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THE VALUE OF POLITICAL CONNECTIONS IN THE FIRST GERMAN DEMOCRACY - EVIDENCE FROM THE BERLIN STOCK EXCHANGE

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The value of political connections in the first German democracy – Evidence from the Berlin stock exchange

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Abstract:

In this paper, we provide the first overview over all political connections for all firms listed on the Berlin stock exchange in 1924 and for the same sample of firms four years later. In contrast to anecdotal evidence which suggest that these political connections had a positive effect on firms' performance, an event study based on the election in December 1924 and May 1928 shows only little evidence that political connections had a positive impact on firm value. These results complement previous research emphasizing that political connections might have mattered less in democracies. Indeed, this seems true for Germany's first democracy - even though it was a very unstable one.

Keywords: Political Connections; Interwar Germany; Stock Market Performance

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The effectiveness of political connections in both democratic[1] and authoritarian regimes[2] in recent periods has been closely examined.[3] However, there has been less focus on historical episodes. In a seminal paper, Ferguson and Voth quantify the impact of an extreme political connection — to the National Socialist Party (NSDAP) – and show that firms that established political connections to the NSDAP before Hitler came to power experienced unusually high returns. [4] They outperformed firms without such connections by 5 to 8 per cent between January and March 1933. However, Ferguson and Voth's study covers a period in German history when the first democracy was in a steep decline and the prospect of Adolf Hitler becoming leader was increasingly credible.

This fits well recent research by Faccio, who has shown that political connections matter most in systems of restricted democracy, where there are high levels of corruption, barriers to foreign investment and weak institutions.[5] According to these findings and assuming that the first German democracy was less corruptible, one would clearly expect that political connections had a limited influence on firm value in the Weimar Republic. However, contemporary observers have suggested that political networks were already advantageous well before the rise of the NSDAP. In 1925 a journalist, using the pseudonym Morus, wrote in a left-wing weekly newspaper: *'Schau einer an, die sitzen gar nicht am Königsplatz, um das ganze deutsche Volk zu betreuen, die wollen nur das Brauereigewerbe oder die Klempnerinnung oder den Großgrundbesitz oder die Metallarbeiter versorgen?'*[6]

[1] Fisman et al., 'Estimating the value'; Acemoglu et al., 'Value of connections'.
[2] Li et al., 'Political connections'; Feng et al., 'Mixing business'.
[3] Further research in this area has looked at the existence and impact of bankers on supervisory boards as well as at the connections between different firms via supervisory board members (see, for instance, Fohlin, *Finance capitalism*; Windolf, 'Unternehmensverflechtung'; Windolf and Beyer, 'Kooperativer Kapitalismus'; Krenn and Marx, 'Kontinuität'), but not on the value added by having politicians on the boards. Furthermore, all of the above focused on samples of firms. We study all firms listed on the Berlin stock exchange.
[4] Ferguson and Voth, 'Betting on Hitler'.
[5] Faccio, 'Politically connected firms'
[6] 'Look at that, they are not sitting at the square of kings to take care of the needs of all German people. They just care about Breweries, the guilds of plumbers, great land owners or metal workers?' The *Königsplatz* (today's *Platz der Republik*) is the square were the parliament was located. Furthermore, he mentions that member bulletins of

In this paper we investigate whether contemporary observers were correct in thinking that political connections also paid off in the first German democracy, indicating limited democracy and weak institutions. We use an event study to identify the advantages of a political connection, by comparing the change in the stock price of those firms with a Member of Parliament (MP) on the supervisory board to that of the largest firms without a political connection, at the time of a general election. The Weimar Republic is generally regarded as turbulent and given the political and economic circumstances, two event periods qualify for this study: the elections in December 1924 and in May 1928.

Overall, we find little evidence that the anecdotal claims of certain lucrative political connections can be generalised, nor that investors valued firms' political associations in the first German democracy. Only the newly-established high quality connections seemed to add value to a firm, by generating significant positive cumulative abnormal returns in the weeks after the election. Other variables that measure political connections or the quality of a political connection are not significant if we compare them to a control group of unconnected firms, and to general market performance. These results indicate that the value of political connections in the first German democracy was limited, and may only be beneficial in times of turbulence or under certain special conditions. Taking Faccio's findings as a general rule, we can interpret our results as suggesting that the Weimar Republic was less corruptible than is generally assumed.[7]

Furthermore, with the exception of a recent paper by Grossman and Imai, research on political connections has paid little attention to differences in the quality of a political

economic associations proudly reported the number of politicians that were members of its organisation or board members of a firm. See *Die Weltbühne, 21*, 1925, pp. 29; *Die Weltbühne*, 24, 1928, pp. 256-258.

[7] Other recent studies on the value of political connections for Victorian Britain show mixed results: Braggion and Moore, 'Economic benefits', detect a significantly better stock market performance of firms with links to a Member of Parliament (MP), while Grossman and Imai, 'Taking the lord's name', restricting their analysis to banks, even find a negative effect on performance. In the likewise relatively democratic environment of interwar Japan, also only newly established links to the parliament proved valuable, despite the high level of overall connected firms; Okazaki and Sawada, 'Extent and implications'.

connection.[8] Thus, we aim to learn more about the types of political connections that mattered most. Indeed we find evidence that quality matters: more experienced politicians with more influential positions created a higher value than the average politician on a supervisory board.

Moreover, we provide the first systematic quantitative overview of the political connections of the firms listed on the Berlin stock exchange in December 1924, and those that were still listed in December 1928. By surveying the political status of nearly 19,000 supervisory board members and executive officers (CEOs), we provide a clear picture of the different quality of political connections. Overall, about 13 per cent of the firms had a politician on their supervisory board and about 12 per cent of the firms were connected to the current Government in 1924. These shares were somewhat smaller in 1928. The data reveal that larger and older firms with larger boards had a higher likelihood of having a political connection.

The paper is organised as follows. In the first section, the literature on political connections is reviewed, along with anecdotal evidence for the interwar years. The second section describes the political situation in Weimar Germany. An overview of sample firms, connected politicians and parties gives a general view of political connections at that time. Their actual benefits are revealed in an event study, after which the final section concludes.

[8] Grossman and Imai, 'Taking the lord's name'.

I

Generally, political connections are valuable for a firm, since they ensure that its interests are supported and represented politically. This support can take many different forms. Political connections might have facilitated preferential access to credit, as shown by Cull and Xu for present-day China and Khwaja and Mian for present-day Pakistan.[9] In a cross-country study including 35 countries over the period 1997-2002, Faccio et al. have found evidence that connected firms received better treatment from the government in times of crisis, with a higher likelihood of being bailed out.[10] Backman provides evidence of preferential treatment by government-controlled banks[11]; De Soto documents evidence of tax discounts, and Stigler discusses regulatory benefits.[12] The magnitude of such advantages depends on the political and economic freedom in that particular context.[13] In less free countries, connections are more widespread and there has been significant emphasis in the research on developing countries in south-east Asia[14], and China[15]. Still, links to politics proved likewise beneficial in terms of market valuation in democratic countries such as the United States.[16]

There is a lot of anecdotal evidence suggesting that a political connection likewise mattered in interwar Germany, and that contemporary observers knew about these potential advantages.[17] A well known example of preferential access to credit is the famous Barmat affair.[18] The two Barmat brothers, owners and CEOs of the Barmat company, made large profits during the hyperinflation of 1923, when they continued to expand their business and bought other firms.[19] The largest firm in their firm group was Amexima, a firm that mainly imported

[9] Cull and Xu, 'Institutions, ownership, and finance'; Khwaja and Mian, 'Politically connected firms'.
[10] Faccio et al., 'Political connections'.
[11] Backman, *Asian Eclipse.*
[12] De Soto, *The other path;* Stigler, 'Economic regulation'.
[13] Pantzalis et al., 'Political elections'.
[14] Fisman, 'Estimating the value'; Chen et al., 'Firm's political connection'.
[15] Li et al., 'Political connections'; Feng et al., 'Mixing business'.
[16] Fisman et al., 'Estimating the value'; Acemoglu et al., 'Value of connections'; Goldman et al. 'Politically connected boards'.
[17] Klein, *Korruption,* has recently collected famous cases of corruption in Interwar Germany.
[18] See for instance Klein, *Korruption,* pp. 239-252.
[19] Ufermann, *Könige der Inflation.*

food into Germany. After 1923, when the hyperinflation had ended, it suddenly became much harder to get access to credit and they did not have sufficient liquidity to support their new acquisitions. In 1924, it became public knowledge that the Barmat brothers had solved this problem by bribing officials and politicians with private credits or board memberships. Private banks, the Central Bank (Reichsbank) and the Post Office, which also granted loans, were all involved. For example, the Postmaster General, Anton Höfle (Centre party), received a private payment from the Barmat brothers. This payment was arranged with the help of an MP from the same party group, Hermann Lange-Hagemann. Lange-Hagemann was member of the board of several firms that were part of the Barmat group. In exchange, Höfle made a large loan to the Barmat company. Although Höfle had already repaid his private credit before he signed the loan for Barmat, he lost immunity and was arrested in 1924. He died in prison three months later. Hermann Lange-Hagemann left the Centre party, but stayed in Parliament. Many other politicians from different parties were involved in the scandal, the most famous being the former Chancellor for the Social Democrats, Gustav Bauer.

In the aftermath of this scandal, the Communist Party initiated a heated debate in the Prussian Parliament. They accused the Government of preferring to bail out firms whose leaders had well-established ties to politicians.[20] The debate included the bailout of Hugo Stinnes AG, which struggled after the death of its founder.[21] In the same year, Reemtsma, a cigarette producer, also seemed to benefit from political connections. The State increased taxation on warehousing of raw tobacco, but only if the tobacco was stored within a company. Reemtsma had already learned of the changes while the law was being debated. When the law came into effect, the company had already secretly outsourced its material stock, unlike many competitors. Moreover, it was rumoured that political connections prevented the firm from

[20] See also: Verhandlungen des Preussischen Landtags, 2. WP. Bd. 5, 95 Sitzung, 11. November 1925, 6267, 6326.
[21] Klein, *Korruption*, p. 223.

being accused of tax fraud.[22] A few years later, Reemtsma would again benefit from strong connections with the Ministry of Finance.[23] In 1929 the tobacco company wanted to take over the smaller cigarette producer Batschari, which had accumulated a huge tax debt. The Ministry of Finance, without any clear explanation, cancelled that debt.

Another well-connected firm was the Siemens & Halske Company. In the period of slow and uncertain economic activity following the First World War, the Berlin-based engineering company benefitted from contracts with the Federal Post to establish and develop the telephone network, which gave it a secure income. At the time, Siemens had a board member who was connected to the Government,[24] and the company enjoyed preferential treatment from the Postal Ministry throughout the 1920s.[25]

Considered together, theory, research from other countries and timeframes, and anecdotal evidence suggest that investors believed that political connections improved firms' performance via information advantages, support of business activities in general and protection against prosecution, thus increasing firm value.

II

The first German democracy is well known for its political and economic instability. Particularly in the early years, the country faced enormous problems. The Treaty of Versailles greatly reduced Germany's economic base – it lost 10 per cent of its population, 80 per cent of its iron ore resources and 40 per cent of its blast furnaces. Moreover, the Treaty imposed a huge financial burden in the form of reparation payments.[26] In addition to high unemployment rates and the virtual exclusion from international trade, the expansionary monetary policy constituted

[22] Klein, *Korruption*, pp. 421-427.
[23] Jacobs, *Rauch und Macht*, pp. 46-57; Klein, *Korruption*, pp. 426-430.
[24] Carl Friedrich von Siemens was an active politician for the German Democratic Party in the early 1920s.
[25] Feldenkirchen, *Siemens*, pp. 262-272.
[26] Wehler, *Deutsche Gesellschaftsgeschichte*, pp. 239-243.

another threat to the economy as well as to society, resulting in the hyperinflation of 1923.[27] On the other hand, the defeat in the First World War brought about important changes, such as the abolition of the monarchy and the introduction of universal suffrage. In contrast to Imperial Germany, the newly founded Weimar Republic was a true parliamentary democracy. Its central legislative body, the *Reichstag*, was more powerful than its predecessor. The Constitution had fewer federal elements and provided the Parliament with broader powers to control the government. Most notably, it appointed the federal government, which in the Empire had been in the power of the Emperor.[28]

Conflicts between social classes and cultural milieus characterised the whole period,[29] and were also apparent in politics.[30] Most of the various government coalitions lasted for only a few months – indeed, there were 14 different governments before 1930,[31] – and several authors have questioned the efficiency of the *Reichstag*.[32] However, in terms of predictability of voting behaviour and the ability to exert power in the end, recent literature has shown that it functioned relatively well.[33] Consequently, the composition of the parliament and therefore elections were of prime importance. To reveal the actual benefit of a political connection, we concentrate on two elections, December 1924 and May 1928. One might argue that the frequent changes in government coalitions might also be useful events. However, since most connections were connections to the parties that were constantly part of the government, the changes in – arguably weak – governments did not affect the connected politicians in our sample.

By studying general elections, however, we can test whether firms directly benefitted from a link to the parliament, that is, by nominating an MP to be a supervisory board member.

[27] Wehler, *Deutsche Gesellschaftsgeschichte*, pp. 241-247.
[28] Boldt, *Deutsche Verfassungsgeschichte*, pp. 230-242.
[29] Winkler, *Weimar*, pp. 285-305.
[30] Sontheimer, 'Weimarer Republik', pp. 454-464.
[31] Wirsching, *Weimarer Republik*, pp. 20-23.
[32] Hermens, *Demokratie oder Anarchie?*; Falter et al., *Wahlen und Abstimmungen.*
[33] Lehmann, 'Chaotic shop-talk'.

We can compare these firms to firms that had no political connection. Elections from 1930 onwards are disqualified as possible events, because Germany was governed via presidential decrees, substantially reducing the influence of single MPs.[34] Likewise, the first Weimar election in 1920 took place in the wake of significant political and economic turmoil. Revolution, the *Kapp Putsch* and the *Ruhraufstand* brought the republic to the brink of a civil war. The stock markets were clearly affected by these events as well, showing a lot of price volatility. Thus, to avoid further bias, we focus on the elections in December 1924 and May 1928, because both were followed by a period of relative political stability: unusually for the time, the subsequent governments were in office for at least one year.[35]

In 1924 the economy recovered from hyperinflation, and experienced higher rates of growth in industrial production and a low rate of unemployment, of about 4.9 per cent.[36] This economic stabilisation also translated into a consolidation of political powers. The main losers in the election of December 1924 were the extreme parties on the left and the right. The communists (KPD) lost 17 seats while parties of the extreme right lost 18 seats. The German National People's Party (DNVP) – a right-wing (but not extreme) party – won some seats, but less than the extreme right had lost. The winners were the democratic parties in the middle of the political spectrum, such as the Centre Party (Zentrum) and the German Democratic Party (DDP) which both won four seats, and the German People's Party (DVP) which won six seats. The major winners of the election, however, were the Social Democrats, gaining 31 seats; nonetheless, they could not translate their political success into political power and remained in opposition until 1928.[37] The Coalition led by Hans Luther lasted for about a year, a relatively long period compared to other governments in the Weimar Republic. The only government that

[34] Falter et al., *Wahlen und Abstimmungen*, p. 45.
[35] See Falter et al., *Wahlen und Abstimmungen*, p. 45., Winkler, *Weimar*, pp. 109-142.
[36] Wehler, *Deutsche Gesellschaftsgeschichte*, pp. 252-257; Falter et al., *Wahlen und Abstimmungen*, p. 38.
[37] Kolb, *Weimarer Republik*, pp. 81-82; Falter et al., *Wahlen und Abstimmungen*, p. 44.

stayed in power for longer was that of Hermann Müller, after the election in May 1928.[38] In this election, the most notable result was the losses by the right-wing parties, DNVP (dropping from 103 seats to 30) and NSDAP (dropping from 14 seats to 2). While the parties of the political centre remained more or less unchanged, the Social Democrats gained an additional 22 seats, consolidating their power. After this election, the Social Democrats formed Government, which they held until the end of parliamentary rule in 1930.[39] In 1928 the economy had already cooled, and a further descent was to come.[40] Yet the employment rate was unaffected and investors were not worried.[41] Moreover, while in 1924 investors' expectations had been formed based on the recent hyperinflation, investors in 1928 had experienced a period of stability, which might have resulted in a different assessment of the importance of a political connection.

III

By the end of 1924, 1064 firms were listed on the Berlin stock exchange, with a nominal share value of 9759 million Reichsmark and a market value of approximately 7000 million RM. This equals a market capitalisation of 11 to 15 per cent of GDP,[42] which is about half the amount of the estimate provided by Rajan and Zingales.[43] The average firm had share capital of about 9.3 million RM, was about 33.6 years old and had a board with 9.4 members. The most dominant group was heavy industry, covering about 23 per cent of all firms, followed by light industry.[44]

[38] Lehmann, 'Chaotic shop-talk', p. 85.
[39] Falter et al., *Wahlen und Abstimmungen*, p. 45.
[40] When the central bank intervened in order to prevent a bubble in 1927, the result was a medium-severe stock market crash. Net investment and GDP were likewise affected. See Voth, 'With a bang'.
[41] Voth, 'High wages', p. 804; Voth, 'With a bang'.
[42] Nominal GDP was taken from Burhop and Wolff, 'Compromise estimate'.
[43] Rajan and Zingales, 'The great reversals', cover all stock exchanges in Germany and not just the central one in Berlin. However, Burhop and Lehmann-Hasemeyer, in 'Berlin stock exchange', have recently shown for that 1913 even if all stock exchanges are covered, the overall market capitalisation is slightly lower. A similar revision of the Rajan and Zingales, 'The great reversals', data has been made for the US and the UK, see Musacchio and Turner, 'Law and finance hypothesis', p. 528.
[44] We used the sectors provided by Handbuch der deutschen Aktiengesellschaften and aggregated these categories into ten broader categories. Please see online appendix Table A1 for further information.

To get a second benchmark year close to the election in May 1928, we checked which of the sample firms were still listed in December 1928. The overall figures remain relatively constant. Firm data for the benchmark years are taken from the *Handbuch der Deutschen Aktiengesellschaften,* a stock market manual.[45] This record includes firm-specific variables such as the name of the firm, director and supervisory board members, size of an issue (total value of all shares), the year of incorporation, location of headquarters and sector.[46]

Political connections were identified by comparing the names of supervisory board members and members of the directorate with *Reichstag* MPs. We count a political connection if a member of the supervisory board or the directorate was a member of the current parliament, or had been an MP at any point since 1919, which is the year of the founding meeting of the first German democracy, the National Assembly.[47] The results were compared and crosschecked with the *Adressbuch der Direktoren und Aufsichtsräte 1925 and 1928.*[48] We use more than one source to reduce the likelihood of mistakes that can arise, for instance, due to misspelling of names or omissions in the manuals.[49]

[45] More precisely, the data are taken from *Handbuch der Deutschen Aktiengesellschaften* (Darmstadt 1925; 1929), each referring to the end of the preceding year.

[46] We are grateful to Carsten Burhop for providing us with an unpublished dataset of all firms listed on the Berlin stock exchange in December 1924, including name of the firm, size of the issue year of incorporation, location of headquarters and sector. This significantly reduced the amount of data that we had to collect.

[47] We do not consider state parliaments. The members of the *Reichstag* are published in a database provided by the Bavarian state library (*Bayerische Staatsbibliothek*).
By considering only supervisory board members who had been MPs since the National Assembly in 1919, we omit the political connections of supervisory board members that were MPs in the Empire, but not in the Weimar Republic. However, since we capture all politicians who started their political career in the Empire but were still politically active in the Weimar Republic, the bias should be limited, especially since the political 'value' in terms of the political influence of a person who was an MP in the Empire but not in the Weimar Republic was most likely very limited in 1924 – about six years after the end of Imperial Germany and almost a decade after the beginning of the First World War.

[48] Ferguson and Voth, 'Betting on Hitler', and Faccio, 'Politically connected firms', also include rather informal political connections such as financial donations to parties. These payments, however, are very difficult to identify and summarise for all parties in our observation period. It is already difficult to get this information for the Nazi party. Furthermore, the careful identification of the formal political connections for all firms and parties was already very time and resource consuming. Altogether, for 1924 and 1928, we checked the biographies of 18,769 board members. Thus, although we are aware that informal connections also mattered, the identification of these connections would go far beyond the scope of this research project.

[49] This is quite a common problem as Radandt, 'Adressbuch der Direktoren und Aufsichtsräte', points out. Furthermore, to avoid such mistakes we checked the bibliographic information carefully.

These formal and public political connections were evident to investors. Board memberships and boards of directors were made public in the *Adressbuch der Direktoren und Aufsichtsräte* and – based on the handbook – discussed in the media.[50] Supervisory boards were elected by the general assemblies and were not just regulatory bodies in this period. Members of the board were often involved in strategically important firm decisions.[51] The usual term of office was five years and the supervisory board had to have at least three members. On average, a firm had nine board members and the size of the board increased with firm size: Deutsche Bank, for instance, had 58 board members in December 1924.

To learn about differences in the quality of political connections, we distinguish between firms that had a political connection to a current or to a former MP. We further differentiate between different party affiliations, in particular whether the connected MP was or is affiliated with a party of the current government. We also collected information on years in parliament and whether the politician was ever board president or held a ministerial position, because this should increase the power to influence decisions at the firm level and at the political level, respectively.

In our first benchmark year of 1924, Morus reports that 65 of the 463 MPs, i.e. about 14 per cent, held board memberships.[52] This proportion is remarkably stable. In 1928, Morus reports that about 16 per cent of the MPs and about 11 per cent of the Members of the Prussian State Parliament were 'close' to industry. He further claims that although the overall number of politicians on supervisory boards seems rather low, a single man from a certain sector or firm in the right parliamentary group would be sufficient to influence policies in their favour.[53]

[50] *Die Weltbühne, 21,* 1925, pp. 29-31; *Die Weltbühne,* 24, 1928, pp. 256-258.
[51] Windolf, 'Unternehmensverflechtung', p. 191. Since 1884, all persons, regardless of whether they held shares or not, could be elected. See Burhop, 'Banken' p. 14.
[52] Altogether, the 65 MPs held 269 board memberships in 1924. In 1928, 72 MPs held 276 board memberships. See *Die Weltbühne, 21,* 1925, pp. 29-31; *Die Weltbühne,* 24, 1928, pp. 256-258. Please note that Morus also reports the board memberships of firm that were not listed in Berlin.
[53] *Die Weltbühne,* 24, 1928, pp. 256-258.

Table 1 provides an overview of the political connections for all Berlin-listed firms in our benchmark years. About 13 per cent of the listed firms had a political connection in the form of a current or a former MP, or the CEO, at the end of 1924. Of these, 6.2 per cent had a former MP on their supervisory board. However, this does not mean that these individuals had abandoned politics. Some of them re-entered the parliament after 1928. By 1928, the overall number of firms with political connections deceased slightly to 9.3 per cent.[54]

Most political connections were direct connections to the government, but only about 2 per cent in 1924 and about 1.5 per cent in 1928 were connections to a former minister. Morus claims that ex-ministers were particularly attractive for firms, but that while ministers were still in office they avoided official connections to industry to maintain the impression of a clean and uncorrupted Republic.[55] Indeed, we find no current minister on a supervisory board, however, many of the former ministers served on supervisory boards while still members of parliament. Hans von Raumer for instance, who was Minister of Economic Affairs until he resigned in 1923, remained in Parliament until September 1930. In 1924, he held eight board memberships of Berlin listed firms and was even president of the board of Deutsche Webstoffwerke AG, a textile producer with headquarters in Berlin (see also Table 2). Another former minister was Otto Landsberg. He was Minister of Justice in the very first parliament, until 1920. After a short sabbatical from politics, he re-entered the parliament with the Social Democrats in 1924. In 1924, he held two board memberships, with Schlesische Boden-Credit-Actien-Bank and Magdeburger Strassen-Eisenbahn-Gesellschaft.

Only eleven firms (1 per cent) were managed and partly owned by CEOs who were politically active. One of these was Albert Vögler, who on the boards of Siemens & Halske AG, Siemens-Schuckertwerke and Gelsenkirchener Bergwerks-AG (see also Table 2).

[54] However, since we only list the firms that were already listed in 1924, it is possible that the overall share remained constant.
[55] *Die Weltbühne, 21,* 1925, pp. 29-31.

Panel B of Table 1 shows that most connections were to moderate centre parties. The most extreme connections were those to the right-wing German National Peoples Party (DNVP). We do not find connections to more extreme parties. Most connections were to the German Democratic Party (DDP), a liberal party that clearly supported economic interests; the German Peoples Party[56] (DVP), and the rather conservative Centre Party (Zentrum). We find very few Social Democrats (SPD) and Independent Social Democrats[57] (USPD) on supervisory boards and all of them in public or non-profit organisations. Morus claims that this might have been caused by the 'Barmat Affair',[58] after which the Social Democrat Gustav Bauer resigned from all board memberships.

(Table 1 about here)

A closer look at the politicians on supervisory boards reveals that some of them were well-known networkers. Table 2 provides an overview of the politicians that held the largest number of board memberships in our sample. The industrialist Victor Weidtmann, for instance, was a member of 19 different boards in 1924. Most of these firms were from heavy industry, but Weidtmann was also on the board of Deutsche Bank, the most influential universal bank at the time.[59] We assume that good networkers played a central role, especially since they often represented large parts of particular sectors and not just a single firm. For instance, Albert Vögler, who held 12 board memberships in 1924 and 13 in 1928, co-initiated the establishment of the trust of large steel mills Vereinigte Stahlwerke AG in the mid-1920s. The Trust

[56] The DVP were principally liberal: in contrast to the DDP, the party was rather right-leaning, see Treue, *Deutsche Parteiprogramme*, pp. 117-130.
[57] The aims of the Social Democrats were defined in their Erfurt Programme of 1891, which contained several practical demands in favour of the working class, such as the improvement of labour conditions, the eight-hour working day and free health care. See Treue, *Deutsche Parteiprogramme*, p. 76.
[58] See previous section, *Die Weltbühne, 21*, 1925, pp. 29-31, and also Klein, *Korruption, pp.* 229-228.
[59] See Lehmann, 'Taking firms'.

cooperated with the Government and used its influence to achieve favourable terms for taxation and other privileges.[60] Furthermore, the overall number of board memberships of these politicians was much higher if we also include non-listed companies, or firms that were not joint stock companies. Hans von Raumer, for instance, held 14 board memberships overall, Hermann Fischer 46 and ten Hompel more than 15 altogether in 1924.[61]

(Table 2 about here)

Furthermore, the connections varied across sectors (see Table 3) and political parties. In mining, for instance, approximately every fourth firm had a politician on the supervisory board in 1924 as well as in 1928. Branches with a direct business link to public or state matters, such as transportation and public utility, likewise rank among the sectors with the largest number of connected firms. For the year 1932, Ferguson and Voth also find the highest concentration of political connections to the Nazis in these sectors.[62] However, while both sample years show that less than 8 per cent of steel firms (part of heavy industry) were connected, the NSDAP affiliation of these firms was nearly 60 per cent in 1932. The NSDAP had a strong interest in controlling that part of the economy, since it would become instrumental in war. Thus, arguably the NSDAP MPs selected themselves onto the supervisory boards of steel producing firms in around 1932 with a clear interest in controlling production. On the other hand, steel industrialists might also have had a strong interest in cooperating with the NSDAP members, as they expected them to increase the demand for armaments.

[60] See Reckendrees, *Das Stahltrust-Projek*t, pp. 222-238.
[61] *Adressbuch der Direktoren und Aufsichtsräte, Band I & II*, 1925/1926. *Die Weltbühne, 21*, 1925, pp. 29-31.
[62] Ferguson and Voth, 'Betting on Hitler', p. 124.

(Table 3 about here)

The connections to the various sectors were not distributed equally among the political parties. However, given the small number of overall connections for most parties, only the shares of the two liberal parties merit interpretation. In both years, the national-liberal DVP was represented to a greater extent in heavy industry and mining, whereas the left-liberal DDP focused on banking, manufacturing and transportation.

In Table 4, we compare the main characteristics of connected and unconnected firms for various types of political connection in 1924 and 1928 for the full sample. There is a clear pattern of significant differences in both years. Firms with political connections were usually older than the average unconnected firm and had larger supervisory boards. Moreover, firms with a political connection had a significant higher share price than unconnected firms. This might indicate that political connections paid off. However, highly capitalised firms often had a much higher probability of having a politician on their supervisory board, which might also drive the share price.

(Table 4 about here)

The location of the headquarters, transformed into a distance to Berlin, is a proxy for asymmetric information. Burhop and Lehmann-Hasemeyer have recently provided evidence that distance is positively correlated with information asymmetries based on a sample of all German firms that were listed on any of the German stock markets in 1913.[63] Furthermore,

[63] Burhop and Lehmann-Hasemeyer, 'Berlin stock exchange'.

Lampe and Ploeckl have shown – based on Bavarian telephone exchanges in 1900 – that theoretically 'weightless' communication like phone calls was subject to substantial distance cost, similar to physically transported mail.[64] Thus, it is possible that firms further away from Berlin used political connections to reduce information costs. However, the location of the headquarters did not seem to matter, although firms that had just established a connection had more remote locations.

IV

In general, a stock price represents the aggregate expectations of market participants about the future performance of the firm. An increase (decrease) in a firm's stock price reflects the expectation that future dividends will rise (fall), which in turn depends on the firm's future profitability.[65] Besides the firm-specific characteristics, we expect that the profitability of a firm depends to a considerable extent on its political connections. Changes in stock prices after elections would therefore indicate shifts in expectations about the political connections of the firm.[66] We study the impact of a political connection in the elections in 1924 and 1928 with standard event study methodology:[67] we calculate the abnormal returns of firms with supervisory board members who were elected for the first time; those who lost their seat in this election, and those who already had a seat but were re-elected. We do not consider firms that had a former politician on the board, i.e. politicians who had left Parliament in an earlier election, since we assume that the election will only have a limited impact on the value of this

[64] Lampe and Ploeckl, 'Spanning the globe'.
[65] Sattler, 'Do markets punish'.
[66] Previous research yields more predictions how stocks may respond to elections. An overview is given by Sattler, 'Do markets punish'. In general, it is possible that electoral outcomes are at least partly anticipated in advance. In that case investors form clear expectations before the election takes place. However, anticipation is lowest for close elections, when either parties or blocs have roughly equal chances of winning. However, even if one side is more popular, elections are rarely perfectly predictable, and both sides retain a nontrivial chance of winning.
[67] For similar approaches see, for instance, Ferguson and Voth, 'Betting on Hitler'; Turner and Zhan, 'Property rights'; Lehmann-Hasemeyer et al., 'Political stock market', or Grossman and Imai, 'Taking the lord's name'. MacKinlay, in 'Event studies', gives an overview of this method.

type of a political connection. We exclude the shares of insurance companies, because trading of those shares was heavily restricted[68]. We also exclude banks for two reasons: First, we aim at comparing firms with similar characteristics, which only diverge in terms of their political connections. By focussing on industrial firms, we get a more homogenous sample. Furthermore, the channels via which political connections improved banks' performances are fundamentally different to those of industrial firms. Second, only two banks got a new connection in 1924 and none did in 1928, so there is very little change within the bank sample for the period being studied.

Overall, we observe 35 firms in 1924 that had a supervisory board member, who won a seat in the election. For six of these firms, the supervisory board member was elected for the first time. In 1928, we observe 33 firms that had a board member who won a seat in the election, but only two firms had a board member who was elected for the first time. We also observe board members who were MPs before the election, but lost their seat (Lost connection). Twelve firms lost their direct link to the parliament in this way in 1924, and three in 1928.

Since share capital seems crucial for the existence of a connection (see Table 5), we selected the largest unconnected firms that were regularly traded as the control group. To get a large enough sample, we collected prices for 53 unconnected firms in 1924 and 64 in 1928. Thus the event study sample comprises 100 firms for each year. Altogether, we collected 2,200 weekly stock prices.[69] Table 5 shows the various types of political connections in the event study and the unconnected firms.

[68] They only issued 'vinkulierte Namensaktien', that is, registered shares with restricted transferability. For details, see Gelman and Burhop, 'Taxation', p. 4.

[69] We collected prices for 100 firms and 11 weeks per event (200*11). Prices were taken from the *Berliner Börsenzeitung*. Prices are listed as a percentage of a security's nominal value. The data are available at the *Staatsbibliothek zu Berlin* or online: (20.02.2017)

(Table 5 about here)

The general concept of an event study is presented in Figure 1. In an estimation period, which is unaffected by the event [T_{-1}, T_1], the parameters later used to determine the expected (normal) returns of every firm are calculated. The event occurs at T_0 and can affect the stock market during the event window [T_1, T_2], which can lie on either side of T_0. We consider three different event windows: one symmetric one, covering one week before and one week after the event [-1;1], and two more over a period of one [0;1] and two weeks [0;2] after the event. These are all preceded by an estimation period of six weeks.

(Figure 1 about here)

The crucial calculation in an event study is the estimation of the expected return, which is subtracted from the actual return in the event window. The resulting abnormal return reflects the impact of the event itself. More specifically, we check whether the (re-)election of an MP who is on the board of a firm affects the market valuation of that firm. A popular method is the market model, which relates the return of any given security to the return of the market portfolio, thereby taking into account overall market effects. Based on the period-*t* returns of security *i*, the expected return $E(R_{it})$ is:

$$E(R_{it}) = \alpha_i + \beta_i R_{mt} + \varepsilon_{it} \qquad \text{With } E(\varepsilon_{it}) = 0 \text{ and } Var(\varepsilon_{it}) = \sigma^2_{\varepsilon_t} \qquad (1)$$

Where R_{it} and R_{mt} are the period-t returns on stock i and the market portfolio, respectively. ε_{it} is the error term, whose variance is assumed to be constant over time. We take the weekly blue-chip index as introduced by Ronge as a proxy for the stock market portfolio.[70] Abnormal returns are calculated for security *i* at time *t* as: $AR_{it} = R_{it} - E(R_{it})$, where R_{it} is a stock's realised return and where $E(R_{it})$ is its expected return in the absence of the event, as calculated above. We then calculate the cumulated abnormal return per firm in the event window.

$$CAR_i = \sum_{t=T_1}^{T_2} AR_{it} \qquad (2),$$

Then the average cumulated abnormal return (ACAR) from $t=T_1$ to $t=T_2$ is calculated as follows:

$$ACAR = \frac{1}{N} \sum_{i=1}^{N} \sum_{t=T_1}^{T_2} AR_{it} \qquad (3),$$

where N is the number of stocks in our sample during each event. To test the significance of the ACARs, the variance of the ACARs is estimated by using cross-sectional variance across the cumulative abnormal returns of the various companies. This cross-sectional approach takes account of an increase in event period variance.[71] Using the cross-sectional approach to form an estimator of the variance gives:

[70] Ronge, 'Die langfristige Rendite'.
[71] Campbell et al., *Econometrics of Financial Markets,* p. 168; Turner and Zhan, 'Property rights', p. 620.

$$V \quad (A\ a \quad) \Theta r \frac{1}{N^2} \sum_{i=1}^{N} A(C \quad {}_i R \cdot \boldsymbol{A} \quad)^2 \mathbb{R} \qquad (4),$$

The test statistic is then calculated as: $t = \frac{A \quad C \quad A}{\sqrt{V \quad \mathbb{4}(Ar \quad C \quad)^{\prime}}}$, which is asymptotically standard normal.

To see the difference in the performance of connected and unconnected firms, the CAR is regressed on four different variables that describe the characteristics of the political connections, along with various firm characteristics that serve as controls, according to the following equation:

$$CAR_i = \alpha + \beta * political\ connection_i + \chi * X_i + \varepsilon_i \qquad (5)$$

The variable 'political connections' covers the different measures for connections, as displayed in table 5. Furthermore, we construct an index that accounts for differences in the 'quality' of a political connection. This index increases with the number of board seats and with other factors emphasising the quality of a connection: the time a politician served as MP until the event, and whether the politician was board president, CEO of the company or a former minister.[72] *Xi* is a vector that covers other firm-specific variables such as joint stock capital, size of the supervisory board, age of the firm and distance of headquarters from Berlin.

[72] Formally, the index is built according to the following equation: $index_i = connection_i + CEO_i + minister_i + mandates_i + years\ as\ politician_i$, where $connection_i$ is equal to one, if the firm had some sort of a political connection. CEO_i is equal to one if the CEO was a current of former MP. $minister_i$ is equal to 1 if the MP was a former minister. $mandates_i$ covers the percentage share of the number of board memberships divided by the highest number a politician had in this year. $years\ as\ politician_i$, is calculated as the number of years the board member was a member of the parliament divided by the largest number of years observed in this year. Thus the latter two values also rank between 0 and 1 and the index ranks between zero and five. If a firm had more than one politician on the supervisory board, we use the largest index.

Moreover, table 5 reveals that the control group of the largest firms shows significant differences to the connected firms, which might lead to biased results. Thus, we use another more precise matching technique, coarsened exact matching (CEM), as described by Iacus et al.[73] Given the mostly continuous covariates in our data and the limited number of observations, it seems preferable to the more common propensity score matching, which often fails to find exact matches.[74] The method restricts the data in a way that common support is empirically given and imbalances between the treated and the control group are reduced ex-ante. The matching algorithm simply coarsens each variable in the data, thereby creating a set of variable-specific strata around the exact values. The bandwidth of these can be set manually, if desired.[75] In a next step, all strata not containing both a treated and a control group observation are dropped. Afterwards, common parametric models like OLS can be applied to the remaining variables.

V

In a first step, we are interested in whether the ACARs of the connected firms differ significantly from zero. Table 6 provides the ACARS for the three event windows. Newly elected board members, seem to have on average positive cumulated returns (5.7 percent in 1924 and 11.1 in 1928), particularly after the election, but the effect is not significant. The firms that lost their direct link to the parliament underperformed the market, which indicates some lost value of the political connection albeit not significantly in 1928. The same effect, however, shows up for the overall connected firms and the control group in 1924. Thus, compared to the market performance, firms did not seem to benefit from a political connection.

[73] Iacus et al., 'Multivariate matching methods'.
[74] For a more detailed overview of the advantages of the method, see King et al., 'Comparative effectiveness'.
[75] In our example, we manually set breakpoints when there is plausible reasoning. Distance to Berlin is split into Berlin-based (<10km) and based in another city. Firm age is classified into start-up (<5 years), founded after 1900 (<25 years) and before 1900 (>25 years).

(Table 6 about here)

In a second step, we analyse whether the CARs are significantly different from a control group of unconnected firms. Thus we apply the regression approach presented in equation (5). The results are presented in Table 7. The dependent variable in models (1) – (4) is the CAR in a symmetric event window, i.e. the returns one week before and one week after the election. In Models (5) – (8), the dependent variable is the CAR until two weeks after the election respectively. We include the CARs of both elections in one regression to increase the degrees of freedom. Not before the results of the election became public, i.e. only in the latter specification, a positive stock market effect materialises for newly established political connections. Board members were considered valuable by investors at the Berlin stock exchange once they were elected as MP for the first time. The effect is even more significant for the connections with a higher quality as reflected in the sign of the variable 'Index new connection'. The other types of connections on the other hand did not result in an abnormally positive market reaction in 1924, neither did the various firm characteristics like share capital or board size.[76]

(Table 7 about here)

Thus, the fact that stock prices of connected firms were higher seems at least partly driven by a causal effect. However, only new connections seem to matter but not connections in general. This can either mean that investors already anticipated re-elected MPs or that political elections did not matter too much. The fact that lost connections did also not have an effect supports the

[76] This outcome is consistent with Deloof and Vermoesen, 'Value of corporate boards', who find no positive effect of board size in times of crisis.

latter. These results are robust, if we only use firms that match the characteristics of the connected firms (see Table 8).

VI

By studying the biographies of nearly 19,000 supervisory board members and CEOs in two sample years, 1924 and 1928, we provide the first quantitative overview of political connections in the first German democracy. By examining such links in the Weimar Republic, we extend the existing research on Germany to earlier periods.[77] Furthermore, we differentiate the quality of the political connections by collecting information on whether the politician was president of the board or former minister and the years he has had spent in parliament for his respective party.

Overall, about 13 per cent of the firms had a politician on their supervisory board or board of directors and about 12 per cent had a connection to the current government at the end of 1924. These numbers decreased slightly by 1928. Very few firms, however, had a previous minister on their supervisory board (2.0 and 1.5 per cent in 1928 respectively). The most active politicians on supervisory boards were often industrialists, who – as implied by the anecdotal evidence – tried to benefit by gaining political power and influence.

A comparison of the main characteristics of connected and unconnected firms reveals that those firms with a large board, large share capital, older firms and firms with a higher share value had a higher likelihood of establishing political connections. Moreover, some sectors such as mining were much more connected than others. Sectors with a direct business link to public

[77] See Ferguson and Voth, 'Betting on Hitler'. The examination of political connections in Imperial Germany must be left to future research. Including this period would shed light on the effectiveness of connections under various regime types.

or state matters, such as transportation and public utilities, also rank among the sectors with the largest number of connected firms.

Anecdotal evidence suggests that these political connections had a positive impact on firm performance, however, our event study of the general elections in December 1924 and May 1928, reveals little evidence of this. Either the anecdotal evidence is only based on casual observations and cannot be generalised, or the advantage of the connected firms was barely reflected in the share prices. In either case, taking Faccio's findings as a general rule, our findings indicate that the democratic institutions seemed to work quite well in the Weimar Republic.[78] Our results also further emphasize the importance of the findings of Ferguson and Voth.[79] There was indeed a large difference between the value of a political connection to the government in a dictatorship compared to a political connection in the preceding democracy, even though it was not a very stable one.

[78] Faccio, 'Politically connected firms'.
[79] Ferguson and Voth, 'Betting on Hitler'.

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Table 1: Overview political connections of supervisory board members and CEOs listed in Berlin

Panel A: Types of political connections	**December 1924**		**December 1928**	
	Number of firms	**% all firms**	**Number of firms**	**% all firms**
All political connections (BM and CEO)	**138**	**13.0**	**88**	**9.3**
Thereof:				
All political connections board members (BM)	131	12.3	88	9.3
All political connections to a governing party (BM and CEO)	124	11.7	83	8.8
All political connections to a governing party (BM)	118	11.1	83	8.8
Political connections to a former MP (BM)	66	6.2	38	4.0
BM is or was board president	24	2.2	16	1.7
BM was Minister	21	2.0	14	1.5
CEO is or was politician	11	1.0	1	0.1
Unconnected firms	**926**	**87.0**	**856**	**90.7**
Panel B: Connections to Parties (BM and CEO)*				
	Number of firms	**% of all connections**	**Number of firms**	**% of all connections**
Bavarian Peoples Party (BVP)	3	2.1	4	4.2
German Democratic Party (DDP)	48	32.9	34	35.8
German Nationals Peoples Party (DNVP)	9	6.2	5	5.3
German Peoples Party (DVP)	55	37.7	29	30.5
Social Democratic Party (SPD)	12	8.2	7	7.4
Centre Party	11	7.5	15	15.8
others	8	5.5	1	1.1
Total number of firms	**1064**	**100**	**944**	**100**

Note: The parties that were part of the government before the election in December 1924 were The DVP, the Centre Party and the DDP. After the election in December 1924, BVP and DNVP joint the coalition. In these tables, we count all five parties as connections to the government. In 1928, the government consisted of BVP, DDP, DVP, SPD and Centre party, respectively (Falter et al 1986, p. 45). Since a firm can have more than one politician on the supervisory board and therefore connections to more than just one party, the total number of connected firms in panel B may exceed the number of political connections in panel A.

Source: see text

Table 2: Networkers

1924	**No. of board memberships**	**Party affiliation**	**Legislative periods**	**Occupation**
Victor Weidtmann	19	DVP	1	Lawyer, Entrepreneur
Hermann Fischer	15	DDP	3	Lawyer
Albert Vögler	12	DVP	2	Engineer, Entrepreneur
Carl Friedrich von Siemens	11	DDP	2	Engineer, Lawyer, Entrepreneur
Hans von Raumer	8	DVP	3	Lawyer, Entrepreneur
1928	**No. of board memberships**	**Party affiliation**	**Legislative periods**	**Occupation**
Hermann Fischer	17	DDP	4	Lawyer
Albert Vögler	13	DVP	3	Engineer, Entrepreneur
Carl Friedrich von Siemens	8	DDP	3	Engineer, Lawyer, Entrepreneur
Hans von Raumer	6	DVP	4	Lawyer, Entrepreneur
Florian Klöckner	6	Centre	4	Entrepreneur

Source: see text. Legislative periods refer to the number of periods a person spend in parliament up until that point.

Table 3: Percentage share of politically connected firms by sector

	All type of connections	Connected to the government
	December 1924	
Banking	15.7	13.7
Insurance	23.3	18.6
Mining	25.6	25.6
Heavy industy	7.3	6.1
Light industry	7.5	7.0
Food processing	9.1	9.1
Transportation	22.4	19.4
Chemical industry	7.5	5.7
Public utility	23.8	22.2
Others	9.5	8.4
All firms	12.3	11.1
	December 1928	
Banking	17.4	13.0
Insurance	10.0	7.5
Mining	25.8	25.8
Heavy industy	5.5	5.0
Light industry	4.6	4.6
Food processing	6.1	4.6
Transportation	22.6	22.6
Chemical industry	7.6	7.6
Public utility	15.9	15.9
Others	4.6	4.6
All firms	9.3	8.8

Source: see text

Table 4: Differences between all connected and unconnected firms

	Any political connections	No political connections
Panel A: all firms December 1924		
Share capital[a]	18.9***	7.8
Firm age	37.8**	32.9
Board size	13.8***	8.8
Distance to Berlin[b]	235.0	246.2
End-of-year price[c]	28.8**	20.6
Panel B: all firms December 1928		
Share capital	33.7***	7.6
Firm age	37.0*	33.1
Board size	15.9***	9.3
Distance to Berlin[b]	260.6	239.5
End-of-year price[c]	146.8*	122.8

Table contains mean values of various firm characteristics. These are compared against non-connected firms, as displayed in the last column, using a simple t test. *** p<0.01, ** p<0.05, * p<0.1 Source: See text.

[a] Share capital in million Reichsmark.

[b] In kilometres.

[c] In percent of the share's face value

Table 5: Differences between connected and unconnected firms in event study

Panel A: event study sample 1924				
	Any political connection (35)	New political connection (6)	Lost political connection (12)	No political connection (53)
Share capital[a]	22.1***	9.2***	43.0	56.0
Firm age	32.5***	32.0	39.9	41.8
Board size	13.9	10.3	13.0	13.7
Distance to Berlin[b]	226.1	127.5	256.9	255.0
Panel B: event study sample 1928				
	Any political connection (33)	New political connections (2)	Lost political connection (3)	No political connection (64)
Share capital[a]	41.0	5.7*	20.6*	40.6
Firm age	32.6**	36.5	36.3	38.6
Board size	14.8	9.5	18.5	13.9
Distance to Berlin[b]	220.7	466.9**	427.2***	229.4
Panel C: event study sample both years				
	Any political connection (68)	New political connections (8)	Lost political connection (15)	No political connection (117)
Share capital[a]	31.1**	8.3***	38.5	48.0
Firm age	32.6***	33.1	39.2	40.2
Board size	14.4	10.1**	13.8	13.9
Distance to Berlin[b]	223.5	212.4	291.0	239.2
Panel D: event study both years after matching				
	Any political connection (39)	New political connections (4)	Lost political connection (9)	No political connection (75)
Share capital[a]	48.8	9.9*	46.9	49.1
Firm age	37.2*	41.7	42.5	42.4
Board size	15.9	12.5	15.6	15.4
Distance to Berlin[b]	214.6	191.2	273.7	225.1

Table contains mean values of various firm characteristics. These are compared against non-connected firms, as displayed in the last column, using a simple t test. *** p<0.01, ** p<0.05, * p<0.1 Source: See text.

[a] Share capital in million Reichsmark.

[b] In kilometres.

Table 6: Overview of Average Cumulative Abnormal Returns (ACAR)

	Number of firms	ACAR (-1/+1)	ACAR (0,+1)	ACAR (0,+2)
			1924	
Any political connection	35	-0.077 (-2.00)*	-0.085 (-2.96)***	-0.083 (-1.95)*
New political connection	6	-0.022 (-0.43)	0.014 (0.33)	0.057 (0.837)
Lost political connection	12	-0.059 (-2.24)**	-0.069 (-2.43)**	-0.074 (-3.46)***
Control group unconnected firms	53	-0.059 (-2.33)**	-0.055 (-2.59)**	-0.065 (-2.38)**
			1928	
Any political connection	33	0.005 (0.46)	0.006 (0.81)	0.020 (1.13)
New political connection	2	0.021 (0.67)	0.024 (2.28)	0.111 (2.59)
Lost political connection	3	0.052 (1.87)	0.032 ((0.73)	0.065 (2.16)
Control group unconnected firms	64	-0.010 (-1.47)	-0.002 (-0.38)	0.023 (2.90)***

Source: see text. Asterisks indicate whether the ACAR are significantly different from zero. Significance levels are *** p<0.01, ** p<0.05, * p<0.1. The ACARs are robust regarding outliers in the 'any political connection' group. Find boxplots for 1924 in the online appendix. Furthermore, the significance of the abnormal returns at the event date is checked using the rank test proposed by Corrado and Zivney.[1] For none of the above connection types, an abnormal performance materialises.

[1] Corrado and Zivney, 'Specification and power'.

Table 7: Results of regression CARs

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	symmetric two week event window (-1;1)				asymmetric two week event window (0;2)			
Any political connections	-0.00261				-0.0280			
	(0.0171)				(0.0181)			
New political connections		0.0466				0.127*		
		(0.0407)				(0.0583)		
Lost political connections		0.0127				0.0116		
		(0.0468)				(0.0421)		
Index any connection			-0.00437				-0.0108	
			(0.00629)				(0.00663)	
Index new connection				0.0230				0.0569**
				(0.0162)				(0.0231)
Index lost connection				0.00744				0.00370
				(0.0177)				(0.0160)
Election 1928	0.0606**	0.0639*	0.0604**	0.0647*	0.103***	0.111***	0.104***	0.110***
	(0.0229)	(0.0285)	(0.0225)	(0.0282)	(0.0216)	(0.0266)	(0.0214)	(0.0266)
Board size	0.00230	0.00226	0.00243	0.00226	0.00209	0.00172	0.00214	0.00172
	(0.00162)	(0.00174)	(0.00165)	(0.00172)	(0.00198)	(0.00202)	(0.00196)	(0.00201)
Share capital (log)	-0.0137	-0.0107	-0.0157	-0.0106	-0.0193	-0.00700	-0.0196	-0.00683
	(0.0134)	(0.0146)	(0.0138)	(0.0141)	(0.0166)	(0.0157)	(0.0163)	(0.0153)
Firm age	0.000674	0.000670	0.000657	0.000668	0.000642	0.000691	0.000648	0.000681
	(0.000592)	(0.000604)	(0.000578)	(0.000598)	(0.000562)	(0.000640)	(0.000566)	(0.000628)
Distance to Berlin	0.000115*	0.000117*	0.000113*	0.000117*	3.44e-05	4.48e-05	3.42e-05	4.37e-05
	(5.05e-05)	(5.11e-05)	(5.10e-05)	(5.13e-05)	(7.65e-05)	(7.63e-05)	(7.62e-05)	(7.76e-05)
Constant	0.0805	0.0243	0.117	0.0205	0.204	-0.0245	0.208	-0.0262
	(0.205)	(0.226)	(0.212)	(0.216)	(0.266)	(0.248)	(0.262)	(0.241)
Observations	200	200	200	200	200	200	200	200
R-squared	0.086	0.089	0.087	0.091	0.113	0.128	0.115	0.130

Robust standard errors in parentheses, clustered at sector level *** p<0.01, ** p<0.05, * p<0.1

Table 8: Results of regression CARs, matched sample

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	symmetric two week event window (-1;1)				asymmetric two week event window (0;2)			
Any political connections	-0.0367				-0.0297			
	(0.0294)				(0.0286)			
New political connections		0.0644				0.144*		
		(0.0602)				(0.0625)		
Lost political connections		0.0555				-0.00382		
		(0.0580)				(0.0510)		
Index any connection			-0.0135				-0.0105	
			(0.0101)				(0.0108)	
Index new connection				0.0330				0.0726**
				(0.0231)				(0.0226)
Index lost connection				0.0177				0.000630
				(0.0196)				(0.0195)
Election 1928	0.0441**	0.0665**	0.0455**	0.0640**	0.0924***	0.0994***	0.0935***	0.103***
	(0.0179)	(0.0270)	(0.0177)	(0.0255)	(0.0146)	(0.0233)	(0.0144)	(0.0228)
Board size	0.000960	0.000994	0.00104	0.000905	0.00257	0.00182	0.00263	0.00173
	(0.00112)	(0.00115)	(0.00105)	(0.00121)	(0.00177)	(0.00148)	(0.00169)	(0.00150)
Share capital (log)	-0.00535	0.00128	-0.00539	-0.000393	-0.0101	-0.00228	-0.0101	-0.000189
	(0.0197)	(0.0184)	(0.0198)	(0.0179)	(0.0236)	(0.0200)	(0.0236)	(0.0185)
Firm age	0.00127	0.00139	0.00126	0.00136	0.00152	0.00151	0.00152	0.00145
	(0.00104)	(0.00120)	(0.00101)	(0.00119)	(0.00154)	(0.00146)	(0.00152)	(0.00145)
Distance to Berlin	0.000129***	0.000114***	0.000128***	0.000124***	6.22e-05	7.71e-05	6.09e-05	8.23e-05
	(2.74e-05)	(3.25e-05)	(2.92e-05)	(2.76e-05)	(5.74e-05)	(4.75e-05)	(5.86e-05)	(4.64e-05)
Constant	-0.0419	-0.194	-0.0412	-0.162	-0.00298	-0.145	-0.00371	-0.182
	(0.295)	(0.273)	(0.296)	(0.256)	(0.348)	(0.316)	(0.346)	(0.281)
Observations	114	114	114	114	114	114	114	114
R-squared	0.107	0.111	0.112	0.111	0.124	0.142	0.126	0.155

Sample is matched applying coarsened exact matching (CEM), as described by Iacus et al. (2011). Robust standard errors in parentheses, clustered at sector level *** p<0.01, ** p<0.05, * p<0.1

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