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Polarizers or landscape groomers? An empirical analysis of party donations by the 100 largest German companies in 1984–2005

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What can donation strategies tell us about corporate political preferences, as seen from the perspective of power resource and varieties of capitalism theories? This article tests six hypotheses within an Olsonian framework for corporate donations to political parties with new data from the 100 largest German firms between 1984 and 2005. The findings reveal that only a minority of firms donate, and donation amounts are surprisingly small given the financial assets of these companies, which suggests the presence of a collective action dilemma with small selective and arguably larger collective benefits. Management ties between firms are an important way of making firms overcome the collective action dilemma. Firms distribute their donations if any – mainly on the right side of the political spectrum, particularly if the firms are personally interwoven with other large companies or if they are family owned. However, some firms, particularly those belonging to the automobile sector, donate across the political spectrum.

Keywords: firms, parties, preference formation, political lobbying, power resources, varieties of capitalism

JEL classification: D22 Organizational Behaviour, transaction costs, property rights, D72 political processes: rent-seeking, lobbying, elections, legislatures, and voting behavior, P16 political economy

1. Introduction: why the political preferences of firms matter

The shift in focus to employer preferences is one of the most remarkable developments in current comparative political economy. Until the 1990s, the premises of power resource theory remained largely undisputed, namely that firms prefer liberal welfare states, maximum discretional power over production factors and deregulation. The larger the power resources of the labor movement, the more constraints could be imposed upon employers and free markets, constraints that employers would not accept voluntarily and that they would abolish given sufficient political power (Korpi, 1978; Esping-Andersen, 1985, 1990). In short, according to power resource theory, firms polarize politically—to the advantage of the right and the disadvantage of the left.

In the early 2000 years, 'varieties of capitalism' (VoC) research (Hall and Soskice, 2001; Hancké *et al.*, 2007; Hall and Gingerich, 2009) challenged this perspective on firms' preferences. First, according to this newer approach, employer preferences vary across historical periods, countries and sectors; and secondly, the distribution of the respective preferences among employers matters for the development of the nexus between state and market as much as does the power of the labour movement. Following this approach, Mares and Swenson, for example, demonstrated that employers in coordinated market economies such as Sweden, France and Germany did not always behave antagonistically when decisive welfare state reforms, such as unemployment insurance, were introduced (Swenson, 2002; Mares, 2003; also see Münnich, 2010).

This view did not remain unchallenged either. Korpi (2006) argued that the new perspective overemphasized the impact of employers on welfare state formation at least as much as power resource theory had overemphasized the power of labour. Recently, Paster (2010) and Emmenegger and Marx (2011) argued that the historical analysis of German employers' preferences provides more support for the power resource theory than for employer-centred explanations. However, the new perspective on employers' preferences matters, despite any revelation that employers were not among the decisive founders of the modern welfare state or of other structural features of 'non-liberal capitalism' (Streeck, 2001). Even if redistributive policies, employment protection and employees' co-determination had to be forced upon antagonistic employers decades ago, firms' preferences may have changed since. As VoC scholars argued, employers could have reacted by concentrating on 'high road' production strategies, making productive use of institutions they initially disliked; and over time, they could have started to perceive these institutions as beneficial. Therefore, firms could react to today's increasing competitive pressures not by calling for political polarization and radical liberalization but by joining sector-based cross-class coalitions that aim at *preserving* the existing set of institutions (Hall and Soskice, 2001, p. 58).

Besides such controversy, proponents of the two sides agree on one crucial point: employers' preferences deserve empirical investigation rather than being deduced from theory alone. Such consensus is easy to reach but much more difficult to put into practice, because employers' political preferences are well hidden. Employers' political demands are not displayed in the firms' annual reports, and polls on employers' political preferences are rare and never cover long periods of time. As a consequence, much research ignores the firm level and concentrates on employers' associations because those, in contrast to their member firms, actively engage in politics and leave evidence of political preferences. Still, this concentration on employers' associations is problematic since firms' preferences are by no means homogenous.

This is where our analysis comes in. So far, political economic research has missed a particular opportunity of observing cross-firm and cross-time variance in employers' political preferences: firms express their preferences when they donate to parties. The careful analysis of such data, when combined with additional qualitative information, provides insights that help moderate between the two political-economy approaches described above. Our starting point is that the preferences of firms should translate into specific donation strategies. If the power resource theorists were right—that is, if employers respond to increasing competitive pressures by polarizing politically—we should expect firms to donate to parties on the right side of the political spectrum and to donate (almost) nothing to the left. In contrast, if the VoC theorists were right—i.e. if employers respond by seeking insurance against abrupt institutional change—we should expect firms to distribute donations across the entire political spectrum of the established parties. More generally, we should hypothesize that firms' donation strategies vary with respect to variables such as sector affiliations and firm size.

Germany is not only the paradigmatic case of a coordinated market economy but also provides good—though far from perfect—conditions for analysing party donation data. It does not have upper-limit restrictions on political donations; at the same time, it does have a relatively high level of transparency in party finance.¹ Firms are allowed to donate to political parties, and a maximum donation ceiling for firms has never been introduced, although frequently discussed. The German Party Act (Parteiengesetz, \$25(3)) prescribes that every donation exceeding the amount of $€50\ 000\ has$ to be disclosed immediately to parliament. Donations between $€10\ 000\ and €50\ 000\ are not subject to such ad-hoc publicity,$ but have to be recorded by parties themselves. Donors' names have to be publishedin the parties' annual reports, thus making the information accessible for our analysis. Two and a half years may pass until such donations become effectively public. $Donations that fall below the €10\ 000\ threshold remain entirely undisclosed and$ are therefore inaccessible.²

Here we analyse all party donations made by the 100 largest German firms between 1984 and 2005 from the perspective of an Olsonian collective action

¹See Nassmacher (2009) as the most comprehensive and up-to-date monograph on party finance in developed democracies, in particular ch. 7 on donations.

²In its evaluation report on the transparency of German party funding, the *Group d'Etats Contre la Corruption* (the Council of Europe's anti-corruption monitoring body) criticized the transparency thresholds of donations to German parties (€10 000 and €50 000, the latter for ad-hoc publicity) as 'excessively high' (GRECO 2009, p. 104).

problem in which we embed the expectations from power resource theory and varieties of capitalism.³ We show that German firms actually do favour the right side of the party spectrum over the left—which, at first glance, supports power resource theory. However, a certain and over time increasing amount of donations is being distributed over the entire political spectrum, a pattern that fits well with the expectations of VoC theory. These two donation strategies vary according to sector affiliations and ownership structures, among other variables. We also argue that there are no reasons to assume that firms not donating have no political preferences. Rather, the willingness to donate often hinges on overcoming a collective action problem: firms may benefit from other firms' lobbying for employers' interests even when they themselves do not give anything. We identify the centre of the German network of interlocking directorates as a place of social cohesion in which this collective action problem is effectively solved.

The article is structured as follows: In Section 2, we develop hypotheses about the determinants of corporate donation strategies. Section 3 describes the dataset and the methods applied. Section 4 presents the results. In conclusion, Section 5 discusses theoretical implications as well as avenues for further research.

2. Theory and hypotheses

We propose two particular theoretical ideas on the political economy of party donations. First, we interpret the willingness to donate as a collective action dilemma among firms. Secondly, we distinguish between two different aims of party donations: to support particular political camps, on the one hand, and to ensure against abrupt political change, on the other hand.

Donations come at a price, and the material costs are not their most important part. In fact, the average donation in our dataset amounts to approximately \in 55 000, adjusted to 2000 prices. This is a small amount of money for a large firm with a domestic value added of approximately \in 15 000 million, such as in the case of Daimler (formerly Daimler-Benz and DaimlerChrysler, respectively). However, immaterial costs add to the material costs: party donations are continuously and critically commented on in the media.⁴ They are criticized at the annual

³To our knowledge, the only other quantitative analysis of the determinants of party donations by German firms has been conducted by McMenamin (2010, 2012). While McMenamin's study has the advantage of comparing internationally (Australia, Canada and Germany), our analysis provides a more in-depth view because it includes much more firm-based information, such as sector affiliations and ownership structures.

⁴See for example Financial Times Deutschland, January 4, 2011, p. 10.

shareholders' meetings,⁵ and NGOs such as LobbyControl fight against corporate contributions to party finance.⁶ In many respects, due to critical public discussion, party donations run the risk of damaging the reputation of firms (see also Sabato, 1984 for similar evidence from a survey of Fortune 500 companies that did not maintain a political action committee (PAC) in Washington, DC).

Which incentives could make firms donate notwithstanding material and immaterial costs? Or in other words, which kinds of returns are firms likely to expect from their donations? In principle, the anticipated returns and the corresponding incentives to donate could be selective or collective in kind (see Olson, 1965, ch. 1). Selective incentives imply that donations lead to returns from which only the donating firm profits. Imagine an automobile firm that seeks a government contract for public staff cars or, for example, subsidies for a particular production location. In such a situation, a firm may decide to donate in order to influence the respective government decision. Another example of such narrow, short-term returns affecting only the single donating firm is the desired appointment of a firm's representative to a governmental advisory board. Of course, if donations are directly traded against government decisions, this implies-strictly prohibited-corruption. But the relationship between donor and addressee may also have a rather middle-term time horizon and may be based on reciprocity rather than on a direct trade: firms may contribute to parties in order to increase the likelihood that they will eventually receive a return in the unforeseeable future. Note that the expected return is still selective in kind but blurred over time so that any corrupt relationship cannot easily be proven.

Although selective incentives are likely to be a part of the story, there is also another part. Consider the range of policies that firms could have an incentive to lobby for and again take an automobile firm as an example. An automobile firm relies on certain apprenticeship regulations that promote the supply of skills required in the industry. Also, it relies on environmental policies that are not too costly for automobile construction and consumption, and it surely is in favour of a business-friendly tax structure. In each of these examples, it is not a single firm, but groups of firms that benefit from the same regulation, that is, the incentive to engage in the respective lobbying is collective in kind. In such a situation, the readiness to donate is subject to an Olsonian collective action problem in which single firms face the incentive to free ride on the efforts of others. Therefore, the literature on PACs in the USA consistently modelled corporate political activity as

⁵See how the Dachverband der kritischen Aktionäre (umbrella organization of critical shareholders) attacked the party donations of the arms manufacturer Rheinmetall: http://www.kritischeaktionaere. de/368.html (accessed in June 2013).

⁶See the LobbyControl press release from 28 June 2011: http://www.lobbycontrol.de/blog/index.php/2011/06/parteispenden-mehr-transparenz-wagen (accessed in June 2013).

part of a free-rider dilemma among firms (see, for example, Lichtenberg, 1989, p. 33; Grier *et al.*, 1991, pp. 728–730; Grier *et al.*, 1994, pp. 915–916; Mitchell *et al.*, 1997, pp. 1098–1100; Hansen and Mitchell, 2000, p. 892; Hart, 2003, pp. 263–267; Scarrow, 2006, p. 6; Hart, 2011, Section 2).

Due to the discrepancy between individual cost and collective aims, the somewhat paradoxical conclusion is that donations meant to influence general regulations (from which more than just one firm is affected) should actually occur only rarely, if ever at all—even if we counterfactually assumed that all donors could be sure that their lobbying would be successful. This implies that the willingness to donate hinges on mechanisms solving the collective action problem. It is theoretically conceivable that firms engage in a dynamic interaction across time, where they reward each other for providing the collective good (by donating) or punish the defectors (even though one might wonder about the type of punishment). However, only if the outcomes were very high would a pattern of cooperation be expected to develop, that is, most firms would donate (Friedman, 1977; Taylor, 1987). Thus, the outcome of *all* firms donating regularly to the big political players is improbable.

So, several hypotheses follow. First, Olson (1965, p. 35) postulated a law of 'exploitation of the great by the small'. Large firms may be more willing to act in accordance with the collectively shared group interest, while smaller firms might be more capable of hiding behind the big ones and, therefore, of embarking on a free ride. Several quantitative studies on the determinants of political lobbying in the USA thus used firm size as a proxy for the ability to overcome the free-rider problem (see, for example, Hansen and Mitchell, 2000, p. 897, and several studies quoted therein).⁷ This state of the discussion makes us hypothesize that large firms should be more willing to donate and that their donations should be larger (hypothesis 1).

Secondly, Olson also argued that solving collective action problems is easier in small groups, for two reasons: transaction costs of overcoming collective action problems are generally lower when the number of group members is small, and so-called social-selective incentives, such as respect and honour, can be applied in small groups where participants are probably to know each other (Olson, 1982, p. 23). This reasoning is of particular importance in the branch of research on lobbying that does not use the firm but the entire industry as the level of analysis, arguing that lobbying should more likely occur in more concentrated industries with fewer members.⁸ While we cannot test this hypothesis with our data, we

⁷Interestingly, Mitchell et al. (1997, pp. 1099–1102) use a firm-size variable to test another hypothesis: they argue that size increases visibility, visibility increases organizational legitimacy and increased legitimacy might lead to increased readiness to donate.

⁸See Grier et al. (1991), Grier et al. (1994), Mitchell et al. (1997) and Hart (2003).

deduce another hypothesis from the same theoretical reasoning: certain norms of behaviour in groups can be enforced more efficiently through dense networks (Coleman, 1990). Interlocking directorates (managers of firms who act as supervisory board members of other firms, i.e. management ties) establish a company network with a small group of interacting firms in its centre, in which social-selective incentives may effectively apply. Therefore, firms in the centre of the network of interlocking directorates may be capable of overcoming the collective action problem and, therefore, of action in the common political interest of business. Evidence for this is shown, for example, in the work of Mizruchi, who argues that one of the several functions of management ties between firms is 'to facilitate the political unity necessary for effective political action' (Mizruchi, 1996, p. 280). Comparative political economy has shown that the German network of interlocking directorates has been exceptionally dense.⁹ Hence, we hypothesize that firms in the centre of the company network should be more willing to donate and that their donations should be larger (Hypothesis 2).

A third hypothesis on the determinants of overcoming the collective action problems derives from the literature on the separation of management and control (Berle and Means, 1932; Burnham, 1941). As corporate governance research has shown, the extent to which managers are effectively controlled by large shareholders affects a multitude of dimensions of firm behaviour (Shleifer and Vishny, 1997; Becht et al., 2005). The first to hypothesize that the separation of ownership and control influences the readiness to donate to parties was Hart (2003, p. 281): 'It might be worthwhile experimenting with variables that measure some personal characteristic of the CEO, perhaps something as simple as whether he or she is the founder of the firm'. Party donations do not stem from the salaries of hired managers but from the firms' value added. Managers who are also owners of the firm (or effectively controlled by owners) may therefore be more sensitive to the material and non-material costs of donations, while hired managers without firm ownership (or who are not effectively controlled by owners) may be more willing to donate. The more diffused firm ownership is, the less direct control derives from owners (Berle and Means, 1932; Shleifer and Vishny, 1997). Therefore, we hypothesize that firms should be more willing to donate and that donations should be larger when the firm's ownership is diffused (Hypothesis 3).

Besides the dynamics derived from the collective action problem of firms, we also look closer at the objectives of corporate political lobbying. This is where the disagreement between power resource and VoC scholars, briefly described in

⁹The network core consists of a 'reciprocal clique' of mutually interlocking directorates, mainly consisting of financial firms that send significant numbers of managers to the supervisory boards of firms on the periphery of the network. See Windolf and Beyer 1996, Beyer 1998, and Streeck 2009: ch. 6, as well as the visualization of the German company network in Höpner and Krempel (2004).

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Section 1, arises. We suggest distinguishing between two different objectives: first, to selectively support one political camp (and implicitly neglect the other) in order to contribute to the organizational health and electoral success of the respective parties¹⁰; and secondly, to groom the whole political landscape, an objective implying donations to the party camps on both the left and the right. Power resource theorists provide good reasons why firms should favour the political camp on the right side of the party spectrum. The left–right distinction originated in the conflict between labour and capital, and comparative policy research confirms that left and right governments differ with respect to (re-)distributive policies, in particular welfare state policies (Huber and Stephens, 2001; see also Budge *et al.*, 2010 on the incentives that parties face to remain distinctive). In times of extraordinary competitive pressures (such as those deriving from globalization), the willingness to polarize along the left–right axis should be particularly pronounced. According to this consideration, firms should—in general—donate more to the right political camp than to the left.

More specifically, are there any firm-level features that should make the political preference for the right side of the party spectrum particularly pronounced? We hypothesize that this should be the case when firms are family owned or belong to the financial sector (Hypotheses 4 and 5, respectively). The reasoning behind the family-ownership expectation comes from the sociology of management. The German sociologist Hartmann (1968, pp. 17–18) argued that hired managers, on the one hand, and family owners, on the other hand, are backed by two different forms of authority. While the hired manager's power is based on 'functional' authority, the power of the family owner who has inherited his or her property is founded on so-called creditive authority, the latter being accompanied by conservative political values. This may lead family-owned firms to be more willing to donate to the right side of the political spectrum. We also hypothesize a particular willingness to donate to the right when firms belong to the financial sector. The arguments for the financial sector hypothesis stem from the political economy of finance. For historical reasons, countries such as Germany are characterized by a particular hostility between Social Democrats and the financial sector. Before the 1990s, German Social Democrats called for legislations to curtail the 'power of the banks',¹¹ and before the 1980s at least, left-wing Social Democrats had favoured the nationalization of large banks. This leads us to hypothesize that a particular preference for the right-wing political camp exists when firms belong to the financial sector.

¹⁰Empirical studies consistently indicate that the amount of money a party can spend in campaigns is related significantly to its electoral success (for the British example, see Fieldhouse and Cutts 2008: 370).

¹¹According to the Berlin party manifesto of 1989, one aim of Social Democratic economic policy was to 'cut back the banks' and insurance firms' influence on basic economic decisions' [*Grundsatzentscheidungen der Wirtschaft*].

Hypotheses	Theoretical background	Expectations
Size hypothesis	Collective action theory	On average, more and larger donations when firms are larger
Network centre hypothesis	Collective action theory, social network theory	On average, more and larger donations, the more firms' directors hold posts on the supervisory boards of other large firms
Dispersed ownership hypothesis	Collective action theory, managerialism theory	On average, more and larger donations, the more diffused the ownership of firms
Family ownership hypothesis	Power resource theory, sociology of manage- ment	On average, more and larger donations to the right side of the political spectrum, the more firms are family owned
Financial sector hypothesis	Power resource theory, political economy of finance	On average, more and larger donations to the right side of the political spectrum if firms belong to the financial sector, compared with all other sectors
Insurance against abrupt change hy- pothesis	Varieties of capitalism	On average, more and larger donations all over the political spectrum if firms belong to the sector s of mechanical engineering or automobile construction, compared with all other sectors

Table 1 Hypotheses on the determinants of donation strategies

Strengthening one particular political camp is not the only possible motive behind party donations. If the aim behind all party donations was to boost one political camp vis-à-vis the competing camp, donations over the entire political spectrum would obviously be counter-effective. Such donation strategies exist, however, and such an 'insurance strategy' makes sense in the light of varieties of capitalism theory. According to Hall and Soskice (2001, pp. 56-60), globalization increased both the economic vulnerability of firms and their preference for preserving the institutions on which their competitive advantages rely. Such a preference for institutional predictability rather than abrupt institutional change makes donations across the political spectrum-'pragmatic' rather than 'ideological' donations, in the terminology of McMenamin (2012, pp. 6-8)—a rational strategy. Beyond this, VoC theorists also argued that coordinated market economy (CME) and liberal market economy (LME) institutions provide competitive advantages for different sectors. CMEs such as Germany, in the view of Hall and Soskice, provide certain institutional advantages for sectors that rely on 'incremental' rather than 'radical' innovations, such as mechanical engineering and automobile construction (an argument that is rooted in the early literature on social systems of production, see Sorge and Streeck, 1988; Streeck, 1991). Therefore, we expect the willingness to donate across the entire political spectrum to be particularly pronounced in these two sectors (Hypothesis 6). Table 1 sums up our hypotheses.

3. Data and methods

Our database covers all donations to large German parties between 1984 and 2005 from the 100 largest German companies above the transparency threshold of €10 000. Data sources are the parties' annual reports (various years). A sample of the 100 largest German firms is published every two years by the monopoly commission (Monopolkommission). The monopoly commission's criterion to identify the largest firms is domestic value added. This means that the top 100 firms are not the same every year. Indeed, in our time period from 1984 to 2005, only 45 companies were continuously in the top 100 and 184 companies in at least one period. This sample has several advantages. First, the companies included represent a sizeable share of the German economy, namely about 18.4% of the domestic value added of all German firms.¹² Secondly, in contrast to samples based on sales, financial and trade firms are included. Thirdly, in contrast to samples based on the DAX, non-listed firms are included, too.¹³

Many firms donate more or less regularly, but not every year, and donations tend to be particularly numerous in election years. Taking this into account, we do not analyse the firms' donations year by year, but by election cycle. Since information provided in annual reports does not display the precise donation dates, we proceed as follows: every observed time period starts with a year after an election year and ends with the next election year. Therefore, we distinguish the six time periods as 1984-1987, 1988-1990, 1991-1994, 1995-1998, 1999-2002 and 2003-2005; by and large, these match the tenth to fifteenth Bundestag legislatures.¹⁴ As a consequence, the dataset consists of 600 observations (100 firms in six time periods). For every observation, the database indicates whether donations were provided, the donation amounts and how the donations were distributed among parties (percentages and euro amounts adjusted to 2000 prices). Of the 600 observation points, 125 are cases in which the respective firm donated (21%); in the other 475 cases, no donations were given (79%). The frequency of donations by the 184 different companies equal 0 for 121 companies, 1 for 31, 2 for 14, 3 for 11, 4 for 4, 5 for 1 and 6 for 2. Further descriptive information about the dependent variables is provided in Section 4.1.

In addition, the dataset entails information about the firms' structural features (our substantial explanatory variables and several controls). Besides domestic value added (our measure for firm size in 2000 euro prices) and economic sector affiliations (with

¹²This number is averaged over the 1978–2009 period, see p. 105 of the 2008/2009 monopoly commission report.

¹³The dataset encompasses corporate donations only, not donations provided by managers. See Supplementary data appendix section B-I.

¹⁴Whenever two monopoly commission reports were published within an observation period, we use the firm sample of the latest available report.

mechanical engineering selected as the reference category as it encompasses most companies), we include data on ownership structures: the percentages of shares held by public authorities (national, Länder [German states] and municipal), by other firms belonging to the 100 largest firms, by foreign firms, by private persons and families, and by diffused owners. Another variable, management ties, measures whether and to what extent firms belong to the centre of the network of interlocking directorates. This indicator is defined as the number of managers (board members) of the respective firm that are at the same time supervisory board members of other top 100 firms. For example, in 2004, managers of the board of airline carrier Deutsche Lufthansa were, at the same time, members of the supervisory boards of insurer Munich Re, car manufacturer BMW, and airport operator Fraport, so that the 2004 entry of the respective variable is therefore '3'.¹⁵ All information stems from the monopoly commission's reports (various years), and all variables cover all observation points (N = 600 for each described variable). The independent variables are rescaled to range from 0 to 1, so that the magnitude of their influence can be compared (see also appendix for a list of variables and Table A1 for further descriptives).

The dataset is an unbalanced panel because the number of observations per firm can vary between 1 (44 firms) and 6 (45 firms that were among the top 100 during all periods) with a total of 184 firms. Therefore, not all observations are independent from one another. The intra-class correlation coefficient of an empty multilevel model is 44%, indicating that observations from the same firm are moderately similar across time. We deal with this by clustering the standard error of our estimates for each company. In addition, we apply a Heckman selection regression analysis (see Heckman, 1979) that allows us to incorporate the decisions about whether to donate at all and about the amount to donate in one estimation step (for similar approaches in the US context, see Lichtenberg, 1989; Grier et al., 1994; Mitchell et al., 1997; Hansen and Mitchell, 2000; Hart, 2001). This strategy is sensible because it mirrors the plausible firm-level decision procedure first to decide about whether to donate at all and then about the sum to give, and it corrects for the selection bias that would occur if the regression dealing with the amount of the donation treated a zero as an actual amount given. Our hypotheses entail predictions both for the donation decision and for the amount. Thus, for the sake of simplicity, we include the same set of variables for both equations. The only difference is that we exclude public ownership from the outcome equation because party donations are prohibited once the public share reaches the threshold of 25% (Parteiengesetz, §25(2) clause 3).

Finally, for a categorical multinomial logistic regression, we distinguish between three types of spending patterns: (i) no donations at all, (ii) donations

¹⁵In additional analyses, we also included a variable with the number of board members of a firm from another top 100 firm. It correlates with r = 0.26 with the main variable. However, this 'receiving' number of directors does not pick up any of the variance and is thus not included in the main analysis.

predominantly (defined as 90% or more of all donations) to the parties on the right, that is, the Christian Democrats (CDU, CSU) and the Liberals (FDP) and (iii) donations to less than 90% to right-wing parties. With data from the Comparative Party Manifesto Project (Volkens *et al.*, 2012), we can show that for all elections between 1983 and 2005, the FDP and CDU/CSU were more in favour of free-market-economy principles than the other three parties. This warrants donations to either of these parties as a bourgeois pro-business donation.¹⁶

Ninety per cent is an arbitrary cut-off point, driven by a gap in the percentages found in the data between 89% and 91%. It is meant to create one category including all who give the overwhelming share of their donations to the bourgeois parties, because we did not want to count the symbolic cross-party donors as substantive ones.¹⁷ We conducted additional analyses with a lower cut-off point of 75% for the last regression analysis (available upon request). The lower threshold attenuates our results as one might expect. The expected effects become smaller and less precise. Among those who give less than 90% to the right-wing parties are five cases in which donations were exclusively given to the left side of the political spectrum, that is, to the Social Democrats (SPD) and the Greens.¹⁸ We checked whether the exclusion of these observations changed our results; they did not (results available from the authors). Henceforth, we treat these five cases as cross-party donors for sake of simplicity. Alternatively, we could have run a Heckman selection model on the percentage given to the right as an alternative to the multinomial regression. Since such a dependent variable is highly skewed and censored at 0 and 100, that technique brings with it more statistical problems than it solves.¹⁹

4. Analysis and results

4.1 Descriptive evidence

Table 2 presents some descriptive evidence across time and across the three different types of donation patterns. For the whole time period (bottom row), 475 out of 600 legislature-firm observations reveal a 0, meaning that in 79% of all instances when

¹⁶See Supplementary data appendix B-II.

¹⁷One firm that notoriously donated substantive amounts of money to the right side of the political spectrum while also giving tiny amounts to the left side is Deutsche Bank in all election periods between 1984 and 2002 (with, e.g., only 1.4 percent going to the left side in the 1999–2002 period). Other firms that implemented similar donation strategies are Henkel in the 1984–87 period, BMW in the 1995–98 period, and Bosch in the 1999–2002 period. It would be obviously misleading to treat such donations as 'grooming the landscape' donations.

¹⁸See Supplementary data appendix B-III.

¹⁹For a discussion of other modeling techniques, see Supplementary data appendix B-IV.

		No donation	\geq 90 percent of donation amount to parties	<90 percent of amount to right parties	Overall on average	
		No. of observations	Average amount (average amount per year) <i>No. of observations</i>	Average amount (average amount per year) No. of observations	Average amount (average amount per year) <i>No. of observations</i>	
Legislature	1984–87		324,829 (81,207)	111,898 (27,975)	32,700 (8,175)	
		86	8	6	100	
	1988-90		165,614 (55,205)	403,977 (134,659)	36,961 (12,320)	
		82	15	3	100	
	1991-94		116,985 (29,246)	1,618,215 (404,554)	59,271 (14,818)	
		75	23	2	100	
	1995-98		162,336 (40,584)	245,261 (61,315)	48,841 (12,210)	
		74	18	8	100	
	1999-2002		230,423 (57,605)	411,872 (102,968)	81,194 (20,299)	
		75	12	13	100	
	2003-5		123,146 (41,049)	601,106 (200,369)	73,510 (24,503)	
		83	6	11	100	
	All legislatures		173,164 (48,101)	442,985 (120,816)	55,413 (15,113)	
	J	475	82	43	600	

Table 2 Amount and frequencies of donations by the top 100 German companies across time in figures adjusted to € prices of the year 2000, 1984–2005

the top 100 firms in Germany could have given money, they did not. This piece of evidence is quite informative with regard to the collective action dilemma: even among the very large firms, many free ride most of the time.²⁰ The bottom row also discloses that the average firm contribution per legislature was just €55 413 (adjusted to 2000 prices)—with the maximum being €3 007 770 in 1991–1994 by Daimler-Benz. Thus, firms gave very little money compared with the magnitude of their value added. Finally, among the 125 donating instances, the predominant pattern (82 of all instances equals 14%) was to support the parties on the right side of the spectrum, the CDU/CSU and the FDP, and to neglect those on the left (see also McMenamin, 2012, p. 23). Only 43 instances (7%) reveal a crossspectrum donation pattern. Among those 43, in only five instances were donations given mainly to the left-wing parties SPD and the Greens. The other 38 instances are 'grooming patterns' in which significant donation shares (i.e. more than 10%) went to both sides of the political spectrum. In general, this implies that the main split between German corporate donors is not between supporters of the left and the right-between 'yankees' and 'cowboys', as Burris and Salt (1990) once put it in the US context (see also Ferguson and Rogers, 1986, pp. 221-228)²¹--but between supporters of the right and landscape groomers.

Let us now look at some trends across time (Table 2). First, the average donation amount in adjusted euro prices increased from 32 700 in 1984–1987 to 73 510 in 2003–2005. This pattern does not change once we look at the average annual donations that increased from €8175 to €24 503. Secondly, the number of crossspectrum donors increased from between 2 and 8 in the Kohl era (1984–98) to 13 and 11 in the Schröder era (1999–2005). The average annual amount given by these cross-spectrum donors did not follow any particular trend, though. If anything, the average amount tended to decrease with more companies joining the across-spectrum group. However, the average annual amount was always larger for those donating across the spectrum than for those giving to the bourgeois

²⁰McMenamin (2012: 23) reports that the readiness to donate is larger in Australia and Canada. Also, research on PACs in the US reveals larger shares of politically active firms. Mitchell et al. (1997: 1103) report that 270 of the Fortune 500 firms had a PAC in 1988 (compare also Hansen and Mitchell 2000: 895). However, the numbers are hardly comparable due to the diverging institutional patterns, party systems, and cultures. In addition, we cannot rule out the possibility that the German transparency threshold of 10 000 € hides a substantial number of firms that would be counted as donors in the US, Canadian, and Australian cases.

²¹According to this view, politically active US firms can be divided into a left-liberal camp that consists of large, monopolistic, internationally oriented and capital-intensive firms ('yankee') and a conservative camp that consists of small, non-monopolistic, domestically oriented and labor-intensive firms ('cowboy'). However, in their analysis of party donations between 1952 and 1982, Burris and Salt (1990) found little evidence for this traditional view. Rather, their data revealed the dominating pattern to be support for conservative candidates.

parties, except for the earliest legislature 1984–1987. Therefore, spending across the spectrum often meant giving more, too. Thirdly, the number of non-givers remained fairly stable between a minimum of 74 in 1994–1998 and a maximum of 86 in 1983–1987. In summary, the increase in the average amount given to parties comes from an increase in the number of companies giving more as well as giving across the entire spectrum. At first sight, this picture seems to support the notion that the change in government from right-centre to left-centre in 1998 was reflected in a greater willingness to groom all parties across the political landscape rather than just the ideologically closer bourgeois parties. However, the multiple regression analysis will reveal that company characteristics explain these changes, not the period effect of government change.

4.2 Multiple regression analysis

After these initial observations derived from descriptive evidence, Table 3 shows the estimates of a Heckman selection model imitating the simultaneous company decision about whether to donate at all and, if so, the amount of their donations (as well as about the distribution across the spectrum that we will analyse next). The table contains two sets of estimates, one from the selection equation of whether companies donate or not (can be read like a probit table with additional average marginal effects, i.e. the average change in probability of donating associated with a change from minimum to maximum averaged across all cases) and the outcome equation for the predictions about the size of their donation (can be read like OLS estimates). The likelihood ratio test for the independence of the two equations demonstrates that the estimates show a systematic connection, which warrants such a selection model approach for these data.

Since our hypotheses referred to the likelihood of a donation and to the size of the donation, we interpret the estimates from both equations simultaneously. The size hypothesis implies that larger companies should be more likely to donate and to donate larger amounts. This is supported by two positive coefficients in both equations for the logarithm of domestic value added. However, for the outcome equation only, the coefficient is significant, with the amount of donation increasing by about \in 570 000 if the domestic added value is changed from the minimum (\in 166 million) to the maximum (\in 18 879 million), whereas on average the likelihood of donation only insignificantly increases by 7%. The network centre hypothesis holds that the stronger the management of the firm is connected to other large firms among the top 100, the larger should be the likelihood and the amount of the donation. This hypothesis is clearly supported: when the management ties variable is changed from the minimum (no directors sent to the supervisory boards of other firms among the top 100) to the maximum (directors sent to 35 other top 100 firms), the likelihood of donating increases on average by 52% and the amount

	Selection equation		Outcome equation	
	Probit coefficients	Av. marginal effects	OLS coefficients	
Log (domestic value added)	0.341 [0.52]	0.07	566521.2** [282477.43]	
Sectors (BL = mechanical engineering) Banking	0.207	0.05	95714.9	
Car manufacturing	[0.23] 1.367*** [0.50]	0.30	[132743.30] 211257.1 [262984.72]	
Chemical production	-0.0670 [0.30]	-0.01	179932.9 [114061.29]	
Energy production and trade	-0.299 [0.34]	-0.07	-3233.9 [144181.10]	
Trade	-0.274 [0.30]	-0.06	42294.3 [114060.25]	
Construction	0.379 [0.46]	0.08	- 1589.8 [164473.43]	
Food	0.441 [0.36]	0.10	31119.2 [121678.92] 106005 5	
	[0.30]	-0.12	[134771.82]	
Public ownership in %	-0.826** [0.34]	-0.18		
Ownership by other top 100 firms in %	-0.0116 [0.44]	0.00	-88991.1 [202103.80]	
Foreign ownership in %	-1.221** [0.48]	-0.27	352920.1 [253653.02]	
Family ownership in %	0.475 [0.30]	0.11	-162856.4 [126460.76]	
Dispersed ownership in %	0.134 [0.34]	0.03	-232173.0 [154596.63]	
Personnel Management ties	2.335*** [0.57]	0.52	871886.3** [354367.44]	
Control variables Legislatures (BL 1984-87)				
1987-1990	0.169 [0.21]	0.04	- 165011.2 [107397.00]	
1990-94	0.550** [0.24]	0.12	-216185.2* [117025.21]	
1994-98	[0.26]	0.13	- 332045.4** [155458.17]	

Table 3Heckman selection model of propensity and amount of donation to German parties by top100 companies, 1984–2005

Continued

	Selection equation		Outcome equation	
	Probit coefficients	Av. marginal effects	OLS coefficient	
1998-2002	0.661*** [0.25]	0.15	– 154301.7 [158451.89]	
2002-5	0.346	0.08	- 58872.0 [155590.35]	
Constant	- 1.986*** [0.40]		561339.3** [280531.87]	
Mill's Ratio (λ)		-405553.2*** [131276.5]		
Ν		600		
AIC BIC		4105.4 4294.4		

Table 3 Continued

Likelihood Ratio Test on the independence of the two equations strongly suggests rejection with p < .001. Standard errors clustered by companies in brackets, * p < 0.10, ** p < 0.05, *** p < 0.01 for two-tailed tests.

of donation by about €870 000. This effect partially stems from banks like Deutsche Bank or Dresdner Bank having been very active on this dimension (having large, influential values on the variable). If the management ties variable is taken out, the average marginal effect of the banking dummy increases to 24% and the coefficient in the outcome equation increases to 272 252 (s.e. = 179 066, P (two-tailed) = 0.128).²²

The dispersed ownership hypothesis suggests that companies with diffused shareholders should be more likely to donate and donate more. This hypothesis is not supported because the coefficients of dispersed ownership are nowhere close to being significant. Also, the amount of shares held by family owners seems to make only a small difference for the likelihood and the amounts of donations. The coefficient of the selection equation is positive and almost significant with a *P*-value of 0.115. So, greater family ownership tends to correlate with a higher likelihood to donate. However, it does not increase the amount that is given to parties. We find another significant effect among one of our control variables, which suggests that foreign ownership decreases the likelihood of firm donation.²³

²²For an overtime analysis of the effect of this variable, see Supplementary data appendix B-V.

²³This resonates with US findings from the 1970s and 1980s as well as British evidence from the 19th into the 20th century (Mitchell et al. 1997; Hansen and Mitchell 2000; Pinto-Dushinsky 1981): The more foreign controlled a company is, the less its decisionmakers contribute to the domestic political arena.

The hypotheses about the financial sector and the insurance against abrupt change both predict more frequent and larger donations within certain sectors. However, none of the evidence supports the predictions about the amount of donations because we see only significant effects on the likelihood of donating. For automobile manufacturing, the sector with the most active companies according to the model, we find a strong positive effect (plus 30%) compared with the baseline category 'mechanical engineering'. Compared with the least donating sector 'other', the companies in the automobile sector are on average even 42% more likely to give, all other things being equal. The sector of mechanical engineering lies at the median position number five of all nine sectors, which is somewhat lower than what we would have expected from this crucial sector of the German model. However, when compared with the least active 'other' sector, the probability is still 12% and statistically significant.²⁴ The high donation likelihood of banks is reflected in their fourth rank of the likelihood to donate. Compared with the lowest sector 'other', banks are on average 17% more likely to donate, and the difference to the top-ranked car sector is statistically significant at the 0.05 level. There are some sectors whose companies we did not expect to show any particularly higher propensity to donate, namely construction (rank 3) and food (rank 2). Thus, only some of the predictions find support because the sectors of interestautomobile, mechanical engineering and banking-only tend to have more active companies. As to the amount of donation, firms in the automobile sector, ceteris paribus, give the largest contributions.

For the control variables of the legislature, we can identify some dynamics. In the legislatures 1990–2002, donations were more common than in the 1980s or in 2002–2005, but the differences are rather small and do not correspond with the change in government, a pattern we have seen in the descriptive evidence.²⁵ For the size of the donations, the earliest legislature 1984–1987 and the 2003–2005 legislature have the biggest sums once the firm characteristics are controlled for. So, we see somewhat more intense spending during the high reign of Chancellor Helmut Kohl. Therefore, the patterns from the descriptive evidence stem from differences in the composition of the sample with regard to our other independent variables.

Figure 1 displays the graphical presentation of a different, multinomial logistic regression analysis. The nominal dependent variable has the values 'no donation', '90% or more of the donation to CDU/CSU or FDP', and 'less than 90% to them'. The most common category of the dependent variable, no donation at all,

²⁴The lower than expected rank of 'mechanical engineering' may be due to the more heterogeneous nature of this sector than some of the other theoretically less interesting sectors.

²⁵McMenamin's (2010: 8-9) data show the same pattern: surprisingly, German donation patterns are not significantly affected by government changes.



Figure 1 Change in predicted probabilities in donating predominantly to bourgeois parties and donating across the spectrum (rather than not donating at all), multinomial logistic regression. McFadden $R^2 = 0.231,600$ observations, standard errors clustered by firm, baseline category of the dependent variable = no donation, 'mech.' = mechanical engineering sector; displayed are the predicted probability change of a given category if the independent variable is moved from minimum to maximum. Variable labels with an asterisk signify at least one coefficient that is significant at 0.10 level for a two-tailed test. For the full regression table, see the Appendix.

is used as the baseline. Two coefficients are estimated per variable, each describing a single contrast between one of the other categories and the no-donation category. The graph shows two bars per variable. The top one captures the change in the predicted probability of donating to bourgeois parties only, the bottom one captures the change of donating across the whole spectrum when the independent variable is changed from the minimum to the maximum. When the variable has at least one coefficient significant at the 0.10 level, the labels are asterisked. Mechanical engineering, the modal category, serves as the baseline for the sectoral variables, meaning, for example, that the automobile industry has a 26% higher likelihood of donating across the spectrum rather than not donating, compared with mechanical engineering, and a 5% higher likelihood of donating to the right, compared with that baseline.

Recall that some of the hypotheses pertained to the type of donation behaviour; let us revisit them one by one. First, the family ownership hypothesis finds support: when family ownership goes from 0 to 100%, the predicted likelihood of giving to right-wing parties only increases by 13%. Since the contrast is negligible between the across-spectrum pattern and no donation at all, the evidence suggests that family ownership significantly predicts the difference between no donation or donation across the spectrum, on the one side, and donation to right-wing parties. Secondly, the financial sector hypothesis does not seem to find any support because companies in the banking sector are not much different from those in the sector chosen as the baseline. However, there is a large effect (plus 63% higher likelihood of giving to the bourgeois parties) associated with the number of management ties (directors sent to the supervisory boards of other top 100 firms). Since the extreme values of this variable are very much dominated by banks (see the Heckman analysis above), it is worthwhile to take the variable out to measure the extent to which its effect is confounded with the effect of the banking sector (see Supplementary data Figure S1 and Table S2). What happens is that the banking dummy gets the expected, significant effect of donating predominantly to the bourgeois parties with an average marginal effect of 10%, compared with the sector of mechanical engineering. So, the centre of the German company network, predominantly populated by financial companies, prefers the right side of the political spectrum.²⁶ Thirdly, for the hypothesis on insuring against abrupt change, there is some mixed support. Car manufacturers are 26% more likely to give across the spectrum than not to donate, compared with the sector of 'mechanical engineering'. Since the difference between no donation and donation mainly to bourgeois parties is negligible, automobile producers clearly prefer the grooming pattern over no donation or giving to the right, compared with 'mechanical engineering'. However, the predicted probabilities of an average automobile company that is otherwise equal to other companies are 61% no donation, 12% predominantly to the right and 27% across the spectrum. They remind us that no donation, even for these companies, carries the highest model-based predicted likelihood. In comparison, the predicted probabilities for a mechanical engineering firm are 90% no donation, 7% to the right and only 3% across the spectrum. Again, the findings support the expectation with regard to the car industry but not to mechanical engineering, as was the case in the previous regression analysis.

One other remarkable finding concerns the variable domestic value added; it is positively associated with donating money across parties and negatively with giving predominantly to right-wing parties. The more economically potent a company is, the more it turns towards grooming the institutional landscape and away both from not donating and from donating to the right.

To summarize the findings for the two analyses, we do not find support for the dispersed ownership hypothesis. Unequivocal support exists for the network centre hypothesis since companies with boards featuring more interlocking directorates are more likely to donate and to give more. Mixed support can be shown for the size hypothesis, because domestic value added is strongly correlated with the amount

²⁶See Supplementary data appendix B-VI for a comment on the reform of the capital gain tax for companies in financial services.

of donations, but not the incident of donation.²⁷ The patterns for the financial sector and car manufacturers support parts of the predictions of the financial sector hypothesis and the insurance-against-abrupt-change hypothesis, especially with regard to the donation probability and type of spending for bourgeois (banks) or across the spectrum (car manufacturers). However, the patterns of donation probability and spending type encountered for mechanical engineering are not as clear.

5. Discussion

Two leading questions have guided our analysis: How do large German firms overcome the collective action dilemma that is inherent to party donations? What do the donation strategies tell us about the political preferences of firms? Our findings have revealed clear answers to the first question. Rather than firm size or the separation of ownership and control, it is the presence in the centre of the network of interlocking directorates that makes firms overcome the collective action dilemma. The more managers the firms send to the supervisory boards of other firms among the 100 largest German companies, the more likely it is that they express their political preferences by donating to parties, a finding that clearly resonates with studies on the UK and the USA which show that personally connected firms are at the forefront of campaign contributions (Mizruchi, 1990, 1996; Useem, 1984).

In this way, our analysis contributes to research on the functionality of networks of interlocking directorates. We find evidence that management ties among firms transcend the narrow perspectives of firm-specific interests and facilitate representation of the overall interests of business (Windolf and Beyer, 1996, p. 225). In the inner circle of the corporate elite, overcoming free-rider situations is easier to achieve than among separated firms. In the words of Useem (1984, p. 55), the interlocking directorate 'discourages the specific and fosters the general', making business capable of political action. Although the size and the density of the German company network have clearly been declining since the early 1990s, the network still exists and has a core of active donors. However, if the on-going dismantling of 'Germany, Inc.'²⁸ would make the network entirely vanish, we would expect a declining readiness to donate as a consequence of declining cohesion, solidarity and 'class discipline' among German business.

Does the analysis of donation data help solve the disagreement between power resource theorists, who expect that firms in coordinated market economies should respond to competitive pressure by intensifying the class conflict (i.e. by polarizing

²⁷The finding does not clearly support the reasoning that firm size helps to overcome the collective action dilemma because higher amounts of donated money among larger firms may simply be due to their larger cash flows.

²⁸See Beyer (2004), Höpner and Krempel (2004) and Streeck (2009: ch. 6).

along the left-right axis), and VoC theorists, who predict that firms should respond by entering into cross-class coalitions in order to protect the given institutional landscape? The different preferences should translate into different donation strategies: while the 'power resource firm' should asymmetrically strengthen the right-wing side of the political spectrum to the disadvantage of the left (thereby promoting change), the 'varieties of capitalism firm' should donate all over the political landscape (in order to prevent abrupt change).

Our analysis has revealed that the donation strategies of German automobile firms meet the predictions of VoC theory remarkably well. Not only do car manufacturers distribute their donations over the entire political spectrum, they also bring their political preferences to bear with particular emphasis, that is, their likelihood to donate is large.

However, we must not confuse the behaviour of automobile firms with the German industry as a whole. The power resource logic has *at least* as much a place in German business as the varieties of capitalism logic. First, the median donation that German firms give to parties is directed to the right side of the party spectrum (to the Liberals and to the Christian Democrats). Throughout the observed time period, the number of donations given mainly to the right side of the political spectrum was nearly double as high (82) as the number of donations given to both sides of the party spectrum (43).²⁹ Secondly, while the VoC predictions hold for the automobile industry, they do not hold for the mechanical engineering sector in which both the predicted readiness to donate and the readiness to distribute donations all over the political spectrum are only at the median of nine sectors. This is remarkable because mechanical engineering, besides automobile construction, comes particularly close to the ideal-typical description of German-style 'diversified quality production'. But the readiness to 'groom the political landscape', from which we argue that it partly indicates a particular preference for institutional stability, seems to be much more typical of automobile construction than for either the whole export sector or large firms as a whole.

Thirdly, the network centre of interlocking directorates is associated with politically polarizing donations. The decisive actors in the centre of the German company network are financial firms. However, our estimates suggest that the respective firms do not favour the right side of the political spectrum because they belong to the financial sector, but rather because they are personally interwoven.³⁰ Interestingly, this implies that the mechanism that helps large firms overcome the collective action dilemma is also partly responsible for the politically polarizing

²⁹See the last row of Table 2.

³⁰Recall that the financial sector dummy gets the expected effect of significantly leading bourgeois donations once the management ties variable is dropped from the equation (see section 4.2 and Supplementary data appendix Figure S1).

distribution of donations among parties. Fourthly, our analysis has revealed an interesting effect concerning yet another feature that is at least as 'typically German' as the traditionally dense company network: family ownership (Achleitner *et al.*, 2009). Just as the sociology of management predicts, our evidence suggests that family owners tend to have conservative political preferences, which increases the likelihood that donations go to the right side of the party spectrum.

These findings are in line with McMenamin (2012), who compared the patters of corporate donations of German, Canadian and Australian firms. He identified typical German features to be an underdeveloped willingness to donate, a clear preference for the right side of the party spectrum, and stable donation patterns before and after government changes. Just like McMenamin, we suggest that donation strategies vary with respect to political systems, political cultures and production regimes. In our view, the elements of consensus democracy in the German political system may be responsible for both the low donation readiness and the stability of donation strategies notwithstanding government changes. In consensus-democracy countries, government changes do not radically translate into policy changes. This makes 'ideological' donations less effective and 'grooming the landscape' donations less necessary, the latter because a certain amount of insurance against abrupt change is built into the political system anyway.

Our findings push the state of research further because we were able to include a greater variety of firm characteristics. We expect that the revealed effects should vary from country to country. For example, a certain readiness to 'groom the land-scape' should exist in other countries as well, but we expect the variables predicting it to be a different set from the ones in the German coordinated market economy. In liberal market economies, if Hall and Soskice (2001, pp. 36-44) are right, financial firms and radically innovative firms in sectors such as biotechnology, rather than automobile firms, should have an especially pronounced preference for the stability of their production regime.

Overall, our analysis has two broader implications. First, donation data are an underestimated information carrier for political economy research (which also implies that party theorists should approach corporate donations to parties more from a political economy perspective). Indicators of firms' political preferences are extremely rare, which contrasts to the enormous theoretical significance that current research ascribes to employer preferences. Admittedly, donation data are not sufficient to assume the political preferences of firms, and they remain silent about *why* firms prefer to polarize or, alternatively, groom the political landscape. But they can valuably complement poll data and interviews with managers.

Secondly, as we have shown, it is not possible to ascribe *one* political preference to a heterogeneous entity such as German business, and we have no reason to believe

that the situation is different in other countries. Therefore, the question of whether businesses of certain countries prefer stability *or* political polarization is misleading. Rather, research efforts should be dedicated to identifying the relevant conflict lines among different *camps* of employers and to the relative weight of the camps. Again, this raises the problem of the lack of reliable data on firms' political preferences, a problem that will not be easily solved. However, we argue that the analysis of donation data, such as the one that we have performed for the German case, has the potential of bringing the discussion one step forward.

Supplementary material

Supplementary material is available at SOCECO online.

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Appendix: Definitions and sources of variables

Donation amounts: addition of the donations in the respective time period in euros and adjusted to 2000 prices. Five variables: donations to the CDU and CSU; donations to the SPD; donations to the Greens; donations to the FDP; donations to all Bundestag parties. All five variables: N = 600 (the respective 100 largest firms in six time periods). Data source: Parties' annual reports (various years).

Sector affiliations: Dummy variables. 1 = main economic activity of the firm belongs to the respective sector; 0 = main activity does not belong to the respective sector. Nine sector dummies: (1) Banking and insurance; (2) car manufacturing; (3) mechanical engineering, plant engineering, tool building, metalworking; (4) chemicals and pharmaceutical industry; (5) energy production and supply; (6) trade; (7) construction; (8) food; (9) other sectors. Data source: Reports of the monopoly commission (various years), firms' websites.

Ownership structures: Percentages of shares held by the respective types of owners. Six variables: (1) shares held by other firms among the 100 largest firms; (2) foreign blockholding; (3) public authorities (state, Länder, municipal); (4) families, private persons, foundations; (5) diffused ownership; (6) other owners. All five variables: N = 600 (the respective 100 largest firms in six time periods). Data source: Reports of the monopoly commission (various years).

Variable	Obs	Mean	Std. Dev.	Minimum	Maximum
Amount of donation	125	265 982.6	49 0945.8	10345.16	3007 770
Three types of donations (0, no donation; 1, \geq 90 % to right; 2, \leq 90 % to the right)	600	0.28		0	2
Logged domestic value added	600	0.45	0.19	0	1
Mechanical engineering	600	0.22		0	1
Banking	600	0.15		0	1
Car manufacturing	600	0.06		0	1
Chemical production	600	0.09		0	1
Energy production and trade	600	0.11		0	1
Trade	600	0.09		0	1
Construction	600	0.03		0	1
Food	600	0.06		0	1
Other sectors	600	0.19		0	1
Public ownership	600	0.12	0.29	0	1
Ownership by other top 100 firms	600	0.11	0.21	0	1
Foreign ownership	600	0.21	0.38	0	1
Family ownership	600	0.20	0.36	0	1
Dispersed ownership	600	0.26	0.34	0	1
Management ties	600	0.04	0.10	0	1
Dummies for legislatures	600	0.17		0	1

Table A1 Descriptives of all variables

Management ties: Personal ties between boards of the respective firms, defined as the number of supervisory boards of other firms among the 100 largest firms in which the respective firm has sent management board members. N = 600 (the respective 100 largest firms in six time periods). Data source: Reports of the monopoly commission (various years).

Election cycles: Dummy variables for the six distinguished observation periods. Every period starts with a year after an election year and ends with the next election year. Six period dummies: (1) 1984-1987; (2) 1988-1990; (3) 1991-1994; (4) 1995-1998; (5) 1999-2002; (6) 2003-2005. All six variables: N = 600.

Value added: natural logarithm of the domestic value added adjusted to euro prices in the year 2000 (measure for firm size). N = 600 (the respective 100 largest firms in six time periods). Data source: Reports of the monopoly commission (various years).