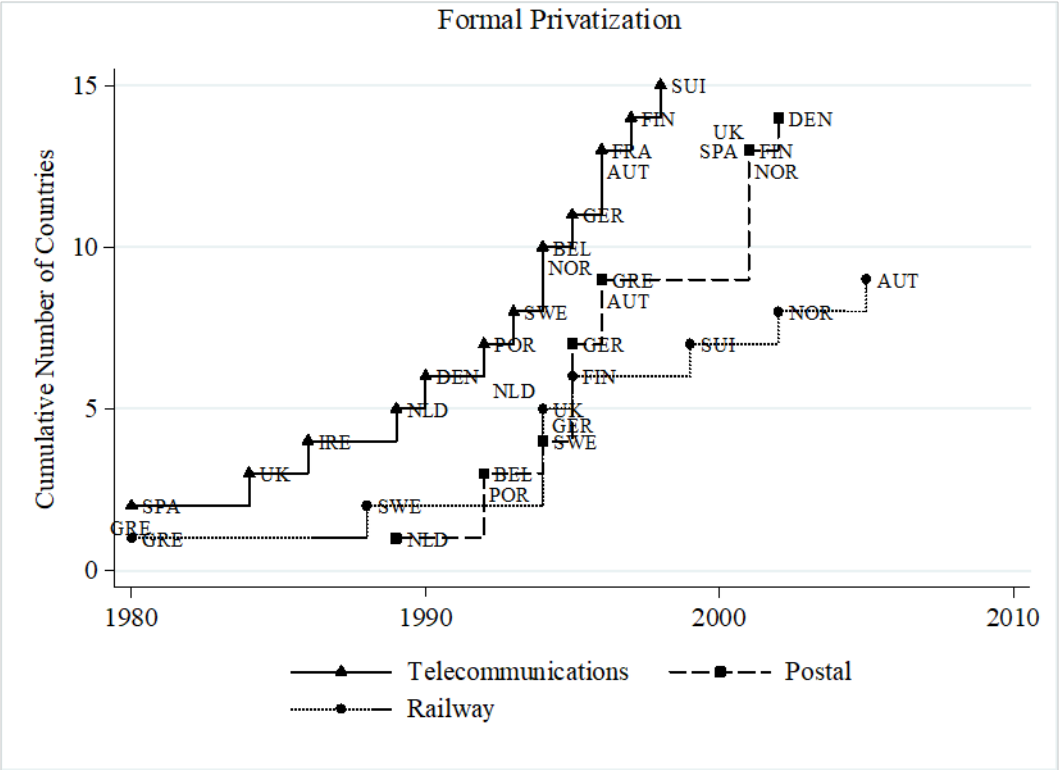
It is obvious that the privatization process differs across sectors and by the type of privatization that takes place. Furthermore, some countries have privatized their public-utility providers in all sectors relatively early, such as occurred in the Netherlands, while other countries, such as Great Britain and Spain, have been early birds when it comes to the privatization of the telecommunications sector but are laggards in the postal sector.

One of the central drawbacks of the existing empirical literature is the measurement of privatization. The revenue obtained as a result of privatization, which is typically used as a dependent variable, only permits the analysis of the divestment of shares and not of the extent of public entrepreneurship. Furthermore, none of the existing indicators incorporates formal privatization as a dimension of privatization that is especially relevant for network based utilities. Therefore, this paper develops a new 'index of public entrepreneurship' that measures the extent

of public control and integrates the concept of formal and material privatization. The 'index of public entrepreneurship' **(← p. 617)** is exactly the reverse of privatization since its highest value refers to the highest extent of public control while the lowest value means that the company is completely privatized. Based on this index, a completely new database has been generated that provides internationally comparative data for all companies in the sample.

Figure 2: The Spread of Formal and Material Privatization





Formally, the 'index of public entrepreneurship' is calculated as follows:

$$I = X_i^{DA} + \alpha \cdot X_i^{PC} + \beta \cdot X_i^{SC} \cdot s_i^{SC} \quad (1)$$

X^{DA}	1=Departmental Agency; 0=Other Organizational Form
X^{PC}:	1=Public Corporation; 0= Other Organizational Form **(← p. 618)**
X_i^{SC}	1=State Company; 0= other Organizational Form
α	Weighting for Formal Privatization, Type I
β	Weighting for Formal Privatization, Type II
s_i^{SC}	Shares hold by the State

The index identifies the organizational form (Departmental Agency, Public Corporation, State Company) and the percentage of shares owned by the government (*s*) on an annual basis. The index has a range from 0 to 1. The different organizational forms are weighted according to their

autonomy from the political centre of authority. If a departmental agency (DA) provides the national public utilities, the index equals 1, which is the maximum value (in this case X^{DA} equals 1 and X^{PC} as well as X^{SC} equal 0). When the state transforms a departmental agency into a public corporation (PC), then X^{PC} is weighted with α (here X^{DA} and X^{SC} are 0). α is assumed to be smaller than 1 to indicate the retreat of the state and the enterprise's greater autonomy from political actors. The weighting for a transformation into a joint-stock company is β. Since the possibility of influencing the operational decisions of a joint-stock company decrease for political actors in comparison to a public corporation (even though the state remains the unique shareholder), β is assumed to be smaller than α. If the state additionally sells public shares (material privatization), the index value further decreases. In the case that, for example, 30% of the public shares are divested, the weighting equals β x .70 as the state still holds 70% of the shares. Once a firm becomes completely privately owned (s=0), it drops out of the index.[2] The sample includes the national telecommunication, railway and postal provider in 15 European Countries[3] and covers the period from 1980 to 2007. The period of observation covers all major privatization programs in the three public-utility sectors. The country sample includes only European countries because non-European OECD countries often organized their public-utility sectors differently. In the United States, for example, the telecommunication sector has always been private. Moreover, the countries selected are closely linked via numerous political and economic ties that are assumed to foster diffusion processes.

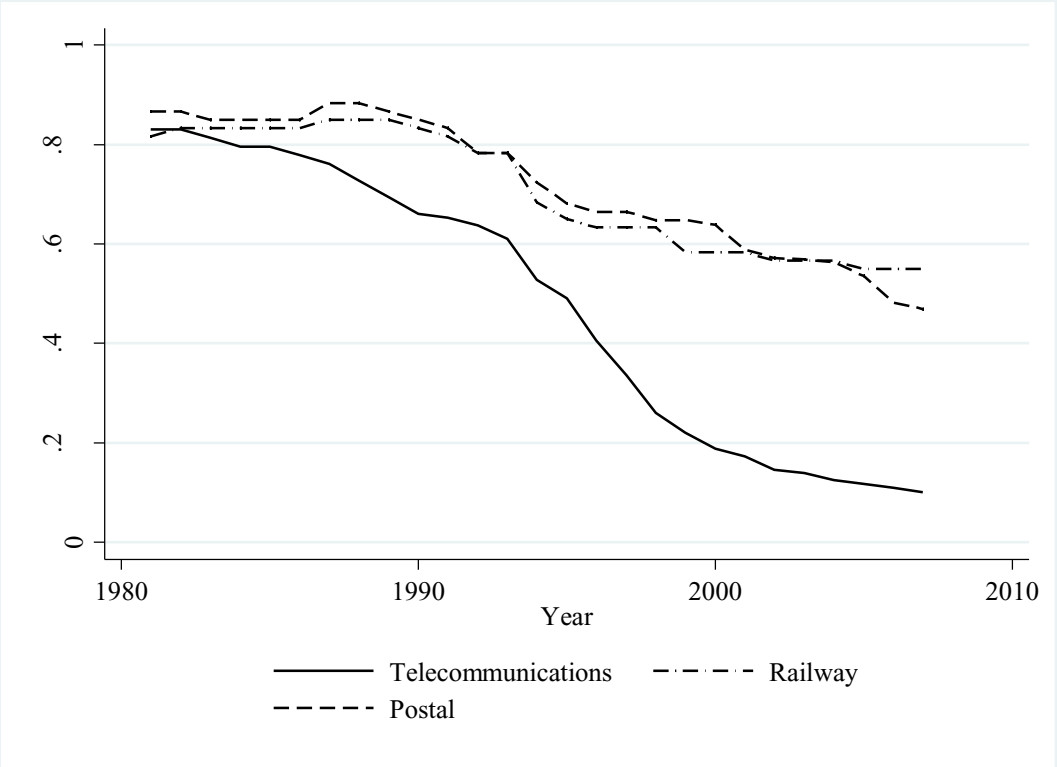
[2] Since no theoretical justification for the selection of α and β exists, sensitivity analyses were applied using different weightings. The results do not differ substantially when using different weightings. Therefore formal and material privatization are weighted equally in this paper with formal privatization being subdivided into two different types. This means that α equals .75 and β .5. Estimations using alternative weights are presented in table A2. With these robustness checks, the presented results cover the whole range from weighting formal and material privatization equally (α= .75, β= .5) over weighting material privatization twice as much as formal privatization (α= .875, β=.75) to not considering formal privatization and only weighting material privatization (α=1, β=1).

[3] Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

To illustrate the privatization paths, figure 3 shows the average development of public entrepreneurship in 15 European countries between 1980 and 2007 in the telecommunications, postal and railway sectors.

The figure clearly indicates that governments strongly retreated from the direct delivery of public utilities in the three sectors. Nonetheless, clear differences between the sectors remain. The average value in the telecommunications sector has decreased from .85 in 1980 to .10 in 2007. While the telecommunications providers were public corporations in 1980, the state is on average only a minority shareholder in 2007. In countries such as Denmark, the Netherlands and Portugal, the state has completely divested its public shares. In contrast, the index of public entrepreneurship in the railway and postal sector equals about .5 in 2007. This value indicates that most of the countries by now have only formally privatized their national incumbents. In the postal sector, 11 out of 15 countries have transformed their postal provider into a joint-stock company, while only six countries have started with the divestment of public shares. A similar picture emerges in the railway sector. In ten countries, formal privatization has taken place, while only Great Britain has materially privatized its national railway company. **(← p. 619)**

Figure 3: The Development of Public Entrepreneurship in Network Based Utilities



THE DIFFUSION OF PRIVATIZATION IN EUROPE

The basic assumption in the policy diffusion literature is that political actors do not implement policies independently of each other (Dolowitz and Marsh 2000; Franzese and Hays 2007). Diffusion therefore denotes a process in which the adoption of a certain policy in one or more countries leads to policy changes in other countries (Strang 1991). But which countries influence each other when it comes to the privatization of public utilities and why?

Governments typically do not have the capacity to process all available information. Given restricted resources, governments will observe those national administrations they regard as

particularly reliable and relatively close to them.[4] One cue might be the ideological orientation of the governments. Ideological affinity should, in principle, give salience to new models and policymakers tend to study them closely. Moreover, "the ideology of adopting states can serve as a proxy for gauging the political implications of adopting a policy (…). A state should be more likely to adopt a policy if it is ideologically similar to previous adopters" (Grossback, Nicolson-Crotty, and Peterson 2004, 526). Governments will therefore consider the experiences made by governments with which they share ideological dispositions. Dolowitz and Marsh (1996) state that "ideological and resource similarities are necessary preconditions to adapt lessons from one country to another" (Dolowitz and Marsh 1996, 353).

Furthermore, with regard to the network-based utilities, several international platforms, such as the Universal Postal Union, the International Telecommunications Union or the European Telecommunications Institute, exist. These organizations explicitly promote the exchange of information between national political actors. The communication and the transfer of information in these platforms should be more intense between governments affiliated to the same party family since "ideological similarity between states (…) can reduce the uncertainty a state may have about a policy and thus induce emulation" (Grossback, Nicolson-Crotty, and Peterson 2004, 522). Furthermore, it might help to legitimate privatization **(← p. 620)** policies at home when other governments with similar ideological preferences implement privatization programs. For example, when left-leaning governments abroad privatize their public-utility providers, the party's constituency at home might be more willing to accept that privatization is a necessary measure in times of globalized economies. Therefore, I expect that governments who share ideological preferences emulate or learn from each other (H1).

[4] I refer to relative closeness with respect to ideological, institutional and economic characteristics in a particular time period rather than closeness in absolute terms.

Furthermore, the uncertainty about the policy consequences can also be reduced by analyzing how governments operating in a similar institutional setting handle the privatization of public utilities. Similarities in the institutional setting might serve as a short cut for privatization decisions. The choices for privatizing public utilities are structured, enabled and restricted by the constitutional framework. The constitutional provisions concerning public utilities differ remarkably across countries. While some constitutions do not make any specific requirement or state that the provision of public utilities is a matter for government, in other countries privatizations are difficult to achieve due to constitutionally defined barriers. Some constitutions even include regulations that stipulate the public provision of certain services in-house (Graham and Prosser 2003). Any privatization of public enterprises would therefore require high levels of consensus, since a constitutional amendment is necessary before the privatization process can be initiated. It is therefore plausible that governments planning to privatize public utilities will analyze what has occurred in other countries with a similar constitutional framework to learn whether this policy can succeed. Studying privatization in countries with a similar institutional framework therefore may reduce uncertainty about the policy consequences.

Hence, governments in countries with similar constitutional provisions concerning public utilities should particularly influence each other (H2).

The diffusion of privatizing network-based utilities might nonetheless also be driven by economic rationales. When important trading partners plan to privatize their large national public-utility providers, governments might be under pressure to also restructure their network-based utilities or to divest public shares as well. A privatized supplier in economically related countries endangers the market position of public providers at home. Fuelled by the predominance of neoliberal ideas, governments might perceive it necessary to follow the privatization strategy of

trading partners to make their national providers fit for global economic competition. This argument should particularly apply if the national public utilities are no longer protected monopolies enjoying special rights (Pacheco 2012, 188).

One further rationale for strategic interaction between economic partners is to make strategic international cross-company alliances possible. The creation of transnational cross-company alliances is easier between countries where governments can resort to strong economic ties. Two countries linked through intensive and historical economic linkages often have harmonized laws that make economic cooperation easier. Moreover, reliability and investment security is relatively high between economic partners. A government that wants to form a cross-border alliance will build this economic cooperation on well-known fundaments rather than choosing a partner where economic cooperation is associated with insecurity and imponderables. Both trading partners would have to privatize their national incumbents and adjust the privatization process since "forming international alliances appear[s] to require privatisation" (Thatcher 2004, 300).

Privatization, therefore, is a beneficial strategy for both partners. **(← p. 621)**

Moreover, communication flows should also be more customary between economically related countries. For example, it might be the case that "[b]usiness people may transmit ideas about the appropriate economic policy by looking to the experiences of the countries with which they have especially intense trading contacts" (Simmons and Elkins 2004, 175).

Overall, when privatizing public-utility providers governments should strategically interact with their most important trading partners (H3).

The importance of diffusion should vary with national preconditions. In this paper, two national characteristics are assumed to condition the susceptibility to diffusion: first, government ideology and second the openness of the national economy.

The first argumentation assumes that the importance of diffusion varies according to the ideological position of the government. Policy makers may discount information that is not in line with their preferences. "Ideological positions and prior beliefs (…) shape the interpretation of new evidence and make new policy makers react differently to information coming from the experience of others" (Gilardi 2010, 650). Governments only adopt foreign policy models when the policies are compatible with their ideological predisposition. The imitation of privatization policy should therefore be more likely when governments are controlled by right-wing parties since market-oriented policies such as privatization are more compatible with their ideologies. Therefore, conservative parties might reference privatization experiences abroad to legitimate privatizing network-based utilities at home. By contrast, left-wing parties are, in principle, less willing to facilitate the diffusion of liberalization and privatization (Martin 2010). Proponents of left-wing parties typically oppose privatization due to the threat of layoffs or the provision of a worse service for the consumer. The fears of left-wing parties associated with privatization make the adoption of privatization policies that have taken place abroad more difficult and less likely. As a result, this paper assumes that left governments are less susceptible to the diffusion of privatization policies (H4).

The second national factor that shapes the diffusion of privatization policy is the openness of the economy. In general, governments in open economies are more receptive to foreign trends. If governments in open economies disregard the global trend of privatization, companies might not be competitive in international markets and not "capable of meeting [the challenge of] other

national champions" (Thatcher 2004, 30). The potential economic disadvantages of being reluctant to the diffusion of privatization policy are particularly high in countries strongly integrated in the world economy. In less open economies with a greater focus on the domestic market, the costs of falling behind might be lower. Therefore, governments in open economies should be more receptive to the diffusion of privatization policies (H5).

METHODOLOGY AND DATA

The basic assumption of this paper is that privatization policy diffuses across space. Spatial interdependencies can be modelled by including a spatial term as a regressor (spatial lag model) (Anselin 2003). The general spatio-temporal autoregressive model can be expressed as follows:

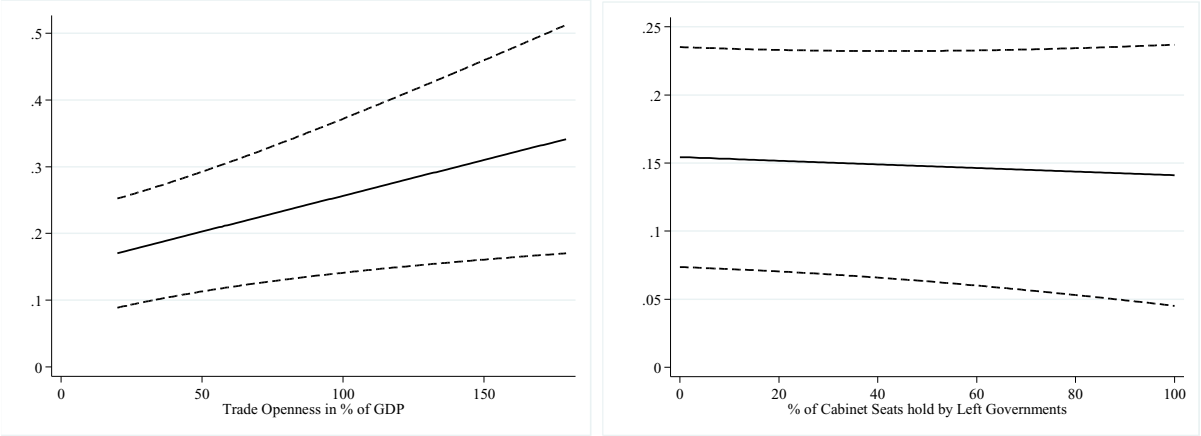
$$(2) \qquad \mathbf{y} = \rho\,\mathbf{W}\,\mathbf{y} + \varphi\,\mathbf{L}\,\mathbf{y} + \phi\,\mathbf{M}\,\mathbf{y} + \boldsymbol{\beta}\,\mathbf{X} + \boldsymbol{\varepsilon}$$

(← p. 622) where y is the index of public entrepreneurship (see above). ρ and φ are spatial autoregressive coefficients. Wy and Ly are weighting averages of the dependent variable (spatial lag). The spatial weight matrix W reflects the relative connectivity of each sector in each country i to every other sector in every other country at time t. The effect on a focal sector in a focal country at time t is then a weighted sum of outcomes across countries (Lee and Strang 2006). L is the weighting matrix capturing cross-sector diffusion. The effect on a focal sector in a focal country at time t is then a weighted sum of outcomes across the other two sectors of that focal country. ϕ denotes the temporal autoregressive coefficient and M an NTxNT matrix to create the first order temporal lag (those on the minor diagonal). X is a set of exogenous right hand side variables.

Before analyzing the different diffusion mechanisms, whether there is spatial association in the dependent variable must be examined. Moran's I as well as Geary's C indicate spatial correlation for all three sectors' dependent variables. Furthermore the local indicators for spatial association show that the spatial correlation is not caused by a single value.

True spatial interdependence has to be carefully distinguished from other sources of spatial association in order to solve Galton's problem. Spatial patterns in the dependent variable might also be caused by common shocks or trends or unobserved spatial heterogeneity. The only possibility to disentangle spatial dependence from its alternatives is to model it and include appropriate right-hand side variables (Plümper and Neumayer 2010, 215). A failure to account for such alternatives will bias the spatial-lag coefficient. To control for common shocks, I added time dummies. Furthermore, a lagged dependent variable captures common trends and temporal dynamics. A lagged dependent variable has the disadvantage of accounting for the largest part of the variance in the dependent variable and of absorbing the explanatory power of the other substantial right-hand variables. However, the focus in this paper is on guaranteeing reliable results for the spatial lags. This procedure is a very conservative test strategy for the hypotheses on spatial interdependencies. To cope with the unobserved spatial heterogeneity unit, fixed effect models are estimated. The fixed effects variables also help to control for alternative sources of spatial patterns in the dependent variable. Spatial diagnostic tests on the residuals of the non-spatial model using OLS gives further information about the nature of the spatial association. The Robust Lagrange Multiplier Test against the spatial lag or spatial error **(← p. 623)** alternative indicates whether the spatial association is caused by unobserved factors. The results clearly support the spatial lag alternatives (Anselin et al. 1996; Franzese and Hays 2007, 2008).

Figure 4: Marginal Effects of the Diffusion Variables



(← Figure 4 p. 623)

In the empirical analyses, whether economic ties or political similarities account for the diffusion of privatization is first analyzed (Model I and II). Next, whether policy diffusion is conditioned by national characteristics is considered (Model III and IV, Figure 4 and Table 2). The first two models are estimated with maximum likelihood estimations since the spatial lag on the right-hand side of the equation is a weighted average of the left-hand side variable. The spatial lags would be endogenous and therefore spatial OLS estimations would be inconsistent and affected by simultaneity bias. Spatial maximum likelihood estimations provide consistent and efficient parameter estimates in the case of instantaneous interdependencies (Franzese and Hays 2007, 2008).

When estimating spatial-lag models, the weighting matrix must be carefully specified. In order to test the hypotheses, I use several different weighting matrices. All weight matrices have NxTxS rows and columns where N is the number of countries, T the number of years and S the number of sectors. All matrices (besides of the cross sector spatial lag) only weight the privatization policy in the same sector. The other cells equal 0. For example, the assumed influence of the Belgian privatization policy in the telecommunications and postal sectors on the German's

privatization policy in the railway sector is 0. Only the Belgian privatization policy in the railway sector is weighted and therefore seen as relevant for the German privatization policy in the railway sector. To test the hypothesis of whether ideological similarities determine spatial interdependencies, the privatization policy is then weighted by the inverse ideological distance between governments. I used the data offered by Döring and Manow (2011), which contain time-variant information about the position of every party on a left-right scale. I have weighted the left-right position of every cabinet party by its parliament seats in relation to all parliament seats held by the government parties to measure the position of the cabinet as a whole. When inversing the ideological distance between two governments the weight decreases with the ideological distance (H1). The constitution index of Schmitt (2012)[5] is taken to test the hypothesis whether privatization policy diffuses across countries with a similar constitutional framework. The index measures the sector-specific constitutional provisions concerning the privatization of public utilities. A high value indicates high constitutional barriers for privatization and is associated with the prescription of an in-house production of the respective service. The lowest value, in contrast, means that the constitution does not contain any specific regulation with respect to the provision of the public service in question. Similar to the ideological distance, the inverse distance between the constitutional frameworks of two countries is used as weight. Weighting the public entrepreneurship with the sum of exports and imports between two countries as a percentage of the total trade volume enables for checking whether trading partners adopt similar policies (H3). All weighting matrices are row standardized so that each row adds up to a total of one.

[5] Alternatively, the affiliation to a specified legal family (German Law, Scandinavian, Common, Southern European and French Law) is taken to express the similarity in legal preconditions for privatization. The binary variable equals 1 if two countries belong to the same legal family and 0 otherwise. The results remain the same and are reported in table A1 in the appendix.

Furthermore, in all models, I include a spatial lag weighting the average public entrepreneurship of the two other sectors to control for cross-sector diffusion. The likelihood of privatization should increase when a government has already privatized other public utilities and the government can consider and reference its own past experiences of privatization. The weighting matrix of the variable on cross-sector diffusion only weights the country's privatization efforts in both of the other sectors and sets all other cells equal to zero. **(← p. 624)**

Moreover, I include political and economic control variables discussed in the literature to influence the extent and timing of privatization policies. Policy making at the European level might have accelerated the privatization process of the member states even though privatization was not directly demanded by EU policies. Europeanization is taken into account by adding a dummy for EU membership. The openness of the economy as an indicator for 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 privatization policy. The higher the percentage of cabinet seats controlled by leftist parties, the lower the retreat of the state from the public service delivery should be (Boix 1997). Since privatization is often seen as an instrument for restoring public budgets, I assume that an increase in the deficit as a percentage of GDP is associated with greater privatization efforts (Bortolotti, Fantini, and Siniscalco 2003). The level and the growth of GDP indicate the economic situation of the country. A high level of GDP growth should go hand in hand with moderate privatization policies due to the relatively low economic pressure that this entails (Bortolotti et al. 2003). Furthermore, the extent of privatization might increase with the productivity of the company since the objective of raising revenue can best be served. The productivity at the company level is captured with the revenues per employee. It can be assumed that privatization decisions are interdependent across

sectors. All control variables are lagged by one year to ameliorate potential endogeneity problems. The details of the measurements of all variables are presented in Table A1.

WHAT DRIVES THE DIFFUSION OF PRIVATIZATION POLICY? EMPIRICAL FINDINGS

Table 1 shows the results from the panel estimations. Several remarkable findings are revealed. The first two models examine whether economic competition or political affinity account for the diffusion of privatization policies. In addition, model III and IV test whether the importance of policy diffusion varies due to the policy preferences of the government and the openness of the economy.

The first model includes two spatial lags, one using the distance between the ideological positions of the governments and the other using trade relations as weights. Governments that share ideological preferences do not seem to influence each other when it comes to the privatization of public utilities. The hypothesis that policy strategies are implemented by governments with similar policy preferences is therefore not confirmed by the data. The coefficient of this spatial lag is close to zero. In contrast, the results of the empirical analysis clearly support the relevance of economic relationships. The coefficient of the spatial lag is positive and statistically significant. Governments' decisions to privatize do depend on the privatization policies of economically related countries. In model II, instead of ideological closeness, a spatial lag is included using the similarity in the constitutional framework as weights. The results are similar to model I. Governments do not look at those countries where a similar constitutional framework for public utilities exists. The

coefficient is negative and even close to zero. Rather surprisingly, the importance of political affinity for the diffusion of privatization is highly limited.

As in model I, the spatial lag using economic relations as weights turns out to be statistically significant at the 1% level. When a government privatizes its public **(← p. 625)** service provider, trading partners move in the same direction. For example, when governments transform a departmental agency into a state company, an economically related country is likely to change the organizational form a departmental agency into a public corporation. Resisting privatization trends abroad is perceived to be associated with a competitive disadvantage. Governments implement privatization in line with their trading partners in order not to fall behind in the global market. When the Dutch government e.g. discussed and decided to privatize its network-based utility sectors, Germany paid attention as the Netherlands is one of Germany's most important trading partners. In 1994 Dutch policy makers sold 30 per cent of the national telecommunications provider KPN (Koninklijke PTT Nederland). Two years later, the **(← p. 626)** German government divested 26 per cent of Deutsche Telekom AG as part of an initial public offering.

Table 1: Spatial Interdependencies in Privatization Policy

Dependent variable: Public Entrepreneurship in the Public Utility Sectors				
Independent variables	(I)	(II)	(III)	(IV)
Public Entrepreneurship$_{t-1}$	.850*** (.016)	.849*** (.016)	.838*** (.016)	.846*** (.016)
Openness	.0001 (.0003)	.0001 (.0003)	.0007*a (.0004)	.0002 (.0003)
GDP per capita	-2.73e-07 (1.23e-06)	-2.30e-07 (1.24e-06)	-1.45e-07 (1.22e-06)	-3.03e-07 (1.24e-06)
GDP growth	.0002 (.001)	.0001 (.001)	.0003 (.001)	.4.87e-05 (.001)
Deficit	.001* (.0008)	.001* (.0008)	.001** (.0008)	.002* (.001)
Constitution	.020** (.008)	.020** (.008)	.023*** (.008)	.021*** (.008)
EU Membership	-.015* (.009)	-.015 (.009)	-.017 (.010)	-.014* (.009)
Leftist Government	7.15e-05	7.25e-05	4.53e-05	5.94e-05

	(6.48e-05)	(6.49e-05)	(7.75e-05)	(7.76e-05)
Productivity	-4.35e-09 (5.16e-08)	-1.55e-09 5.26e-08	2.01e-08 (5.07e-08)	1.70e-08 (5.09e-08)
Cross Sector Diffusion	.010 (.021)	.021 (.022)	.015 (.021)	.017 (.023)
Diffusion -Trade Relations	.090** (.042)	.083* (.048)	.149***a (.039)	154***a (.041
Diffusion - Ideological Closeness	.018 (.042)			
Diffusion - Institutional Similarity		-.026 (.051)		
Diffusion (Trade Relations) x Trade Openness			.001** (.004)	
Diffusion (Trade Relations) x Leftist Government				-.0001 (.0002)
Log Likelihood	10664.01***	10702.27***	12164.69***	12101.66***
N	1169	1169	1166	1166

Note: The fixed effects are suppressed to conserve space; standard errors in parentheses; *** z, p<0.01, ** z, p<0.05, * z, p<0.1; a: The coefficient and standard errors refer to the situation when the conditioning factor equals 0; the models are estimated by Maximum Likelihood. Note that low values for the dependent variable indicate low levels of public entrepreneurship and therefore extensive privatization.

(← Table 1 p. 626)

Additionally, trading partners strategically interact with regard to the privatization of public utilities in order to form transnational alliances. The creation of cross-border alliances is easier between countries that share economic relationships. Harmonized laws, established cooperation procedures and therefore high security and reliability facilitate economic cross-border alliances. Transnational alliances enable the transformation of inward looking incumbents into global transnational corporations that are capable of achieving an extensive share of the world-wide market. For example, Germany, as France's most important trading partner, "called for privatisation" of France Télécom since France and Germany planned to set up a strategic alliance between France Télécom and Deutsche Telekom to expand abroad (Thatcher 2004, 300). According to German policy makers, a "partial privatisation [of France Télécom] was required for internationalisation, particularly to create a 'European champion' through its alliance with Deutsche Telekom" (Thatcher 2004, 302). In fact, the French and the German governments have transformed their telecommunication providers into joint-stock companies and started material

privatization almost at the same time. The merger of the Finnish and Swedish national incumbents, Sonera corporation and Telia AB, into TeliaSonera corporation is a further example. The cross-holding required the partial privatization of both former monopolistic companies.

It might be argued that the decision to privatize falls apart from the implementation of privatization policy and that this might bias the results. However, it does not matter for the interpretation of the results whether two countries strongly related through economic linkages implement privatization programs due to information exchange between the antecedent governments or due to information exchange between the current governments. The reason in both cases is a strong economic relationship. The existence of time gaps between the decision to privatize and its implementation might only be important for the results of the spatial lag using the ideological distance as weights due to short term changes. To test for this possibility, I generated a variable counting the number of privatization experiences abroad made by governments belonging to the same party family, as well as a variable counting the number of all countries with privatization experiences in the respective sector. Both variables are not statistically significant and the findings for trade interdependence remain stable (see appendix, table A2). I also checked the robustness of my results via different alternative estimations including different time trends, different weightings for α and β, sector competition and sector specific EU regulations (see appendix, table A2 and A3). Overall, all findings strongly support that it is the economic strategic behaviour of trading partners that drives the diffusion of privatization.

The results for the remaining variables also reveal astonishing findings. A positive and highly stable influence is observed for the constitutional provisions related to the privatization of public utilities. Public-utility services are typically protected by the constitution when an administrative body is responsible for the service provision. In this case, the constitution must be amended before the transformation of an administrative body or a public law company into a joint-

stock company (i.e. formal privatisation). Protection of the provision of a specific public utility in the constitution hampers privatization (see Schmitt and Obinger 2011 for a detailed discussion of the role of constitutional barriers). As hypothesized, leftist parties do indeed privatize less than right-wing parties. In line with Fink (2011), empirical evidence is not found for the assumption that diffusion processes occur across sectors within countries. The coefficient is close to zero and statistically **(← p. 627)** insignificant. That means that having privatized one sector does not alter the extent of privatization of another sector. The UK is a case in point. Having been one of the first countries to privatize its telecommunications provider, it is a clear laggard in the postal sector with a public-service provider still 100% state owned. The influence of the European Union is negative and statistically significant at the 10% level. Members of the European Union tend to have a lower level of public entrepreneurship than non-European member states. This result might be partly driven by the country selection, which is restricted to European countries with Norway and Switzerland as the only non-EU member states. These two countries are laggards with regard to privatization. When all OECD countries are taken into account the results for the European Union are less clear and each sector has to be considered separately (for a detailed analysis, see Schmitt 2012).

The models III and IV test whether the ideological positions of the government and the openness of the economy conditions the importance of diffusion.

Model III, which tests the conditional influence of the ideological position, shows that the effect of the spatial lag variable does not depend on the policy preferences of the government. Left-leaning governments are as receptive to market-oriented policies as right governments. The coefficient of the spatial lag only slightly increases with the number of cabinet seats held by leftist

parties from .129 in the case of 0% cabinets hold by leftist parties to .140 when the cabinet is totally dominated by leftist parties.

Table 2: Coefficient of the Spatial Lag according to the Openness of the Economy or Parties' Ideologies

Openness		Party Ideology	
Value of Openness	Coefficient of Spatial Lag	Value of Party Ideology	Coefficient of Spatial Lag
25	.176 (.042)	0	.154 (.041)
50	.203 (.046)	20	.151 (.042)
75	.230 (.052)	40	.150 (.042)
100	.256 (.059)	60	.146 (.044)
125	.283 (.067)	80	.144 (.046)
150	.310 (.076)	100	.141 (.049)
175	.337 (.086)		

Notes: Standard error in parentheses

In contrast, model IV clearly identifies the significant influence of the openness of the economy on the effect of the diffusion variable. The coefficient is positive and statistically significant at the 5% level. The pressure on governments in open economies to follow the privatization strategy of their trading partners is higher than on governments operating in relatively closed economies with less dependence on international markets. Transnational alliances and economic advantages in the global market act as rationales for diffusion between trading partners and are of less relevance for governments in closed economies. The coefficient of the spatial lag is .176 in economies where the sum of exports **(← p. 628)** and imports only account for 25% of the

GDP. When the trade openness equals its maximum (sum of exports and imports account for about 175% of the GDP) the coefficient for the spatial lag is .337. In open economies, countries sell about 20% of the national public utility provider when trading partners divest on average about 50% of the public company operating in the same sector. In contrast governments in closed economies confronted with trading partners divesting 50% of public shares only sell about 10% of the public utility provider. The costs of neglecting the privatization policies of trading partners are higher when the economy is heavily involved in the international market. Figure 4 and Table 2 summarize the conditional effect of the ideological position of the government and the trade openness of the economy.

CONCLUSION

In recent years, several studies have analysed the role of diffusion in the privatization of public enterprises and have overcome the previously exclusive focus on national and international determinants for privatization pathways for a long period. Nearly all these studies have found empirical evidence for the existence of diffusion (Levi-Faur 2005; Jordana, Levi-Faur, and Fernández I Marín 2011; Fink 2011; Henisz, Zelner, and Guillén 205). The assumption that governments do not react independently of each other when it comes to the privatization of public utilities is deemed non-controversial. Despite it being empirically well documented that privatization is (partly) driven by diffusion processes, it has remained unclear which countries influence each other and why, as well as whether diffusion is conditioned by national characteristics.

This paper has addressed this drawback by asking whether the diffusion of privatization is driven by economic competition between trading partners or by emulation among politically related

countries. The sample includes all telecommunications, postal and railways providers in 15 European countries from 1980 to 2007. A completely new data set was compiled containing information gathered from national ministries, company data bases and the companies themselves. The new data base enables the measurement of the extent of public entrepreneurship and therefore captures formal and material privatization measures. This allows a more comprehensive picture than was hitherto possible.

The empirical analysis has clearly revealed that the importance of political variables for the diffusion of privatization policy is highly limited, at least from a macro-quantitative perspective. Governments sharing similar ideological preferences are not of particular relevance for each other. Furthermore governments do not observe those governments in greater detail operating under a similar constitutional framework. In contrast, the empirical evidence strongly supports the hypothesis that the economy matters for the diffusion of privatization. Trade partners move in the same direction when it comes to the privatization of public utilities. Governments seem to be under pressure to follow the trend of economically related countries in order not to fall behind in the international market (Dobbin, Simmons, and Garrett 2007; Simmons and Elkins 2004). They also strategically interact with important trading partners when privatizing their national public-utility providers to enable cross-holdings and strategic cross-company alliances and, therefore, to form transnational global players.

With regard to the conditional effect of national characteristics, the results show that the pressure to move in line with economically related countries towards more market and less state intervention is the same for all parties independent of their party affiliation. The diffusion of privatization, however, is of greater relevance in countries that are more exposed to international market pressure. Governments in open economies do less and **(← p. 629)** get away with resisting

the trend of important trading partners than in relatively closed economies. What main lesson can be drawn against the background of the empirical results? It is the strategic behavior of trading partners acting in a global competitive market rather than political alliances that mainly drive the diffusion of privatization policy.

However, a quantitative statistical analysis is only able to identify general patterns. It might be possible that the importance of diffusion varies over time and across country and sector. For example, the first left government to privatize a national public-utility provider might have a stronger influence on other left governments than the privatization experiences of left governments in later years. Or, political alliances might be of varying relevance across the sectors. However, within a statistical analysis, it is impossible to model every single possibility of influence. More qualitative oriented work might be one way of investigating more multifaceted and heterogeneous political channels of diffusion. **(← p. 630)**

REFERENCES

Anselin, L. 2003. Spatial Externalities, Spatial Multipliers, And Spatial Econometrics. *International Regional Science Review,* 26, 153-166.

Anselin, L., A. Bera, R.J. Florax, and M. Yoon. 1996. Simple diagnostic tests for spatial dependence. *Regional Science and Urban Economics,* 26, 77-104.

Armingeon, K., P. Leimgruber, M. Beyeler and S. Menegale. 2011. *Comparative Political Data Set 1960-2006*.

Berne, M. and G. Pogorel 2006. *Privatization experiences in the European Union.* Cambridge: MIT Press.

Boix, C. 1997. Privatizing the Public Business Sector in the Eighties: Economic Performance, Partisan Responses and Divided Governments. *British Journal of Political Science,* 27, 473-96.

Bortolotti, B., M. Fantini and D. Siniscalco. 2003. Privatisation around the World: Evidence from Panel Data. *Journal of Public Economics,* 88, 305-332.

Bortolotti, B., and D. Siniscalco. 2004. *The Challenges of Privatization. An International Analysis*. Oxford: Oxford University Press.

Conway, P., and G. Nicoletti. 2006. *Product Market Regulation in Non-Manufacturing Sectors in OECD Countries: Measurement and Highlights*. OECD Economics Department Working Paper 530. Paris: OECD.

Dobbin, F., B. Simmons and G. Garrett. 2007. The Global Diffusion of Public Policies: Social Construction, Coercion, Competition, or Learning? *Annual Review of Sociology,* 33, 449-472.

Dolowitz, D. and D. Marsh. 1996. Who Learns What from Whom: a Review of the Policy Transfer Literature. *Political Studies,* 44, 343-357.

———. 2000. Learning from Abroad: The Role of Policy Transfer in Contemporary Policy-Making. *Governance,* 13, 15-24.

Döring, H. and P. Manow. 2011. *Parliament and government composition database (ParlGov): An infrastructure for empirical information on parties, election and governments in modern democracies*. Version 11/07-26 July 2011. Bremen.

Fink, S. 2011. A Contagious Concept: Explaining the Spread of Privatization in the Telecommunications Sector. *Governance,* 24, 1, 111-139.

Franzese, R. and J. Hays. 2007. Spatial Econometric Models of Cross-Sectional Interdependence in Political Science Panel and Time-Series-Cross-Section Data. *Political Analysis,* 15, 140-164.

———. 2008. Interdependence in Comparative Politics: Substance, Theory, Empirics, Substance. *Comparative Political Studies,* 41, 4/5, 742-780.

Garrett, G. and D. Mitchell. 2001. Globalization, government spending and taxation in the OECD. *European Journal of Political Research,* 39, 145-177.

Gilardi, F. 2010. Who learns from What in Policy Diffusion Processes? *American Journal of Political Science,* 54, 3, 650-666.

Graham, C. and T. Prosser. 2003. *Privatizing Public Enterprises. Constitutions, the State, and Regulation in Comparative Perspective*. Oxford: Oxford University Press.

Grossback, L., S. Nicolson-Crotty and D. A.M. Peterson. 2004. Ideology and Learning in Policy Diffusion. *American Politics Research,* 32, 5, 521-545.

Henisz, W.J., B.A. Zelner and M. F. Guillén. 2005. The Worldwide Diffusion of Market-Oriented Infrastructure Reform, 1977-1999. *American Sociological Review,* 70, 871-897.

Heston, A., R. Summers and B. Aten. 2009. *Penn World Table Version 6.3. Center for International Comparisons of Production, Income and Prices at the University of Pennsylvania*.

IMF. *Direction of Trade Statistics. Yearbook*. Washington, D.C.: IMF.

Jordana, J., D. Levi-Faur and X. Fernández I Marín. 2011. The Global Diffusion of Regulatory Agencies: Channels of Transfer and Stages of Diffusion. *Comparative Political Studies* 44: 871-897.

Lee, C. and D. Strang. 2006. The International Diffusion of Public-Sector Downsizing: Network Emulation and Theory-Driven Learning. *International Organization,* 60, 883-909.

Levi-Faur, D. 2005. The Global Diffusion of Regulatory Capitalism. *The ANNALS of the American Academy of Political and Social Science,* 598, 12-32.

Martin, C. 2010. Interdependence and Political Ideology: The Conditional Diffusion of Cigarette Taxation in the US States. *World Political Science Review,* 6, 1.

Meseguer, C. 2004. What Role for Learning? The Diffusion of Privatisation in OECD and Latin American Countries. *Journal of Public Policy,* 24, 3, 299-325.

———. 2009. *Learning, Policy Making, and Market Reforms*. Cambridge: Cambridge University Press.

Neumayer, E. and T. Plümper. 2012. Conditional Spatial Policy Dependence: Theory and Model Specification. *Comparative Political Studies,* 45, 7, 819-849.

OECD. 2008. *Economic Outlook No. 84*. Paris: OECD.

Pacheco, J. 2012. The Social Contagion Model: Exploring the Role of Public Opinion on the Diffusion of Antismoking Legislation across the American States. *The Journal of Politics,* 74, 1, 187-202.

Plümper, T. and E. Neumayer. 2010. Model specification in the analysis of spatial dependence. *European Journal of Political Research,* 49, 418-442.

Schmitt, C. 2011. What Drives the Diffusion of Privatization Policy? Evidence from the Telecommunications Sector. *Journal of Public Policy,* 31, 1, 95-117.

———. 2012. The Janus Face of Europeanisation: Explaining Cross Sector Differences in Public Utilities. *West European Politics* forthcoming.

Schmitt, C. and H. Obinger. 2011. Constitutional Barriers and the Privatization of Public Utilities in Rich Democracies. *World Political Science Review,* 7, 1.

Schneider, V. and F. M. Häge. 2008. Europeanization and the Retreat of the State. *Journal of European Public Policy,* 15, 1, 1-19.

Simmons, B. A. and Z. Elkins. 2004. The Globalization of Liberalization: Policy Diffusion in the International Political Economy. *American Political Science Review,* 98, 1, 171-189.

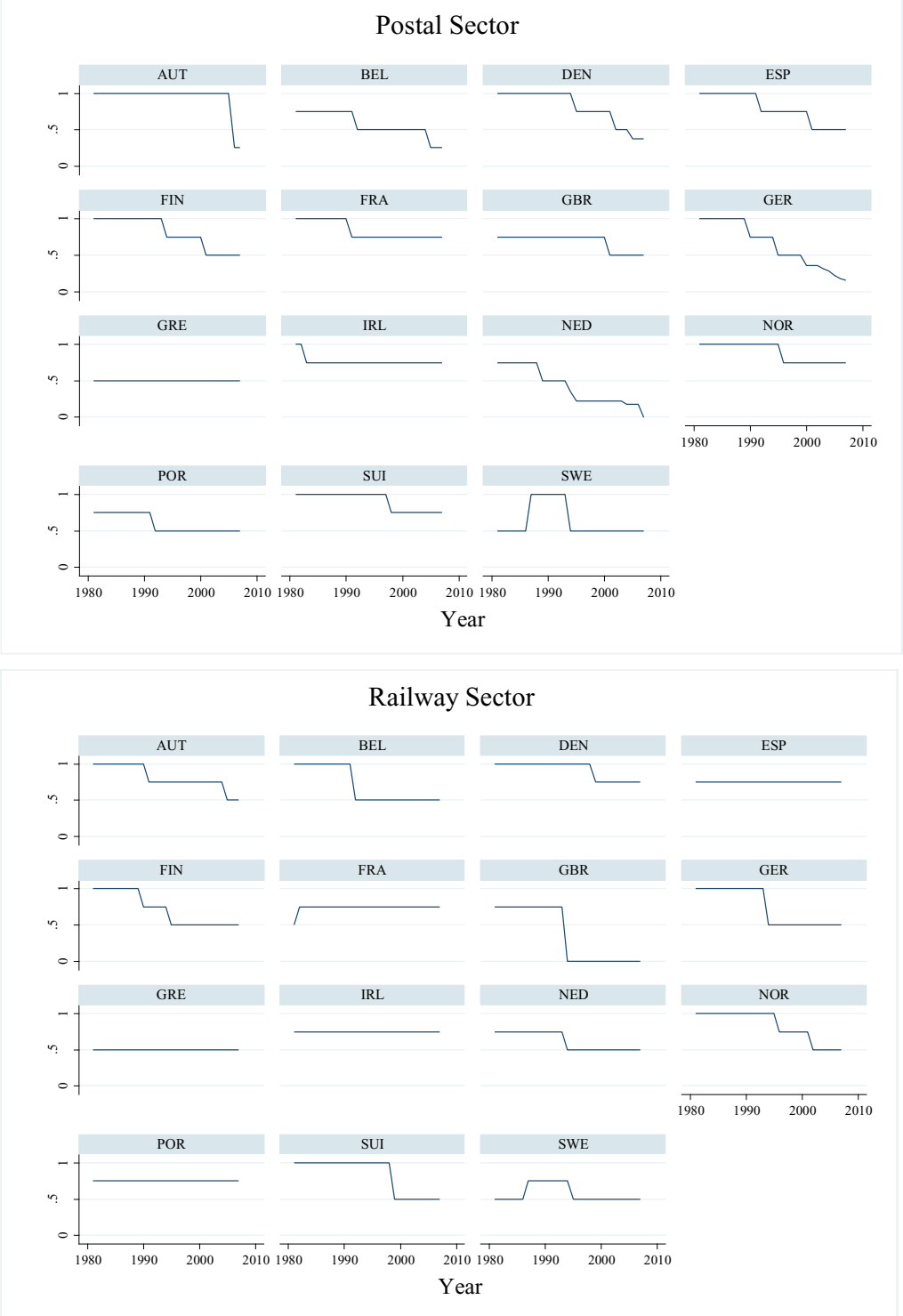
Strang, D. 1991. Adding social strucutre to diffusion models: An event history framework. *Sociological Methods and Research,* 19, 3, 324-353.

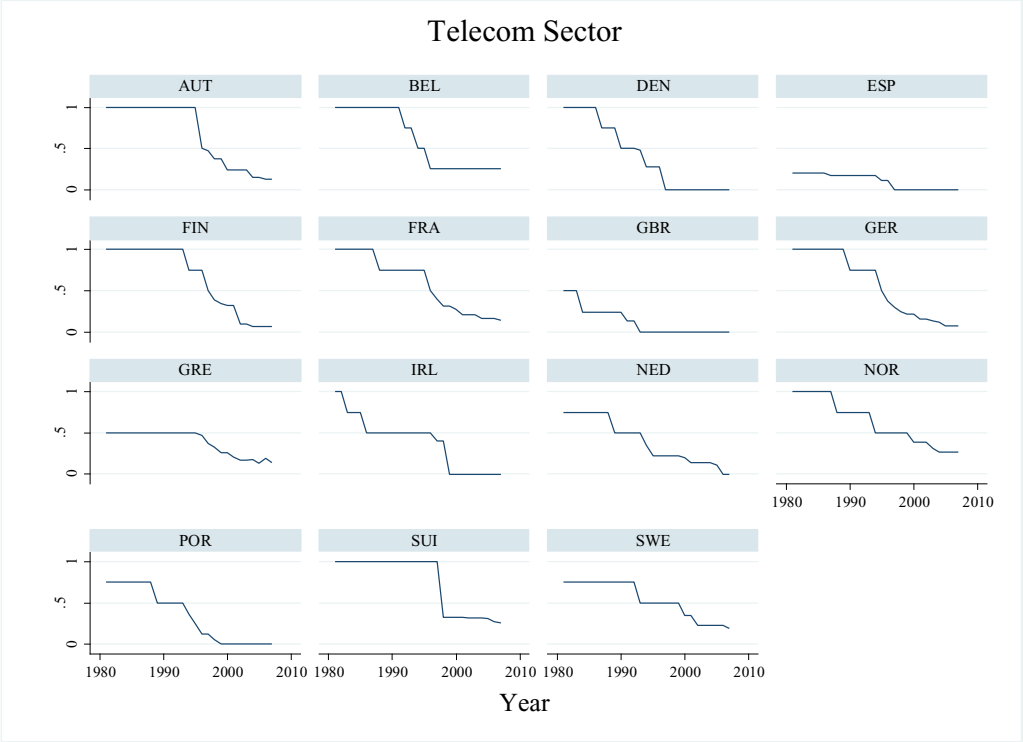
Thatcher, M. 2004. Winners and Losers in Europeanisation: Reforming the National Regulation of Telecommunications. *West European Politics,* 27, 2, 284-309.

United Nations Statistics Division (UN). 2009. *National Accounts Statistics Database*. New York: United Nations.

Appendix

Figure A1: Development of Public Entrepreneurship in Each Country and Year




Telecom Sector
AUT
BEL
DEN
ESP
FIN
FRA
GBR
GER
GRE
IRL
NED
NOR
POR
SUI
SWE
0
.5
1
1980
1990
2000
2010
Year

(← p. 632)

Table A1: Measurement and Sources of the Variables

Variable	Description	Source
Public Entrepreneurship	See p. 7ff for a detailed description	Own data source
Openness	Sum of exports and imports as a percentage of GDP	Heston et al. (2009)
GDP per capita	Real GDP per capita	UN (2009)
GDP growth	Growth of real GDP	OECD (2008)
Deficit	Annual deficit (government primary balance) as a percentage of GDP	Armingeon et al. (2011)
Constitutions	0=No constitutional requirements, 1=Sector is assigned to the legislative jurisdiction of the government, 2=Parliamentary reservation when modifying sector specific regulations, 3=Guarantee of adequate public service provision, 4=Constitution prescribes in-house production	Schmitt and Obinger (2011)
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 on an annual basis (1=yes; 0=no)	Own assessment
Productivity	Sales revenues per employee at the company level	Own data source
Cross Sector Diffusion	Spatial lag only weights the privatization policy in the two other sectors	Own data source
Weighting Matrix – Trade Relations	Sum of exports and imports between two countries as a percentage of the total trade volume. The weighting matrix is row-standardized.	Direction of Trade Statistics (IMF)
Weighting matrix – Ideological Closeness	Inverse distance between the ideological positions of the governments. The weighting matrix is row-standardized.	Doering & Manow (2011)
Weighting Matrix – Institutional Similarity, Constitutional Framework	Sector-specific constitutional provisions concerning the privatization of public utilities. The index ranges from 0 to 4; 0=no constitutional protection, 1=legislative competence, 2=parliamentary reservation, 3=supply guarantee, 4=in-house production. The weighting matrix is row-standardized.	Schmitt (2012)
Weighting Matrix – Institutional Similarity , Legal System	Binary Variable: 1= both countries belong to the same legal family; 0= both countries do not belong to the same legal family; legal families are Common Law, Scandinavian Law, German Law and French Law Countries. The weighting matrix is row-standardized.	Own Assessment
Sector competition	Index of Entry Regulation provided by the OECD	Conway and Nicoletti (2006){, 2006 #50} (2006) (2006) (2006) (2006)
Alternative Party Variables	1) Number of governments belonging to the same party family and who have privatized in the respective sector. 2) Number of countries that have privatized the respective sector.	Own Assessment
EU Sector Liberalizations	Dummy variables for the most important EU regulations in the telecommunications, postal and railway sector. a) Telecommunications sector: Green Paper in 1987 (COM/87/290), Directive 96/19/EC in 1996, Directive 2002/21/EC in 2002; b) Postal Sector: Green Paper in 1991 (COM/91/476), Directive 97/67/EC in 1997, Directive 2002/39/EC in 2002; c) Railway Sector: Directive 91/440/EEC in 1991, Directive 96/48/EC in 1996. The dummy variables equal 1 in the year of adoption of a specific legislation and in the years after the adoption and when a company is operating in an EU-member country, otherwise 0.	Own Assessment

(← p. 633)

Table A2: Spatial Interdependencies in Privatization Policy

Dependent variable: Public Entrepreneurship in the Public Utility Sectors					
Independent variables	(I) Alternative Weights α=1 and β=1	(II) Alternative Weights α=.875 and β =.75	(III) Linear Trend	(IV) Period Effects	(V) Sector Competition
Public Entrepreneurship$_{t-1}$	.850*** (.016)	.890*** (.015)	.850*** (.030)	.844*** (.016)	.836*** (.017)
Openness	.0001 (.0003)	-.0003 (.0003)	.0001 (.0003)	7.46e-05 (.0003)	4.20e-05 (.0003)
GDP per capita	-2.73e-07 (1.23e-06)	6.22e-07 (1.04e-06)	-5.49e-07 (1.28e-06)	-5.23e-07 (1.18e-06)	-9.08e-08 (1.24e-06)
GDP growth	.0002 (.001)	.0002 (.0009)	.0001 (.001)	.0007 (.001)	.0002 (.001)
Deficit	.001* (.0008)	.0008 (.0007)	.002 (.0008)	.002 (.0008)	.001 (.0008)
Constitution	.020** (.008)	.008 (.007)	.020** (.008)	.022*** (.008)	.020** (.008)
EU Membership	-.015* (.009)	-.008 (.008)	-.015 (.009)	-.015 (.009)	-.018* (.010)
Leftist Government	7.15e-05 (6.48e-05)	2.00e-05 (5.51e-05)	7.87e-05 (6.55e-05)	6.63e-05 (6.35e-05)	7.96e-05 (6.61e-05)
Productivity	-4.35e-09 (5.16e-08)	-8.81e-09 (4.51e-08)	-1-17e-08 (5.25e-08	1.30e-08 (5.01e-08)	-8.46e-09 (5.19e-08)
Cross Sector Diffusion	.010 (.021)	-.009 (.018)	.013 (.022)	.010 (.019)	.012 (.022)
Diffusion -Trade Relations	.090** (.042)	.087** (.037)	.092*** (.042)	.117*** (.038)	.085** (.043)
Diffusion - Ideological Closeness	.018 (.042)	.027 (.037)			
Sector Competition					.004* (.002)
Log Likelihood/R2	10664.01***	12175.03***	10670.63***	10428.91***	10481.57***
N	1169	1169	1169	1169	1138

Note: The fixed effects are suppressed to conserve space; standard errors in parentheses; *** z, p<0.01, ** z, p<0.05, * z, p<0.1; Note that low values for the dependent variable indicate low levels of public entrepreneurship and therefore extensive privatization.

(← p. 634)

Table A3: Spatial Interdependencies in Privatization Policy

Dependent variable: Public Entrepreneurship in the Public Utility Sectors				
Independent variables	(I) Legal System	(II) Three Spatial Lags	(III) Alternative Party variable	(IV) EU Sector Liberalizations
Public Entrepreneurship$_{t-1}$	.851*** (.015)	.850*** (.016)	.852*** (.016)	.831*** (.016)
Openness	.0001 (.0003)	.0001 (.0003)	.0001 (.0003)	-6.44e-05 (.0003)
GDP per capita	-3.35e-07 (1.22e-06)	-2.84e-07 (1.23e-06)	-2.89e-07 (1.23e-06)	-8.67e-07 (1.17e-06)
GDP growth	.0002 (.001)	.0002 (.001)	5.89e-05 (.001)	.0006 (.001)
Deficit	.001* (.0008)	.001 (.0008)	.001 (.0008)	.002** (.0008)
Constitution	.020** (.008)	.020** (.008)	.020** (.008)	.020** (.008)
EU Membership	-.015 (.009)	-.015* (.009)	-.013 (.009)	-.017* (.009)
Leftist Government	7.03e-05 (6.46e-05)	7.23e-05 (6.48e-05)	6.26e-05 (7.87e-05)	3.40e-05 (7.82e-05)
Productivity	-8.07e-09 (5.00e-08)	-2.78e-09 5.18e-08	-1.17e-08 (4.98e-08	2.93e-08 (5.36e-08)
Cross Sector Diffusion	.009 (.021)	.011 (.022)	.010 (.021)	.039 (.021)
Diffusion -Trade Relations	.113*** (.043)	.101* (.054)	.102*** (.031)	.104*** (.027)
Diffusion - Ideological Closeness		.016 (.043)		
Diffusion - Institutional Similarity	-.009 (.023)	-.008 (.024)		
Log Likelihood/R2	10589.73***	10151.04***	10837.98***	10847.66***
N	1169	1169	1166	1169

Note: The fixed effects are suppressed to conserve space; standard errors in parentheses; *** z, p<0.01, ** z, p<0.05, * z, p<0.1; Note that low values for the dependent variable indicate low levels of public entrepreneurship and therefore extensive privatization.
MODEL III:
No of governments belonging to the same party family and who have privatization in the respective sector .0005(.001)
No of countries that have privatized the respective sector -.0007(.0009)
MODEL IV:
EU Telecom 1987 -.017 (012); EU Telecom 1996 -.028**(.014); EU Telecom 2002 .025(.013); EU Post 1997 .014(.012); EU Post 2002 -.008(.013); EU Railway 1991 -.019(.012); EU Railway 1996 .043***(.013);

(← p. 635)