Peña-Miguel, N., & Cuadrado-Ballesteros, B. (2020). Political Determinants of Privatisation Reforms: A Comparative Analysis in Europe. **Political Studies Review** 18(2): 204-227. Copyright © 2019 The Author(s) published by SAGE. https://doi.org/10.1177/1478929919868071.

Political determinants of privatisation reforms: A comparative analysis in Europe

ABSTRACT

This paper analyses the effect of political factors on privatisation reforms and considers the practical implications of such policy from a comparative point of view in Europe. According to a sample of 25 countries in 1995–2013, our findings suggest that privatisation reforms could be impeded by veto players, fragmentised governments, and political competition. These reforms tend to be used less by politicians who have been in power for a long period of time, and implemented at the start of an office term, except in the case of right-wing governments. Our findings support greater privatisation in concentrated conservative governments, especially when the next elections are about to be held.

Keywords: privatisation; policy analysis; political economy; comparative policy.

1. Introduction

Traditionally, privatisation has been defined as the partial or complete transfer of functions from the public to the private sector (Butler, 1991), addressing a wide range of policies designed to reduce the scope, limit the functions, and generally weaken the influence of the public sector (Vickers and Wright, 1989). Such transfers of functions have occurred in different forms, however, leading to different definitions of privatisation. This paper uses the "material" approach of Obinger et al. (2016): privatisation is the sale of the shares of a state-owned enterprise (SOE) to private investors, resulting in a transfer of ownership or voting rights from the state to the private sector[1].

Privatisation reforms began in the 1970s with the Thatcher Government in the UK, due to the government's belief in the greater efficiency of the private sector (Parker and Saal, 2003). Following the UK, other countries implemented privatisation programmes, but these programmes were not homogeneous and depended on diverse factors, such as institutional, political, financial and economic factors (Obinger et al., 2016). Privatisation has sometimes also been required by external forces, such as international organisations (e.g. World Bank, the International Monetary Fund) as a condition for the receipt of grants to finance an economic adjustment programme (Gonzalo et al., 2003). In other cases, privatisation has been encouraged as part of a programme of market liberalisation, as in the case of the Washington Consensus during the 1980s and 1990s, or the market reforms implemented by the European Commission for the sake of European integration (Clifton et al., 2006).

[1] The state includes the central or local government, ministries, bodies of the public administration, and companies where the central or local government acts as a shareholder; the private sector refers to private individuals and economic entities with private shareholders. This definition does not take into account other intermediate forms, such as reversing privatisation (Warner, 2008) or remunicipalisation (Cumbers and Becker, 2018).

Among the numerous reasons given when explaining privatisations, this paper focuses on political factors. It specifically deals with the design of government and privatisation, specifically in Europe. As privatisation decisions are taken by politicians, such reforms depend on the incentives of the political leadership and public managers. Adopting a political economy approach (Opper, 2004; Bortolotti and Pinotti, 2003; Li and Xu, 2002), we could therefore expect that political conditions (e.g. electoral competition, political ideology, veto players, electoral cycles, and so on) affect privatisation decisions.

Bienen and Waterbury (1989) were (among) the first scholars to explain privatisation reforms from a political economy viewpoint. They suggested factors to explain privatisation in developing countries during the 1980s, such as ideological rationales, dominant coalitions, and an interest in the maintenance of power. From that moment, a substantial amount of literature has explained privatisation reforms through the political conditions, but there is a lack of agreement on the driving factors of privatisation from the empirical point of view.

Some scholars found that right-wing governments had a greater predisposition to privatise (e.g. Bortolotti et al., 2001; 2003; Belke et al., 2007; Bortolotti and Pinotti, 2003; 2008; Schneider and Häge, 2008; Schmitt, 2013; Breen and Doyle, 2013; Belloc et al., 2014; Obinger et al., 2014; 2016), but this is not corroborated by others (e.g. Opper, 2004; Schmitt, 2011; Fink, 2011; 2017; Roberts and Saeed, 2012). Some studies noted that majoritarian political systems positively affect privatisation (e.g. Bortolotti and Pinotti, 2003; 2008), but others do not support this (e.g. Opper, 2004; Zohlnhöfer et al., 2008). Some scholars found negative effects from veto players on privatisation (Opper, 2004; Breen and Doyle, 2013), but others did not find relevant evidence (Li and Xu, 2002; Belke et al., 2007; Roberts and Saeed, 2012). The electoral cycle is also relevant in some studies for explaining privatisation (e.g. Opper, 2004; Breen and Doyle, 2013), and not relevant in others (Bortolotti et al., 2003).

This paper contributes to the literature on the political economy of privatisation, whose results are inconclusive. Most of cited studies are also focused on the OECD countries, developing and transition economies, or mixed samples of developed and developing countries; we add evidence in the European context, to explain privatisation through political conditions. Others are focused on specific sectors, such as telecommunications or public utilities, while this paper considers all activity sectors, and also extends the period to 2013, while most of previous studies have focused on the 1980s and 1990s. This is essential since privatisation reforms are again a subject of debate, after the Troika pushed through privatisation programmes in EU countries suffering from financial problems (Clifton et al., 2018). The context is also worth studying because most of the countries in the OECD's top-ten lists of exponents of privatisation are European countries (OECD, 2009).

2. The political economy of privatisation: Literature review

The major driving force behind institutional changes (Demsetz, 1967), such as privatisation is the aim of efficiency gains. The political theory of institutional change explains the existence of institutions as the result of the interests of two actors, namely political decision-makers and major interest groups, who demand public good and services. From the public choice perspective, political decision-makers not only serve the general public, but also pursue self-interested actions (Buchanan et al., 1980); they are usually motivated by opportunistic or partisan reasons, and so there are several characteristics that affect institutional changes in general, and particularly privatisation.

Adopting a political economy approach (like Opper, 2004; Bortolotti and Pinotti, 2003; Li and Xu, 2002), we could expect that political conditions affect decisions regarding privatisation. Such political conditions may involve government partisanship, the discretionary power of decision-makers, the time left to the next elections, and the existence of veto players. These political factors have been already analysed in the privatisation literature, in different contexts and sectors, but there is a lack of agreement on the empirical results.

On the one hand, several scholars have noted a greater predisposition towards the privatisation of right-wing governments in different contexts: Bortolotti and Pinotti (2003) in 21 industrialised countries over 1977-1999; for the same period, Bortolotti et al. (2003), with a sample of 34 developed and developing countries; Bortolotti et al. (2001) on a sample of 49 developed and developing countries in 1977-1996; Li and Xu (2002) in highly democratic countries in the 1990s; Belke et al. (2007) for 22 OECD countries in 1990-2001. Breen and Doyle (2013) found that left-wing governments tend to resort to privatisation to a lesser extent than the right-wing, using a sample of 77 developing countries over 1988-2008; and, Zohlnhöfer et al. (2008), Schneider and Häge (2008), Obinger et al. (2014) and Schmitt (2013) found a similar result in the OECD context.

Some scholars have not corroborated these findings. For example, Roberts and Saeed (2012) suggest that right-wing governments are not necessarily associated with privatisation in Eastern Europe. Opper (2004) restricted the greater predisposition toward privatisation of right-wing governments to large-scale privatisation and to the Central and Eastern transition economies. Schmitt (2011) did not find statistical relevance for political ideology variables in the case of telecommunication sectors in the OECD. Zohlnhöfer et al. (2008) suggested that partisan differences did exist in the privatisation implemented during the 1980s, but they disappeared in the 1990s. More recently, Schmitt and Zohlnhöfer (2017) showed that, for government interventionists in advanced democracies, partisan differences only really make themselves felt after one term in office.

As well as ideology, other political conditions have been analysed, although to a lesser extent. One is the strength of the government. Bortolotti and Pinotti (2008) demonstrated delays to privatisation in more fragmented democracies in 1977-2002. Similarly, Bortolotti and Pinotti (2003) noted that privatisation is positively associated with majoritarian political systems in industrialised countries in 1977-1999. Conversely, Zöhlnhöfer et al. (2008) found that minority governments in the EU carried out a greater number of privatisation proceeds than governments that commanded a parliamentary majority; but they did not find such a relationship in OECD countries. Opper (2004) did not find evidence to support such an association in Central and Eastern transition economies during the 1990s.

Privatisation has been also analysed using an electoral cycle approach. Opper (2004) noted that large-scale privatisation is more likely to occur at the beginning of a term than during the remaining years of a term. Conversely, Bortolotti et al. (2003) and Roberts and Saeed (2012) did not find enough evidence to support a relationship in mixed samples of developed and developing countries. Obinger et al. (2014) suggested that, for the OECD, long lasting cabinets are better able to realise comprehensive privatisation than cabinets in office for a shorter period of time.

The role of veto players has also been analysed in the privatisation literature, but there is also little agreement. Opper (2004) noted that an increasing number of political veto players impeded progress in privatisation in Central and Eastern transition economies over 1994-2000; and, similarly, Breen and Doyle (2013) found that the number of veto players hampers government action on privatisation in developing countries, but only in the period 2000-2008. Belke et al. (2007) noted that EU countries with many veto players are plagued by a *status quo* bias, which prevents the privatisation issue from being addressed for a longer period of time; but, the results were not significant in the OECD sample. Li and Xu (2002) did not find evidence to support such an effect in telecommunications sector in democratic countries.

3. Research hypotheses

As privatisation policies are decided by politicians, such decisions depend on the incentives of the political leadership for privatisation (Börner, 2004), so its success is highly dependent on the political features (Vickers and Yarrow, 1991). This paper focuses on several characteristics of the political system, the electoral period, and characteristics of the chief executive, to explain privatisation decisions.

3.1. The role of veto players

Firstly, the role of the regime type (parliamentarism vs. presidentialism), legislature type (unicameral vs. bicameral) and party system (two-party vs. multi-party) is taken into account through the concept of *veto player* (Tsebelis, 1995): veto players are individual or collective actors whose agreement is required to change the status quo (i.e. a change in policy). The core idea is that veto players restrict the use of a government's discretionary power, acting as a checking and disciplinary mechanism. This issue comes from the idea of "checks and balances" in the American Constitution (Lijphart, 1984).

The main conclusion of Tsebelis (1995) is that the potential for policy change decreases with the number of veto players, the lack of congruence, and the cohesion of these players. Veto players *per se* do not produce any particular political result; they just slow down or facilitate policy changes (Tsebelis, 2000).

The veto player theory is a framework for the analysis of the effects of political institutions on policy change. There are a large number of studies that empirically corroborate the role of veto players, but most are focused on budgetary changes (Bräuninger, 2005; Tsebelis and Chang, 2004), spending patterns (Huber et al., 1993; Bawn, 1999), tax burdens (Hallerberg and Basinger, 1998), capital investment (MacIntyre, 2001), or specific policies regarding pensions (Bonoli, 2001), health care (Immergut, 1990), or electric utilities (Heller and McCubbins, 2001), among others (for more details see Hallerberg, 2010).

Nevertheless, there is little empirical evidence in the case of privatisation policies. Opper (2004) found that veto power may delay large-scale privatisation in Central and Eastern transition economies; and Breen and Doyle (2013), had similar results in developing countries. Accordingly, we propose the following hypothesis, which will be tested to determine the role of veto players in the privatisation decisions of EU governments:

H1. The strength of veto players negatively affects privatisation reforms.

3.2. Duration of the electoral mandate

Barber and Sen (1986) observed that parties tend to address budgetary discipline in the years immediately following their election, because voters may have a negative opinion of controversial policies. Privatisation could be considered a controversial reform, with defenders and detractors, particularly due to its socio-economic consequences. Despite the positive effects in terms of efficiency and growth (Bortolotti et al., 2001; 2003;

Schmitt, 2011; 2013; Boubakri et al., 2009; Roberts and Saeed, 2012; Belke et al., 2007; Bortolotti and Pinotti, 2008; Schneider and Häge, 2008), the general public has a more critical and pessimistic view of privatisation. It has been empirically found that privatisation can have negative consequences in terms of unemployment, inequality and corruption (Cuadrado-Ballesteros and Peña-Miguel 2018; Knott and Miller 2006; Overman 2016; Peña-Miguel and Cuadrado-Ballesteros, 2019).

Considering that privatisation is a controversial reform, it could be expected to be implemented in the first years of the electoral term; if elections are close to being held, privatisation may damage the popularity of the incumbents in polls. Breen and Doyle (2013) supported the assertion that governments are cognisant of the damaging political after-effects of privatisation and so, in an election year, will reduce privatisation reforms. Opper (2004) noted that large-scale privatisation in transition economies tended to be implemented at the beginning of the mandate. Accordingly, we propose the following hypothesis:

H2. The proximity of elections negatively affects privatisation reforms, while they tend to be implemented in the years immediately after the elections.

Further, not only the proximity of elections but also the number of years that politicians are in term may affect privatisation decisions. Warner and Hebdon (2001) observed that politicians who have been in power for longer periods of time also tend to make greater use of restructuring processes in local governments as a result of their accumulated experience. Similarly, Obinger et al. (2014) noted that long-lasting cabinets are better able to realise comprehensive privatisation reforms than cabinets that have been in office for a shorter period of time. According to these arguments, we could expect that:

H3. Privatisation reforms tend to be implemented by governments that have been in power for longer periods of time.

3.3. Characteristics of the chief executive

Traditionally, lower-income groups tend to support a larger and more active state that equalises the outcomes of the market, while higher-income groups tend to support limited intervention by the state and trust in the market. From the partisan perspective, governments primarily enact policies and reforms that are consistent with the preferences of their core constituencies. Leftist parties are thus focused on the first segment and rightist parties are focused on the second segment of the electorate.

In such a situation, each party needs the support of the middle-class to win the election. In allocating the shares of privatised companies to the middle-class, a right-wing party makes those voters averse to the policies of the left, such as nationalisations (Engler and Zohlnhöfer, 2018), which leads them to vote with the right in the next election (Biais and Perotti, 2002). In other words, their rationale is the creation of a middle-class of *small capitalists* who favour market-oriented policies and thus right-wing parties at the polls (Vickers and Yarrow, 1988). Consequently, it could be expected that right-wing governments tend to have a greater predisposition towards privatisation than left-wing ones. Indeed, privatisation became relevant worldwide in the 1980s, when the Conservative government of Thatcher in the UK and that of Reagan in the USA privatised important SOEs, especially in the telecommunication and energy sectors.

Some scholars have noted that the greater orientation towards privatisation by right-wing governments was common only in the first stage of the reforms, but that, after the 1990s, privatisation was introduced by both right- and left-wing governments (Belloc et al., 2014). Indeed, several studies do not find that partisan differences matter in interventionist policies in general, and privatisation in particular (Zohlnhöfer et al., 2017). Schmitt and Zohlnhöfer (2017) suggest that partisan differences only really make themselves felt after about one term in office, and such differences depend on globalisation and the extent of economic problems. Further, there are real examples in history, such as in France, Spain or Italy, where privatisation programmes were promoted initially by conservative governments but were continued and accelerated by the successive socialist and liberal governments (Cioffi and Höpner, 2006)[2].

Given the inconclusive results, we study the predisposition to privatise in the EU by empirically testing the following hypothesis:

H4. Privatisation reforms tend to be implemented by right-wing governments to a greater extent than by those with other ideologies.

The power of the government may affect privatisation reforms because of the diversity of opinions on the subject. Governments that need the legislative support of other parties and face substantial competition may find it difficult to achieve consensus regarding the reforms to be made and the most appropriate way to approach them. From a public choice perspective (Buchanan et al., 1980), the extent to which politicians can appropriate political rents is determined by the degree of discretion that they enjoy in the political system (Opper, 2004). More specifically, it is easier for politicians to pursue potential rents from the sales of SOEs when they hold more discretionary power

[2] For instance, in France, the first wave of reform took place under the conservative Minister Balladur in 1986–1987, but the successive socialist government continued and accelerated the privatisation process of SOEs. In the case of Spain, although the main privatisation programme took place during the 1990s, promoted by the conservative People's Party (PP) government, the first wave of reforms of public management was carried out by the Spanish Socialists (PSOE), when they came to power in 1982, as a way to finish with the old state sector of Franco dictatorship (Clifton et al., 2011). Among these reforms were important privatisations in sectors such as the automotive industry, the steel industry, and the shipbuilding industry. In Italy, privatisation was also relevant during the 1990s, and one of the fervent proponents of such reform was the leader of the Party of Democratic Socialism (Cioffi and Höpner, 2006).

in decision making. The power of the government thus determines the degree of discretion in decision making, including the sale of SOEs.

Accordingly, we propose the following hypothesis:

H5. The power of the government against other parties positively affects privatisation reforms.

4. Methodology

4.1. Sample

To test the effect of political factors on privatisation reforms, we selected a sample of 25 European countries for the period (see Figure 1). The European context is appropriate, since privatisation reforms have returned as a subject of debate in recent years. The Troika, made up of the European Commission (EC) and the International Monetary Fund (IMF), has pushed through privatisation programmes in EU countries that suffer financial problems, such as Greece, Ireland, Portugal, Spain and Italy.

Information about privatisation processes was obtained from the Privatisation Barometer website[3], which is the most representative privatisation data, used by the OECD, the World Bank, and the IMF (Son and Zohlnhöfer, 2019). The Privatisation Barometer was launched in 2003 by Fondazione Eni Enrico Mattei (FEEM), which is a non-profit, nonpartisan research institution. Data on political factors (i.e. the political system, the electoral process, and chief executive characteristics) was obtained from the Database of Political Institutions 2015 (Cruz et al., 2016) and the Comparative Political Data Set (Armingeon et al. 2018). The rest of the variables, including the budgetary and

[3] http://privatizationbarometer.com/

socio-economic factors used as control variables, were obtained from the OECD and World Bank databases.

4.2. Variables

Numerous indicators have been put forward to represent privatisation; while technically and conceptually all indicators seem to be reliable, they represent different aspects of the phenomenon (Son and Zohlnhöfer, 2019). This paper uses the "material" approach of Obinger et al. (2016), referring to privatisation as the transfer of ownership or voting rights from the state to the private sector. Accordingly, we use data about privatisation from the Privatisation Barometer website, which has become the most representative privatisation data, beyond data from the OECD dataset (Son and Zohlnhöfer, 2019), which stopped producing indicators on privatisation from 2001.

There are also other indicators focused on public ownership (e.g. ETCR and Schneider et al.'s indicators) and turnover (e.g. REST database), however, we found they have some shortcomings: the former focuses on non-manufacturing sectors, while we are interested in considering all activity sectors. The latter considers not only the "material" definition of privatisation, but also the legal transformation from departmental agency to public corporation or from public corporation to SOEs (Son and Zohlnhöfer, 2019).

We used data on the Privatisation Barometer to create two privatisation indicators, *Deals* and *Proceeds* (Bortolotti et al., 2001; Bortolotti et al., 2003; Zohlnhöfer et al., 2008). The former refers to the number of privatisations (both partial and total) in absolute terms in each country in each year; and the *Proceeds* variable represents the total revenue (in current US dollars) obtained from all those transactions (both partial and total), as a percentage of GDP (in current US dollars).

The last variable represents the willingness of governments to privatise state-owned enterprises, but also how the market values the sale of state-owned enterprises. It captures the economic relevance and financial success of the privatisation transactions in a country. It is important to include both variables because only considering the revenue of those reforms would overestimate the impact of privatisation when just a few large state-owned enterprises are involved (Bortolotti et al., 2001), and only considering the number of transactions would underestimate the economic effect of privatisation. This can be seen in Figure 1 which shows the average for the analysis period (1995-2013) of both variables; Poland shows the largest average number of privatisations (*Deals*), but Portugal shows the highest mean value of *Proceeds*.

<Insert figure 1 about here>

The political factors represent different characteristics of the government, the political system and the electoral system:

- Veto players (*Checks*): in autocratic countries, this variable equals one, but our sample does not contain autocratic countries. In that case, *Checks* is incremented by 1 if there is a chief executive, it is incremented by 1 if the chief executive is competitively elected, and it is incremented by 1 if the opposition controls the legislature. In presidential systems, *Checks* is incremented again by 1 for each chamber of the legislature unless the president's party has a majority in the lower house and a closed list system is in effect (implying stronger presidential control of their party and therefore of the legislature) and for each party coded as being allied with the president's party and having an ideological orientation closer to that of the main opposition party than to that of the president's party. In parliamentary systems, *Checks* is incremented by 1 for every party in the government coalition as long as the parties need to maintain a majority, and for every party in the government coalition that has a position on economic issues (right–left–centre) closer to the largest opposition party than to the party of the executive.

- Duration of the mandate (*Years_office*): indicates the number of years that the chief executive has been in office.
- Pending mandate (*Years_left*): this indicates the number of years left for the chief executive in the current term.
- Executive elections (*Elections*): this is a dummy variable that takes the value 1 if there was an executive election in this year and 0 otherwise.
- Political ideology (*Right*): this variable is represented by the share of parliamentary seats held by right-wing parties in government, weighted by the number of days in office in a given year. "Right" denotes liberal and conservative parties.
- Political competition (*Competition*): this is represented by the probability that two deputies picked at random from the legislature will be of different parties.
- Political strength (*Strength*): this is represented by the fraction of seats held by the government.

Finally, the results are controlled by some budgetary and socioeconomic factors (Bortolotti et al., 2001, 2003): *Balance* is the general government deficit (% GDP); *FDI* is the foreign direct investment and shows the net inflows in the reporting economy from foreign investors divided by GDP; *Growth* refers to the GDP (market prices) growth rate; and *EU* is a dummy variable that takes the value 1 in the year before the European Union accession of each country.

4.3. Model and analysis technique

Taking all variables described previously, the analysis empirically estimates the following models for the sample described above:

$$Deals_{it} = \beta_0 + \alpha_1 Checks_{it} + \alpha_2 Yearsoffice_{it} + \alpha_3 Yearsleft_{it} + \alpha_4 Exeelections_{it} + \alpha_5 Right_{it} + \alpha_6 Competition_{it} + \alpha_7 Strength_{it} + \beta_1 Balance_{it-1} + \beta_2 FDI_{it-1} + \beta_3 Growth_{it-1} + \beta_4 EU_{it-1} + \sum_{j=5}^{23} \beta_j Year_t + \eta_i + \nu_{it} \quad \textbf{(1)}$$

$$Proceeds_{it} = \beta_0 + \alpha_1 Checks_{it} + \alpha_2 Yearsoffice_{it} + \alpha_3 Yearsleft_{it} + \alpha_4 Exeelections_{it} + \alpha_5 Right_{it} + \alpha_6 Competition_{it} + \alpha_7 Strength_{it} + \beta_1 Balance_{it-1} + \beta_2 FDI_{it-1} + \beta_3 Growth_{it-1} + \beta_4 EU_{it-1} + \sum_{j=5}^{23} \beta_j Year_t + \eta_i + \nu_{it} \quad \textbf{(2)}$$

In each model, sub-indexes *i* and *t* refer to the country and year, respectively; $Year_t$ are j dummy variables that have the value one in year t (1995–2013). The error term has been broken down into two parts: η_i refers to the unobservable heterogeneity (i.e. the characteristics of each country, which are different from other countries but invariant over time), and ν_{it} is the classical disturbance term.

The two models are estimated using econometric techniques for panel data. The fixed or random effects are the traditional estimators for panel data models, but both require homoscedasticity and no serial correlated errors. We thus first test these conditions using the Breusch–Pagan test and the Wooldridge test, respectively. The p-values obtained are lower than 0.05, so we must reject the null hypotheses of homoscedastic errors and no serially correlated errors. Therefore, these estimators are not appropriate in this case.

Secondly, endogeneity problems additionally appear in the three models for the three reasons noted by Wooldridge (2010): (i) the use of proxy variables to represent concepts that are difficult to represent, such as most of the political factors, because they are not directly observed; (ii) the possibility that the results could additionally be controlled by other variables (e.g. indebtedness, inflation, education, unemployment, the GINI index, globalisation, etc.), but they have been omitted due to multicollinearity problems with other control variables; and (iii) the existence of reverse causality between the dependent variable (privatisation) and most of the control variables, such as economic development, FDI, and public deficits.

Accordingly, endogeneity should be addressed using instrumental variable (IV) methods. In the presence of heteroscedasticity (as is the case), the conventional IV estimator is consistent but inefficient (Baum et al., 2003). It is therefore necessary to use another IV method, such as the dynamic panel estimator (Arellano and Bond, 1991), which overcomes such a limitation. Specifically, we use the two-step *system* estimator of Arellano and Bover (1995), which augments the traditional estimator, the *difference* estimator (Arellano and Bond, 1991). The latter is consistent when the sample size is large, but it has poor small-sample properties, and the *system* estimator is able to solve this problem (Arellano and Bover, 1995; Blundell and Bond, 1998).

The *system* estimator uses the lagged values of endogenous and predetermined variables as instruments to correct endogeneity. It has been demonstrated that these instruments are uncorrelated with the error term (Arellano and Bond, 1991), and that they usually contain better information on the current value of the variable than outside instruments. This approach may lead to a proliferation of instruments, however, and the results could be biased. Accordingly, the instrument validity is tested by: (i) the Arellano–Bond test for AR(2) in first differences, under the null hypothesis of no serial correlation between the error terms; and (ii) the Hansen test of over-identification restrictions, under the null hypothesis that the over-identifying restrictions are valid. The results of these tests are shown at the bottom of the tables of results.

5. Results

5.1. Descriptive analysis

Table 1 shows the descriptive statistics of all the variables previously described. Regarding the privatisation variables, the mean value of *Deals* suggests that there were 3 or 4 transactions on average during the period of analysis, although there are large differences; for instance, the maximum value is 55 transactions in Poland in 2010. The mean value of *Proceeds* is 0.0092, indicating that privatisation revenues are about 0.92% of the GDP, but there are also relevant differences, reaching 16.86% in Portugal in 1997, when the government sold, among other things, part of *EDP Electricidade de Portugal* for US$2033.4 million. Thus, although Poland is the country with the largest number of privatisation transactions, Portugal exceeds it with revenues obtained from privatisation reforms. These differences can also be seen in Figure 1, in which the mean value of *Deals* and *Proceeds* is represented by country.

Table 1 also shows the descriptive statistics of the political factors. The most relevant results can be summarised as follows: over the period of analysis, 37 executive elections were held; governments were in office for almost four years, although in some cases, such as the PCS in Luxembourg, this value reaches 18, the maximum value in the sample. Right-wing parties held 21.31% of the parliamentary seats. In addition, the probability that two deputies picked at random from the legislature will be from different parties is 0.7127 on average; and the government holds about 55.36% of seats, on average, reaching 79.72% in the case of France between 1995 and 1997.

<Insert Table 1 about here>

Table 2 shows the bivariate correlations between all independent and control variables entered into the models, with the aim of investigating the existence of multicollinearity problems. In general, the variables are weakly correlated; in descriptive terms, most of the correlation coefficients are less than 0.4, which is the accepted threshold for multicollinearity problems (Wooldridge, 2010).

<Insert Table 2 about here>

5.2. Empirical analysis

Table 3 shows the estimated effects of the political factors on privatisation reforms, such as were proposed in Models 1 and 2. The role of veto players, represented by *Checks*, is relevant to the explanation of both *Deals* and *Proceeds*, being statistically relevant at the 95% confidence level. In both cases, we find negative coefficients, which means that privatisation reforms could be impeded by political veto players. This result supports hypothesis H1.

The variable *Years_left* has a positive impact on dependent variables, being statistically relevant at 99%. These findings suggest that privatisation reforms tend to be implemented at the start of an office term, and they tend to be reduced when the number of years left for the chief executive in the current term is increased. The variable *Exe_elections* is significant in explaining *Deals*, with a positive effect, which suggests that the number of privatisation reforms increases during election periods; although, *Exe_elections* it is not relevant in Equation 2. However, this dummy does not take into account the exact date of the election; it takes the value 1 if an election has been held during that specific year, independently of the month. Then, linking the effect of this variable with the variable *Years_left*, we could think that privatisations tend to be implemented immediately after the election, including the first months after that; while these reforms tend to be avoided before the election, probably because of the negative view of citizens about privatisations. Then, these findings support the hypothesis H2.

The number of years that the chief executive has been in office affects *Deals* and *Proceeds* negatively, and coefficients are relevant at the 99.9% level. This indicates that privatisation reforms tend to be implemented by "young" governments and are used less by politicians who have been in power for a long period of time. This does not support the hypothesis H3.

The empirical results do not demonstrate the relevance of the political ideology variable (*Right*). These findings suggest that privatisation reforms tend to be implemented by governments with different ideologies, not just rightist ones, as the literature has traditionally supported, as does our hypothesis H4. In the case of *Competition*, it exerts a negative impact on *Deals* and *Proceeds*, being statistically relevant at 99.9% and 90%, respectively. This means that privatisation reforms could be impeded when political competition increases, due to the possibility that it could be more difficult to arrange an agreement between different political forces. This result is according to Hypothesis H5, although *Strength* is not relevant in explaining privatisation reforms.

Regarding control variables, neither *Balance* nor *FDI* are statistically relevant, while *Growth* exerts a negative impact on *Deals*, indicating that governments with lower levels of economic growth tend to privatise more SOEs, maybe as a way to improve economic development. *EU* is relevant in both equations, and it shows negative coefficients, which means that privatisation reforms are reduced after accession to the EU.

<Insert Table 3 about here>

5.3. Robustness checking

This section checks the robustness of the previous results for those variables that represent the electoral moment, the strength of the government, and the political ideology, since they are less relevant in previous analyses.

More specifically, Table 4 shows the results for Models 1 and 2 by changing *Exe_elections* to *Parl_elections*, which is a dummy variable that takes 1 if there was a parliamentary election in that year and 0, otherwise. It is essential to take into account not only the executive elections, since there are so many parliamentary systems in the sample, in which Parliamentary elections are important. *Parl_elections* variable impacts positively on *Deals* and *Proceeds*, being statistically relevant at 99.9% and 90%, respectively. These findings indicate that privatisation reforms tend to be implemented in the year that a parliamentary election is hold. Again, linking this effect with the results obtained for *Years_left* (positive coefficients) our findings suggest that privatisations tend to be implemented immediately after the election (including the year in which the elections are held), instead of being implemented in the years previous to the election.

The rest of the variables are the same as were initially described, and the results are very similar to those obtained previously; only *Checks* has lost relevance in the first equation, and *EU* has lost relevance in both equations; while *Balance* has become significant in both models, impacting negatively, which means that privatisation reforms tend to be implemented by governments that suffer larger deficits.

<Insert Table 4 about here>

Table 5 shows again the results for Models 1 and 2 but here the power of the government is represented by an index that refers to the level of fragmentation/concentration of the government, namely *Herfindahl*. It is calculated as the sum of the squared seat shares of all the parties in the government, and it takes values between 0 and 1, from the least to the most concentrated (i.e. from the most to the least fragmented). Herfindahl index is highly correlated with *Competition* and *Strength*, so they have been replaced by *Herfindahl* variable. It has a positive impact on *Deals* and *Proceeds*. The positive coefficients suggest that privatisation reforms are more used when the Herfindahl index rises, which represents concentrated governments (less fragmented governments). This is according to findings obtained for *Competition*. The results of the rest of the variables are similar to those obtained previously.

<Insert Table 5 about here>

Finally, we check the robustness of the political ideology, by changing the variable *Right* to *Ideology*, which takes value 1 to represent right-wing governments (including Christian democratic and conservative parties), value 2 represents the centre, and value 3 refers to left-wing governments (communist, socialist, or social democratic governments). The results are shown in Table 6 (Equations 1 and 2). Further, we enter two new variables, namely *Right*Years_left* and *Right*Herfindahl*, in Equations 3 and 4. They are the interaction terms between *Right* and *Years_left* and *Herfindahl*, respectively. These terms represent the moderating effect of the political ideology on the link between the privatisation reforms and the other two variables, namely electoral period and the fragmentation of the government.

The *Ideology* variable is not statistically relevant *per se* in Equation 1 nor 2. Nevertheless, Equations 3 and 4 resulted in interesting findings, for the interaction terms. Political ideology moderates the effect of *Years_left* and *Herfindahl* on privatisation variables. More specifically, the interaction term *Right*Years_left* is negative and statistically relevant. This means that right-wing governments tend to carry out privatisation reforms, especially at the end of their mandate, when the election period is approaching. Governments with other ideologies tend to implement the most relevant privatisation reforms when the number of years left for the chief executive is increased (see the positive effect of *Years_left* on Proceeds in Equation 4).

*Right*Herfindahl* impacts positively on *Deals* and *Proceeds*. This means that right-wing governments tend to implement privatisation reforms especially when most of the components of the government have such an ideology; while the strength of governments with other ideologies is not relevant in explaining privatisation reforms (see *Herfindahl* in Equations 3 and 4; it is not statistically relevant).

<Insert Table 6 about here>

5.4. Discussion of the results

Firstly, our empirical results show that several political factors may affect privatisation decisions.

We show the relevant role of veto players in a government's decision-making process. Our findings suggest that privatisation reforms could be impeded by political veto players and an unstable political environment. These results extend (for the EU) the previous findings obtained by Opper (2004) and Breen and Doyle (2013) who were focused on less developed countries. Veto players may restrict the full use of a government's discretionary power, and force consensus building and reciprocal disciplining, bringing in the concerns of various interest groups (Opper, 2004).

The electoral period is also relevant in explaining privatisation reforms in the EU. Our findings suggest that privatisation reforms tend to be implemented at the start of the office term. It seems that politicians prefer to start privatisation at the beginning of their term if they wish to benefit from voter support when the privatisation benefits are realised (Opper, 2004). However, our findings indicate that right-wing governments tend to carry out privatisation reforms, especially at the end of their mandate, when the election period is approaching. In that case, privatisation is used as an electoral tool, according to the rightist's political orientation.

Contrary to Obinger et al. (2014), we found that cabinets that are in office for a shorter period of time tend to implement more relevant privatisation reforms than cabinets that have been in office for long periods. This finding suggests that politicians who have been in power for long periods of time tend to be more moderate and to oppose major reforms.

Several characteristics of the chief executive, in terms of ideology, strength, competition, and fragmentation, may also affect the privatisation decisions taken by EU governments. Specifically, we found that strong governments with low political competition have a greater predisposition to privatise than others. This is in accordance with Bortolotti and Pinotti (2008), who noted delays in privatisation in fragmented democracies and those characterised by a larger number of parties. Fragmented governments that need the support of other parties and face considerable competition may find it difficult to achieve consensus on the decision to privatise SOEs.

Our findings do not totally support the effect of political ideology *per se* on privatisation reforms. As we have just indicated, we found that right-wing governments tend to implement privatisation reforms at the end of their mandate, when the elections are approaching; but, they require the support of the other parties that make up the government (i.e. little fragmented governments). The literature on the political economy of privatisation has traditionally supported a greater predisposition towards privatisation by right-wing governments (e.g. Belke et al., 2007; Bortolotti and Pinotti, 2003; Bortolotti et al., 2001, 2003; Li and Xu, 2002; Obinger et al., 2014; Schmitt, 2013; Schneider and Häge, 2008; Zohlnhöfer et al., 2008), however, we found that the greater predisposition of rightist governments is conditional on other political factors, such as the degree of fragmentation of the government and the number of years left in office.

6. Conclusions

This analysis set out to test the effect of political factors on privatisation reforms in EU governments. Following an empirical analysis over the period 1995–2013, we can state that privatisation reforms are affected by the political system, the electoral period, and different characteristics of the government. Our findings are in line with the main conclusions of Bortolotti et al. (2003), who noted that privatisation decisions are determined by the interplay of government interests and the political structure. We can conclude that multiple political factors affect the decision to privatise SOEs, and that they should be controlled in future research on privatisation reforms.

More specifically, privatisation reforms may be impeded by political veto players. Our findings also suggest that privatisation reforms are usually implemented at the start of an office term and tend to be forgotten as the government spends time in power. Finally, political competition reduces the implementation of privatisation reforms, since the opinion of other political parties should be taken into account in order to pass the reforms. The effect of the political ideology depends on other characteristics, such as the degree of fragmentation of the right-wing government and the years left in office.

This study contributes to the political economy of the privatisation literature by corroborating the relevance of the political framework for privatisation reforms (Obinger et al., 2016). Nevertheless, it is not free of limitations. One is that our data is at the country-year level and sectoral issues are not easy to control. Neither have we taken into account the extent of public ownership and entry barriers that could affect the predisposition to privatise SOEs. Further, the period of analysis ends in 2013, due to the availability of data in the Privatisation Barometer; however there has been a new wave of privatisation in recent years (promoted by the Troika), as a way to recover the financial situation in some countries, such as Greece and Ireland (Clifton et al., 2018). It would be interesting to include this more recent wave of privatisation in future studies, by using other sources of data that include more recent reforms.

It would be interesting to refine our findings through further analyses: (i) replicating the results for other privatisation indicators on public ownership or turnover (Son and Zohlnhöfer, 2019); (ii) taking into account the sector affected and the method of privatisation; and (iii) controlling the regulatory environment (Boubakri et al., 2009), and also the constitutional barriers, since they may be impede privatisation reforms (Schmitt and Obinger, 2011). Future research could consider the conditions of the current political environment, for example the future changes within the EU, the consequences of Brexit, and the collateral effects of important political and social issues, such as migration waves.

References

Arellano, M., and Bond, S. (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *Review of Economic Studies*, 58: 277-297.

Arellano, M., and Bover, O. (1995). Another look at the instrumental variables estimation of error components models. *Journal of Econometrics*, 68: 29-51.

Armingeon, K., Wenger, V., Wiedemeier, F., Isler, C., Knöpfel, L., Weisstanner, D., y Engler, S. (2018). Comparative Political Data Set 1960−2016. Bern, Institute of Political Science, University of Bern.

Baber, W., and Sen, P. (1986). The Political Process and the Use of Debt Financing by State Governments. *Public Choice*, 48(3): 201–215.

Baum, C., Schaffer, M., and Stillman, S. (2003). Instrumental variables and GMM: Estimation and testing. *Stata Journal*, 3 (1): 1–31.

Bawn, K. (1999). Money and majorities in the Federal Republic of Germany: Evidence for a veto players model of government spending. American Journal of Political Science, 707-736.

Belke, A, Baumgärtner, F., Schneider, F., and Setzer. R. (2007). The different extent of privatization proceeds in OECD countries: A preliminary explanation using a public-choice approach. *FinanzArchiv: Public Finance Analysis*, 63 (2): 211–243.

Belloc, F., Nicita, A., and Sepe, S. (2014). Disentangling liberalization and privatization policies: Is there a political trade-off?. Jo*urnal of Comparative Economics*,42 (4): 1033–1051.

Biais, B, and Perotti. E., (2002). Machiavellian Privatisation. *The American Economic Review*, 92 (1): 240–258.

Bienen, H., and Waterbury, J. (1989). The political economy of privatization in developing countries. *World Development*, 17(5): 617-6312.

Blundell, R., and Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics*, 87 (1): 115-143.

Bonoli, G. (2001). Political institutions, veto points, and the process of welfare state adaptation. The new politics of the welfare state, 238-264.

Börner, K. (2004). The political economy of privatization. *Discussion Paper No 2004-1*. Department of Economics, University of Munich.

Bortolotti, B., and Pinotti P. (2003). The political economy of privatization. *Working Paper 45.2003*, Fondazione Eni Enrico Mattei (FEEM).

Bortolotti, B., and Pinotti, P. (2008). Delayed privatization. *Public Choice*, 136(3): 331–351.

Bortolotti, B., Fantini, M., and Siniscalco, D. (2001). Privatization: Politics, institutions and financial markets. *Emerging Markets Review*, 2: 109-136.

Bortolotti, B., Fantini, M., and Siniscalco, D. (2003). Privatisation around the world: evidence from panel data. *Journal of Public Economics*, 88: 305-332.

Boubakri, N., Cosset, J. J., and Smaoui, H. (2009). Does privatization foster changes in the quality of legal institutions? *The Journal of Financial Research*, 22(2): 169-197.

Bräuninger, T. (2005). A partisan model of government expenditure. Public Choice, 125(3-4), 409-429.

Breen, M., and Doyle, D. (2013). The determinants of privatization: A comparative analysis of developing countries. *Journal of Comparative Policy Analysis: Research and Practice*, 15(1): 1-20.

Buchanan, J.M., Tollison, R.D., and Tullock, G. (1980). *Toward a theory of the rent-seeking society*. Texas: College Station.

Butler, S. (1991). Privatization for Public Purposes. In Gormley, W. T. (Ed.), Privatization and its Alternatives. University of Wisconsin Press: Madison.

Cioffi, J.W., and Höpner, M. (2006). The political paradox of finance capitalism: Interests, preferences, and center-left party politics in corporate governance reform. *Politics and Society*, 34(4): 463-502.

Clifton, J., Comín, F., and Díaz-Fuentes, D. (2006). Privatizing public enterprises in the European Union 1960–2002: ideological, pragmatic, inevitable?. *Journal of European Public Policy*, 13(5): 736-756.

Clifton, J., Comín, F., and Díaz-Fuentes, D. (2011). From national monopoly to multinational corporation: How regulation shaped the road towards telecommunications internationalisation. Business History, 53(5): 761-781.

Clifton, J., Díaz-Fuentes, D., and Gómez, A. L. (2018). The crisis as opportunity? On the role of the Troika in constructing the European consolidation state. Cambridge Journal of Regions, Economy and Society, 11(3): 587-608.

Cruz, Cesi, Keefer, P., and Scartascini, C. (2016). Database of Political Institutions Codebook, 2015 Update (DPI2015). Inter-American Development Bank. Available at: https://publications.iadb.org/handle/11319/7408 [Accessed 3 May 2018].

Cuadrado-Ballesteros, B., y Peña-Miguel, N. (2018). The Socioeconomic Consequences of Privatization: An Empirical Analysis for Europe. Social Indicators Research. 139(1): 163-183.

Cumbers, A., and Becker, S. (2018). Making sense of remunicipalisation: theoretical reflections on and political possibilities from Germany's Rekommumalisierung process. Cambridge Journal of Regions, Economy and Society, 11(3): 503-517.

Demsetz, H. (1974). Toward a theory of property rights. In Gopalakrishnan, C. (Ed.) *Classic papers in natural resource economics* (pp. 163-177). Palgrave Macmillan, London.

Fink, S. (2011). A contagious concept: Explaining the spread of privatization in the telecommunications sector. Governance, 24(1): 111-139.

Fink, S. (2017). Varieties of capitalism and privatization in a globalized world: How trade integration shapes the relation between type of capitalism and privatization. Comparative European Politics. In press.

Gonzalo, J.A., Pina, V., and Torres, L. (2003). Objectives, Techniques and valuation of state-owned companies in privatization processes. Public Management Review, 5(2): 177-196.

Hallerberg, M., and Basinger, S. (1998). Internationalization and changes in tax policy in OECD countries: the importance of domestic veto players. Comparative Political Studies, 31(3), 321-352.

Hallerberg, M. (2010). Empirical applications of veto player analysis and institutional effectiveness. In Reform processes and policy change (pp. 21-42). Springer, New York, NY.

Heller, W.B., and McCubbins, M.D. (2001). Political institutions and economic development: The case of electric utility regulation in Argentina and Chile. In Haggard, S., McCubbins M.D. (Eds.), Presidents, parliaments, and policy (pp. 229-255). Cambridge University Press: Cambridge.

Huber, E., Ragin, C., and Stephens, J. D. (1993). Social democracy, Christian democracy, constitutional structure, and the welfare state. American journal of Sociology, 99(3), 711-749.

Immergut, E. M. (1990). Institutions, veto points, and policy results: A comparative analysis of health care. Journal of Public policy, 10(4), 391-416.

Knott, J. H., y G. J. Miller. (2006). Social welfare, corruption and credibility: Public management's role in economic development. Public Management Review, 8 (2): 227-252.

Li., W., and Xu., X (2002). The Political Economy of Privatisation and Competition: Cross- Country evidence from the Telecommunications Sector. *Journal of Comparative Economics*, 30: 1-25.

Lijphart, A. (1984). Democracies: Patterns of majoritarian and consensus government in twenty-one countries.

MacIntyre, A. (2001). Institutions and investors: The politics of the economic crisis in Southeast Asia. International Organization, 55(1), 81-122.

Obinger, H, Schmitt, C., and Zohlnhöfer, R., (2014). Partisan politics and privatization in OECD countries. *Comparative Political Studies,* 47 (9): 1294–1323.

Obinger, H., Schmitt, C., and Traub, S. (2016). The political economy of privatization in rich democracies. Oxford University Press.

OECD (2009). Privatisation in the 21st Century: Recent experiences of OECD countries. Organisation for Economic Co-operation and Development. Available at: https://www.oecd.org/daf/ca [Accessed 09 May 2019].

Opper, S. (2004). The Political Economy of Privatization: Empirical Evidence from Transition Economies. *Kyklos*, 57 (4), 559-586.

Overman, S. (2016). Great expectations of public service delegation: A systematic review. Public Management Review, 18 (8): 1238-1262.

Parker, D., and Saal, D. (2003). *International handbook on privatisation*. Edward Elgar Publishing: Cheltenham.

Peña-Miguel, N., and Cuadrado-Ballesteros, B. (2019). Is privatization related to corruption? An empirical analysis of European countries. Public Management Review, 21(1): 69-95.

Roberts, B.M. and Saeed, M.A. (2012). Privatizations around the world: Economic or political determinants? *Economics andPolitics*, 24(1): 47-71

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

Schmitt, C. (2013). The Janus Face of Europeanisation: Explaining Cross Sector Differences in Public Utilities. *West European Politics*, 36, 3, 547-63.

Schmitt, C., and Obinger, H. (2011). Constitutional barriers and the privatization of public utilities in rich democracies. *World Political Science*, 7(1): 1-24.

Schmitt, C., and Zohlnhöfer, R. (2017). Partisan differences and the interventionist state in advanced democracies. Socio-Economic Review. In press.

Schneider, V, and Häge, F. (2008). Europeanization and the Retreat of the State. *Journal of European Public Policy*, 15 (1): 1–19.

Son, K., and Zohlnhöfer, R. (2019). Measuring Privatization: Comparing Five Indicators of the Disposition of State-Owned Enterprises in Advanced Democracies. Journal of Comparative Policy Analysis: Research and Practice, 1-21.

Tsebelis, G. (1995). Decision making in political systems: Veto players in presidentialism, parliamentarism, multicameralism and multipartyism. *British Journal of Political Science*, 25(3): 289-325.

Tsebelis, G. (2000). Veto players and institutional analysis. *Governance*, 13(4): 441-474.

Tsebelis, G., and Chang, E. C. (2004). Veto players and the structure of budgets in advanced industrialized countries. European Journal of Political Research, 43(3), 449-476.

Vickers, J., and Wright, V. (1989). The Politics of Privatization in Western Europe. Frank Cass and Co: Totowa.

Vickers, J., and Yarrow, G. (1988). *Privatisation: An Economic Analysis*. Cambridge: The MIT Press.

Vickers, J., and Yarrow, G. (1991). Economic perspectives on privatization. *Journal of Economic Perspectives*, 5(2): 111-132.

Warner, M. E. (2008). Reversing privatization, rebalancing government reform: Markets, deliberation and planning. Policy and Society, 27(2): 163-174.

Warner, M. E. and Hebdon, R. (2001). Local Government Restructuring: Privatization and its Alternatives. *Journal of Policy Analysis and Management*, 20(2): 315–336.

Wooldridge, J. M. (2010). *Econometric analysis of cross section and panel data*. Cambridge: The MIT Press.

Zohlnhöfer, R, Obinger, H., and Wolf, F. (2008). Partisan politics, globalization, and the determinants of privatisation proceeds in advanced democracies (1990–2000). *Governance: An International Journal of Policy, Administration, and Institutions*, 21 (1): 95–112.

Zohlnhöfer, R., Engler, F., and Dümig, K. (2018). The retreat of the interventionist state in advanced democracies. British Journal of Political Science, 48(2), 535-562.

Table 1. Descriptive statistics

Variable	Mean	Std. Dev.	Min	Max
Deals	3.8484	5.2565	0	55
Proceeds	0.0092	0.0206	0	0.1686
Checks	4.2008	1.2195	2	9
Years_office	3.9558	2.9986	1	18
Years_left	1.8710	1.2732	0	4
Exe_elections	0.0779	0.2683	0	1
Right	21.3099	20.8517	0	68.1
Competition	0.7127	0.1044	0.4967	0.8971
Strength	0.5536	0.0800	0.2443	0.7972
Balance	-3.0224	4.6702	-32.3046	11.9434
FDI	10.3944	-37.3394	58.3229	451.7155
Growth	2.6163	3.4963	-14.8142	11.8894
EU	0.8105	0.3923	0	1

Distribution of categorical variables

Exe_elections	*Freq.*	*Percent*	*Cum.*
0	438	92.21	92.21
1	37	7.79	100

Table 2. Bivariate correlations

	Checks	*Years_office*	*Years_left*	*Exe_elections*	*Right*	*Competition*	*Strength*	*Balance*	*FDI*	*Growth*	*EU*
Checks	1										
Years_office	-0.0095	1									
Years_left	0.016	-0.2678***	1								
Exe_elections	-0.0539	0.0095	-0.1871***	1							
Right	0.0167	-0.1231**	0.0193	0.0678	1						
Competition	0.3695***	-0.0363	-0.0285	0.0073	0.1899***	1					
Strength	0.0473	0.1263**	-0.0781†	-0.0972*	-0.1594***	0.3144***	1				
Balance	0.1524***	0.2222***	-0.0436	-0.0884†	-0.0744	0.206***	0.3169***	1			
FDI	-0.0776†	0.0826†	0.0204	-0.058	-0.1403**	-0.0983*	0.0786†	0.0381	1		
Growth	0.0535	0.0184	-0.0708	-0.0184	-0.0187	0.0883†	0.0242	0.3076***	0.0004	1	
EU	0.0888	-0.0251	0.0398	-0.0599	-0.1595	-0.0345	0.1635	0.1105	0.0706	-0.247	1

Notes:
†, *, **, ***significant at 10, 5, 1, and 0.1 percent level, respectively.

Table 3. Effect of political factors on privatization reforms

	Equation 1 Deals		**Equation 2 Proceeds**	
	Coef.	*Std. Dev.*	*Coef.*	*Std. Dev.*
Checks	-0.6555*	0.2953	-0.2640*	0.0949
Years_office	-0.2224***	0.0409	-0.1168***	0.0169
Years_left	0.2508**	0.0858	0.0831**	0.0254
Exe_elections	1.1547*	0.5004	0.1484	0.1136
Right	0.0228	0.0139	-0.0046	0.0043
Competition	-6.8894***	1.5718	-0.5279†	0.2757
Strength	0.0316	0.0193	0.0004	0.0043
$Balance_{t-1}$	-0.0405	0.0430	0.0145	0.0109
FDI_{t-1}	0.0078	0.0190	0.0002	0.0054
$Growth_{t-1}$	-0.0011**	0.0003	-0.0003	0.0002
EU_{t-1}	-4.7326†	2.4613	-0.8829*	0.4085
Intercept	6.4946*	3.0267	3.8043***	0.6559
Arellano and Bond test AR(2)	Pr > z = 0.740		Pr > z = 0.891	
Hansen test	Pr > chi2 = 1.000		Pr > chi2 = 1.000	

Notes:
All regressions include year fixed effects.
†, *, **, ***significant at 10, 5, 1, and 0.1 percent level, respectively.

Table 4. Robustness checking for Elections variable

	Equation 1 Deals		**Equation 2 Proceeds**	
	Coef.	*Std. Dev.*	*Coef.*	*Std. Dev.*
Checks	0.1766	0.5228	-0.2046†	0.1148
Years_office	-0.0910†	0.0461	-0.1586***	0.0231
Years_left	0.5985***	0.0978	0.1621***	0.0307
Parl_elections	1.9747***	0.1844	0.0698†	0.0377
Right	-0.0125	0.0189	-0.0011	0.0042
Competition	-5.9616**	1.9448	-0.6336**	0.1955
Strength	0.0245	0.0185	-0.0075	0.0059
Balance $_{t-1}$	-0.1073*	0.0411	-0.0391†	0.0210
FDI $_{t-1}$	0.0033	0.0445	0.0054	0.0095
Growth $_{t-1}$	-0.0013***	0.0003	-0.0005***	0.0001
EU $_{t-1}$	-2.1543	1.6419	0.3270	0.5092
Intercept	6.8171**	1.9067	3.3752***	0.7612
Arellano and Bond test AR(2)	Pr > z = 0.712		Pr > z = 0.894	
Hansen test	Pr > chi2 = 1.000		Pr > chi2 = 1.000	

Notes:
All regressions include year fixed effects.
†, *, **, ***significant at 10, 5, 1, and 0.1 percent level, respectively.

Table 5. Robustness checking for government fragmentation variable

	Equation 1 Deals		**Equation 2 Proceeds**	
	Coef.	*Std. Dev.*	*Coef.*	*Std. Dev.*
Checks	0.1482	0.3196	-0.2536**	0.0739
Years_office	-0.1686***	0.0316	-0.1039***	0.0130
Years_left	0.2602**	0.0735	0.0746*	0.0272
Exe_elections	0.9467†	0.4802	0.0660	0.1302
Right	-0.0039	0.0063	-0.0039	0.0032
Herfindahl	4.9732*	1.8339	3.0877***	0.3784
Balance $_{t-1}$	-0.0639	0.0670	-0.0205†	0.0115
FDI $_{t-1}$	0.0060	0.0335	0.0003	0.0036
Growth $_{t-1}$	-0.0014***	0.0002	-0.0004*	0.0001
EU $_{t-1}$	-2.0548	1.3386	-0.4647	0.5348
Intercept	1.7202	2.4593	0.2855	0.3655
Arellano and Bond test AR(2)	Pr > z = 0.921		Pr > z = 0.914	
Hansen test	Pr > chi2 = 1.000		Pr > chi2 = 1.000	

Notes:
All regressions include year fixed effects.
†, *, **, ***significant at 10, 5, 1, and 0.1 percent level, respectively.

Table 6. Robustness checking for ideology variable

	Equation 1 Deals		**Equation 2 Proceeds**	
	Coef.	*Std. Dev.*	*Coef.*	*Std. Dev.*
Checks	-0.9999*	0.4394	-0.2025*	0.0862
Years_office	-0.1919***	0.0468	-0.0921**	0.0258
Years_left	0.1274	0.0771	0.0577†	0.0307
Exe_elections	1.5806***	0.3289	0.0633	0.1401
Ideology	0.1586	0.0942	0.0211	0.0747
Competition	-10.1967***	2.8388	-0.3217	0.3333
Strength	0.0649**	0.0217	0.0079*	0.0032
Balance $_{t-1}$	-0.0551*	0.0235	-0.0175†	0.0089
FDI $_{t-1}$	0.0686*	0.0330	0.0033	0.0057
Growth $_{t-1}$	-0.0007†	0.0004	-0.0004**	0.0001
EU $_{t-1}$	1.0514	1.9413	-0.1363	0.5847
Intercept	-0.3392	2.8449	2.2376*	0.9984
Arellano and Bond test AR(2)	Pr > z = 0.796		Pr > z = 0.999	
Hansen test	Pr > chi2 = 1.000		Pr > chi2 = 1.000	
	Equation 3 Deals		**Equation 4 Proceeds**	
	Coef.	*Std. Dev.*	*Coef.*	*Std. Dev.*
Checks	0.0138	0.2696	-0.1805*	0.0907
Years_office	-0.1571***	0.0338	-0.1337***	0.0319
Years_left	0.0111	0.1189	0.1013*	0.0404
Exe_elections	-0.4003	0.7308	-0.0092	0.1346
Right	0.0872	0.0573	-0.0042	0.0098
Herfindahl	-0.0573	2.4543	-0.1259	0.5534
Right*Years_left	-0.0225**	0.0067	-0.0089***	0.0018
Right*Herfindahl	7.1515**	0.0433	0.0305*	0.0142
Balance $_{t-1}$	-0.1869†	0.1056	0.0315	0.0184
FDI $_{t-1}$	0.0518	0.0558	-0.0054	0.0060
Growth $_{t-1}$	-0.0021	0.0006	-0.0005**	0.0002
EU $_{t-1}$	-6.5152	3.8642	0.1740	0.7090
Intercept	2.8000	2.1467	2.3437*	1.0098
Arellano and Bond test AR(2)	Pr > z = 0.951		Pr > z = 0.920	
Hansen test	Pr > chi2 = 1.000		Pr > chi2 = 1.000	

Notes:
All regressions include year fixed effects.
†, *, **, ***significant at 10, 5, 1, and 0.1 percent level, respectively.

Figure 1. Evolution of privatization deals and proceeds