

THE POLITICAL ECONOMY OF STATE AIDS IN THE EUROPEAN COMMUNITY: SOME ECONOMETRIC EVIDENCE

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Discussion Paper No. 945
April 1994

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April 1994

ABSTRACT

The Political Economy of State Aids in the European Community: Some Econometric Evidence*

This paper analyses the pattern of state aids to the manufacturing sector in ten EC countries for the period 1981–90. It focuses on determinants suggested by the political economy of state aids. We estimate a regression model where the intensity of state aids is accounted for by the weakness of government, their ideological orientation, the concentration of industry, and the timing of elections. The evidence indicates that the fractionalization of political parties is associated with higher state aids. We also find support for the view that state aids are higher under right-wing governments and when firms' interests are highly concentrated. This is consistent with a partisan view of government in which firms represent an important constituency for right-wing coalitions. By contrast, the timing of elections does not seem to matter. Finally, the paper observes significant fixed country effects. We gather evidence on the transparency of procedures used to allocate and control state aids and suggest that these fixed effects could be associated with lax procedures which enhance the scope for capture.

JEL classification: H20, L50, L51

Keywords: political economy, state aids, capture, European Community

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*This paper is produced as part of a CEPR research programme on *Market Structure, Industrial Organization and Competition Policy in Europe*, supported by a grant from the Commission of the European Communities under its SPES Programme (no. SPESCT910071). I would like to thank G Siotis and K Thomas for useful discussions, T von Ungern-Sternberg for detailed comments on a previous draft, A Walther (DG 4) for his help with the data and R Ionici for excellent research assistance.

Submitted 9 March 1994

NON-TECHNICAL SUMMARY

The objective of this paper is to present some evidence on the factors underlying the allocation of state aids to the manufacturing sector in the European Community.

According to the public interest approach to government, public intervention attempts to address particular market failures. The 'leviathan' approach suggests that governments may pursue their own goals and may be captured by particular interest groups. In any real-world outcome, one would expect both motivations to prevail. This paper attempts to account for the pattern of state aids in the European Community solely in terms of the determinants suggested by this second approach. We find that a few variables picking up the characteristics of political institutions and regimes are well associated with the pattern of state aids.

Political theories of government have traditionally emphasized the incentives of politicians and the role of institutions. They suggest that politicians are associated with different constituencies and implement policies to retain their support. In the present context, one might thus expect right-wing governments to grant relatively more state aids than left-wing governments, and one would also expect to observe an increase in state aids before elections. In terms of political regimes, the literature suggests a positive association between state aids and the weakness of the ruling government.

Loosely speaking, the political theories of government emphasize the 'supply' side of government policies. The characteristics of the interest groups which demand the distribution of rents also matter, however. A higher concentration of firms should therefore be associated with more effective lobbying and higher state aids.

In terms of institutions, transparency in the decision making process should greatly reduce the scope for political capture so that a higher level of state aids should be observed when the procedure for their allocation are relatively opaque.

In order to evaluate these presumptions, the paper estimates a regression model where the intensity of state aids is accounted for by the weakness of government, their ideological orientation, the concentration of industry, and the timing of elections. The evidence indicates that the fractionalization of political parties is associated with higher state aids. We also find support for the view that state aids are higher under right-wing governments and when firms' interests are highly concentrated. This is consistent with a partisan view of government in which firms represent an important constituency for right-wing coalitions. By contrast, the timing of elections does not seem to matter. Finally, we observe significant fixed country effects. We gather evidence on the transparency of

procedure used to allocate and control state aids and suggest that these fixed effects could be associated with lax procedures which enhance the scope for capture.

The simple approach followed here can be criticized on a number of grounds. It is striking, however, that the characteristics of political institutions and regimes can account for about 90% of the variance in our sample. In the light of this evidence, it is difficult to deny that politics is the key determinant behind the allocation of state aids.

1. Introduction

The objective of this paper is to present some evidence on the factors underlying the allocation of state aids to the manufacturing sector in the European Community. We focus the factors suggested by the political economy of state aids. We find that variations in state aids across time and countries are closely associated with the characteristics of political institutions and regimes.

In principle, governments may intervene in order to address particular market failures. They may also be captured by particular interest groups. In any real-world outcome, one would expect both motivations to prevail. Accordingly, while analysing ex post realisations of government policies, it may be necessary to control for both. An equation which focuses on one type of motivations may be misspecified. Accordingly, the evidence presented here should be interpreted cautiously. Yet, what is striking about this approach is its success in explaining the pattern of state aids. A few variables describing political institutions and regimes suffice to account for about 90 % of the variance in our sample. This observation alone may warrant some attention.

The approach that we follow can also be defended on the following grounds : first, it is not clear how one could control for changes in the importance of market failures across countries and over time. The importance of market failures could presumably be evaluated at great cost in narrowly defined industries. Information on state aids is however only available for the aggregate of the manufacturing sector. Building an aggregate indicator of market failure would be difficult and potentially meaningless. Second, it is not clear that ex-post realisations of government interventions will be well related to market failures even if governments were attempting to target them. Indeed, the public interest view of governments suggests that, because of asymmetric information, government are likely to be rather poor at targeting market failures, so that ex post, the importance of state aids may not be related to the importance of the market failures (see Grossman, 1991, and also, Neven and Vickers, 1992).

Section 2 discusses the determinants of state aids from the point of view of its political economy and reviews existing studies. Section 3 presents our estimates. Section 4 concludes.

2. Political economy and determinants of state aids

Political theories of government have traditionally emphasised the incentives of politicians and the role of institutions.

According to the leviathan approach, politicians (and governments) are represented as self-interested individuals, maximising rents. To the extent that rents are associated with tenure in office, it is traditionally considered that governments implement policies which maximise the probability of staying in office (Downs, 1957). This suggests, however, that different governments will tend to apply similar policies, presumably targeted at the median voter. This prediction is however not consistent with empirical evidence (see Alesina, 1989). Additional motivations for governments have thus been considered. For instance, the "partisan" theory assumes that governments have some preferences over policy issues stemming from ideological considerations (see Hibs, 1977 and Alesina, 1987). According to this approach, politicians are associated with different constituencies and implement policies to retain their support.

These political theories of government have been applied to the implementation of macro policies in specific models (see Nordhaus, 1975, Rogoff, 1987, Alesina, 1987). Their insights can however be applied to the implementation of structural policies through the allocation of state aids: to the extent that state aids benefit firms and capital owners more than workers, one would expect right wing governments to grant relatively more state aids than left wing ones. To the extent that recipients of state aids (including managers, and to a lower extent workers, in recipient firms) have an incentive to maintain a political status quo (because for instance, the state aid is phased over several years), one would also expect to observe an increase in state aids before elections.

The theoretical approaches that focus on the role of institutions have emphasised the role of potential conflicts among political decision makers. According to Tabellini (1986), one would expect a lack of consensus between politicians to lead to a postponement of controversial policies. According to Roubini and Sachs (1989), weak governments should also be expected to spend more as the various members of the ruling coalition secure agreements which favour their own constituencies. One should therefore expect to observe a positive association between state aids and the weakness of the ruling government.

Loosely speaking, the political theories of government reviewed so far have dealt with the "supply" side of government policies. But the characteristics of the interest groups which

demand the distribution of rents also matter. As emphasised by the traditional work of Olson (1965), large interest groups face a free rider-problem. A higher concentration of firms should therefore be associated with more effective lobbying and higher state aids.

Recent work by Laffont and Tirole (1993) has focused on the constraints faced by regulators and some of their insights carries over to the current context. They point out that in the absence of asymmetries of information, governments could hardly redistribute rents to particular interest groups. With complete information, the public at large could observe the redistribution undertaken by governments and sanction it. This in turn would reduce the incentive for particular interest groups to seek political favours. As indicated by Seabright (1993), transparency in the decision making process should thus greatly reduce the scope for political capture. One should expect to see higher level of state aids in those countries where the procedure for their allocation are relatively opaque.

The theories of government suggested by the political economy approach have been tested in a number of studies including Robini and Sachs, (1989), Alesina, (1989), Grilli et al., (1991). These studies focus on macroeconomic variable like the volume of public debt, the volume and pattern of public expenditures or the pattern of inflation and unemployment. Systematic work on the political economy of state aids is relatively scarce. Blais (1985), using data from the OECD has analysed the pattern of state aids across 17 countries. He regresses the absolute amount of state aids on the level of GDP, GDP per head, the tendency of the government (left-right), the agricultural intensity, the average tariff, the ratio of tax revenues to GDP, the unemployment rate and the ratio of social security expenditures to GDP. He finds that left wing governments tend to spend more than right wing ones. One may however wonder about his choice of regressors : he only considers one political variable (the tendency of governments) and it is not clear whether the other variables can reasonably be considered as exogenous.

3. Empirical estimates for the European Community

Recently, a number of studies by the European Commission (EEC, 1988, 1990, 1992) and the OECD (1990) have put together comparable data on state aids across countries. In what follows, we use the data compiled by the European Commission¹. The data refers to yearly

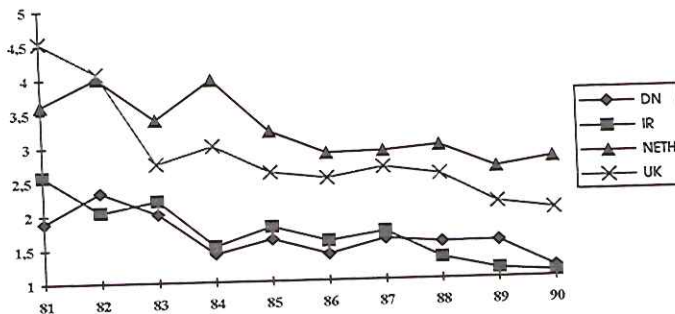
¹ The three surveys on State aids published by the EC Commission do not use consistent definitions. Our series has been constructed using additional data from national sources and additional information provided by the Commission. Data on value added in the manufacturing sector was obtained from the Chronos database (INDE).

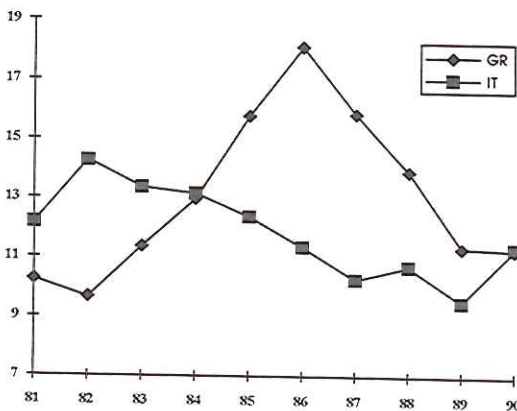
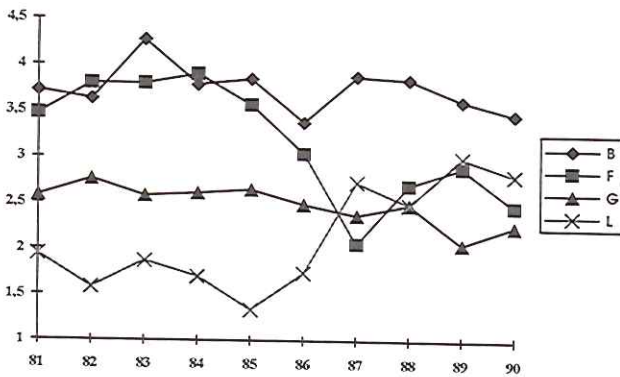
amounts of state aids granted to the manufacturing sector, excluding coal, steel and shipbuilding. These three industries have been subject to EC sponsored restructuring plans. Accordingly, one cannot expect the pattern of state aids in those industries to be associated with political economy developments at the national level. What would be required for those industries is an analysis of the political economy at the EC level. Our data covers 10 EC countries (Spain and Portugal are not included) and 10 years (81-90).

Before describing our explanatory variables, it is worth briefly describing the pattern of state aids across time and countries. Figure 1 presents state aids in percentage of value added in the manufacturing sector. The spread of the intensity of state aids across countries is high (about 11 %) at the beginning of the period and decreases only slightly towards the end (about 10 %) after a peak in 1986 (more than 16%).

In four countries (namely Denmark, Ireland, the Netherlands and the UK, on the top part of figure 1), there is a clear descending trend over the whole period, such that the intensity of state aids is reduced by about 1.5 % on average between 81 and 90. Variations in Germany are quite limited and no clear trend can be detected. There is no clear tendency in Belgium either but this country exhibits wider fluctuations. A sharp drop is observed in France between 1982 and 1987 and some stabilisation thereafter. A significant increase is observed in Luxembourg between 85 and 87, with again a stabilisation towards the end of the period. Southern European countries are characterised by a very high intensity, relative to the northern European countries. Whereas a downward trend is observed in Italy (at least for the period 82-89), Greece reaches an (EC wide) absolute maximum in 86 before returning to some 11 % in 1990.

Figure 1. State aid in manufacturing





On the whole, there are significant variations in the intensity of state aids both across countries and over time. This is a priori reassuring in so far as political institutions and the recent political history vary a great deal across EC countries.

As indicated above, we attempt to explain the pattern of state aids by the characteristics of governments and firms. Our explanatory variables include three proxies for the weakness of the government, an indication of its ideological orientation, a proxy for the concentration of firms lobby and the timing of elections. We also include a time trend and country dummies. Details of data sources are provided in the appendix.

Following the tradition in political science (see also Alesina, 1989, Grilli et al., 1991), we use an index of fractionalisation (INDFRACT, i.e. the probability that two members of the house chosen at random will belong to different parties) in the lower house as one proxy for the weakness of government². We also use the number of parties (NPARTIES) represented in the ruling coalitions. As an alternative, we also consider a dummy (COAL) for coalition (COAL = 0) versus single party majority governments (COAL = 1).

The ideological tendency of the government (TENDANCE) is represented by a dummy, ranging from -2 for a left wing government to +2 for a right wing government (with -1, 0 and 1 representing respectively centre left, centre and centre right governments). The timing of elections (ELECTION) is represented by a dummy (=1) in election years. The concentration of firms (EMPLOYEES) is represented by the percentage of employees in the manufacturing who work for large firms (i.e. firms with more than 500 employees).

The analysis of European government by political scientists (see e.g. Bowler, 1987 or Kesselman, 1993) often draws a distinction between countries with a "dirigiste" tradition (like France) and a more "laissez-faire" attitude (like the UK). These studies suggest that the size of government may not be a bad indicator of the orientation of the government in this regard. Accordingly, we also considered the government budget deficit (in % of GDP) and the government expenditures (% of GDP) as explanatory variables. However, these variables should be treated cautiously : whether they can be treated as exogenous is questionable. In addition, the orientation of government is presumably itself determined to a large extent by political institutions. For instance, Grilli et al. (1991) suggest that the weakness of governments is an important factor behind the growth of government expenditures and deficits. As a consequence, these variables may not be independent from the political indicators that we include in the regressions.

As suggested above, one could loosely distinguish between factors that affect the responsiveness of public institutions to potential capture (the "supply") from those that affect the effectiveness of firms as an interest group (the "demand"). This suggests that one should estimate simultaneously separate equations for demand and supply. In this perspective, the volume of state aids can be seen a proxy for the amount for rents which is transferred. The price which is paid by firms can then be proxied by the amount of control that government exercise over their business. This is a latent variable which is however difficult to measure.

² Data on political variables were constructed from two main sources : the Europa World Yearbook (1993) and the International almanach of electoral history (T Mackie and R. Rose, 1991). Data on government deficits and expenditures were obtained from EUROSTAT (Chronos database). Data on the concentration of firms were constructed from the Chronos database (INDE - Data by size of enterprises).

Accordingly, we have estimate a single equation, which can be seen as a reduced form. One should keep this restriction in mind in the interpretation of the coefficients.

A large number of different specifications have been tested. It turns out that the index of firm concentration (EMPLOYEES) is highly correlated with the deficit of the public sector (DEFICIT) and accordingly could not be used simultaneously. Three sets of estimates are presented in table 1.

Table 1. Regression results

	1	2	3
ELECTION	-0.15 (0.25)		
ELECTION(+1)		0.03 (0.26)	
INDFRACT	3.83* (0.71)	3.55* (5.07)	1.32* (0.58)
TENDANCE	0.28** (0.15)	0.29* (0.14)*	0.24* (0.12)
COAL	-0.97* (0.41)	-0.77** (0.43)	
DEFICIT	-0.10* (0.04)	-0.11* (0.03)	
DUMGRE	10.48* (0.58)	10.49* (0.57)	10.27* (0.43)
DUMITA	8.56* (0.53)	8.25* (0.50)	9.16* (0.40)
DUMIRL	-2.08* (0.52)	-2.17* (0.57)	
EMPLOYEES			0.03* (0.008)
R ² (adjusted)	0.92	0.93	0.92
N	100	90	100

Note : a single (double) * denotes a coefficient significant at the 5 (10) % level. OLS estimates. Standard errors in parentheses.

First, we observe that the proximity of elections does not seem to matter. State aids are neither affected by the holding of an election in the current year, nor by the holding of an election in the following year. This finding is extremely robust (there is not estimate where these election variables turned out to be significant). This suggests that the distribution of state aids is not motivated by electoral consideration. This result may however be due to the fact that some elections were not fully anticipated.

The presumption that right wing governments provide more state aids is confirmed. This finding is also very robust (this variable is always significant with the predicted sign). The hypothesis that weak government provide more state aids is also supported by the estimates. The fractionalisation of the lower house seems particularly important (the coefficient of INDFRACT is always significant). By contrast, the number of parties in the coalition does not seem to matter (NPARTIES is never significant³). The distinction between coalition and single party majority governments is also significant in most estimates. The degree of concentration among firms (EMPLOYEES) is also highly significant. This supports the view that well organised interest groups can obtain higher levels of transfers from governments.

As indicated above, we also tested for the presence of a trend and could not detect any. This suggest that the apparent fall in state aids reported by the EC Commission is not associated with an exogenous change of regime. It seems that this reduction is well explained by changes in the political environment. That is also to say, that as right wing governments take over in some countries or as election results lead to more fractionalised representations, state aids could possibly increase again.

Some countries dummies also turn out to be significant. As expected, dummies for Italy and Greece have positive coefficients and are always highly significant. In a number of regressions, the dummy for Ireland is negative and significant and that for Belgium is positive and significant. It is of course somewhat uncomfortable that fixed country effects seem to matter to such an extent. It suggests that some political variables may have been omitted.

As indicated above, there is a presumption that the degree of transparency in the procedure for allocating state aids may actually matter. This variable has not been included in the regressions presented above because it is difficult to measure. One can however undertake some cross country comparisons in the procedures used to allocate state aids and to control the allocation ex post. A systematic account of the procedures in place in the early eighties is provided by the OECD (1983) for France, Germany, the UK, Italy, Belgium, the Netherlands. Additional

³ The correlation between the number of parties and the index of fractionalisation is also rather low.

but less detailed information on Greece and Ireland can be found in OECD country studies (various years).

In order to build a systematic comparison of these procedures, we have paid attention to (i) the existence of criteria ex ante to allocate state aids (this may be termed ex ante transparency after Seabright, 1993), (ii) the publication requirements and (iii) the control procedures (by the house, by administrative bodies and independent bodies) and (iv) ex post evaluation procedures. The resulting evidence is presented in table 2.

Table 2. Transparency

	Ex ante	Publication	Control	Evaluation
Belgium	Complex	Confidential	Administration No right of initiative Cour des comptes	Not feasible
France	Checks and balances	Widespread Detailed	Parliament Cour des comptes (right of initiative) Social and economic Committee	Frequent (admin)
Germany	Low	Detailed	Cour des comptes Landers Parliament	Frequent (external)
Italy	Complex Ad hoc	Aggregates	Parliament Recent	Not frequent Admin
Nether.	Checks and balances	Detailed	Independent Parliament	Thorough Multiple
UK	Discretionary	Detailed Widespread	Comptroller and Auditor general Public Accounts Committee	Frequent Internal External

Source : OECD, 1983

The comparison of institutions along dimensions as abstract as independence or transparency is a notoriously difficult exercise and one should not attach too much weight to the information provided in this table. However, this comparison suggest a rather clear pattern : the procedures in place in Italy and Belgium are likely to be more prone to capture than those in place in France, Germany, the UK and the Netherlands. The former countries have deficient procedures relative to the latter on all the dimensions of transparency. This is particularly striking for Italy. This observation is actually confirmed by the evaluation provided by the OECD, which is rather severe towards Belgium and Italy.

Country studies by the OECD provide additional information on Greece and Ireland. The degree of detail is however not sufficient to undertake a comparison along the dimensions of table 2. The OECD is still extremely critical of the procedures in place in Greece (see e.g. OECD, 1993) and rather pleased with those prevailing in Ireland (which are close to the UK procedures).

On the whole, it appears that the country effects identified above may actually be associated with differences in the degree of transparency in the procedures for allocating and controlling state aids. It was therefore tempting to introduce an additional variable in the regressions presented above, which would represent the degree of transparency (TRANSPA). Italy and Greece were given a score of -1, Belgium a score of 0 and France, Germany, the UK and the Netherlands were given a score of 1. In the absence of information regarding Denmark and Luxembourg, a score equal the mean of the sample was allocated to these countries. Results are presented in table 3.

Table 3. State aids and transparency

INDFRACT	3.93*
	(0.92)
TENDANCE	1.21*
	(0.21)
TRANSPA	-4.59*
	(0.25)
EMPLOYEEES	0.06*
	(0.01)
R ² (adjusted)	0.79
N	100

Note : a * denotes a parameter significant at the 1 % level. OLS estimates. Standard errors in parentheses.

These estimates confirm that transparency may indeed matter a great deal. This is not surprising given our observation above that Greece and Italy as large outliers also have lax procedures. It is still remarkable that four political variables can account for as much 79 % of the variance in the sample.

4. Conclusion

This paper has analysed how political institutions can help account for the pattern of state aids in the European Community. Some factors, like the weakness of the government or its dominant ideology, which were found to be relevant for the determinants of macro variables seem to affect state aids as well. By contrast, the timing of elections do not seem matter in the current context. This accords with intuition given that the scope for winning electoral support from the allocation of state aids is inherently more limited than through the manipulation of the business cycle. In addition to the traditional factors, we find that the concentration of interest groups and the transparency of procedures may also matter.

The approach followed in this paper could be improved in many ways. First of all, it lacks of clear theory of capture which could deliver sharp and testable predictions. The game which is played between firms and the government could be modelled. The effectiveness of interest groups in obtaining rents and the willingness of governments to grant them could be made more precise. The time period covered in our sample is short relative to the length of a typical legislature (it does not cover more than 2.5 legislatures on average per country) and the analysis could be replicated as more data become available. Finally, the equation that is estimated is a reduced form. In principle, it would be desirable to disentangle the factors that make firms effective in capturing governments from those that make the government prone to capture.

Yet, despite these shortcomings, the present analysis gives a strong indication that political regimes and institutions determine to a large extent the allocation of state aids.

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