Measuring the extent and implications of corporate political connections in prewar Japan

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Abstract

This paper investigates the extent, determinants, and implications of the political connections of firms at the peak of democracy in prewar Japan, identifying a firm as politically connected if one of its directors was simultaneously a member of the House of Representatives. We analyze the data of publicly traded companies in the periods before and after the 1928 and 1930 general elections. It is found that almost 20 % of publicly traded companies had political connections through politician directors. Regressions analyses reveal that smaller or badly performing firms and firms in the electric utilities and railroad industries, where government licenses were important, were more likely to have political connections. Furthermore, we find that the stock returns of firms that had new political connections improved from the pre-election period to the post-election period.

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1. Introduction

Anecdotal evidence from various countries indicates that firms with political connections can obtain various benefits through preferential treatment for government procurement, easier access to public fund, tax exemptions, and so on. Motivated by these observations, many studies have addressed the issue of the political connections of firms in the field of political science as well as economics. Various studies have examined whether politically connected firms actually benefit from those connections (Khwaja and Mian, 2005; Faccio et al., 2006; Claessens et al., 2008; Goldman, 2013 among others).[1]

For example, Faccio (2006) analyzed the data of listed companies in 47 countries and found political connections in many countries (35 countries); further, political connections enhance firm values, especially in countries with weak political institutions. Fisman (2001), Johnson and Mitton (2003), and Goldman et al. (2009) confirmed that political connections increase firm in developing as well as developed countries. However, focusing on newly privatized firms in China, Fan et al. (2009) revealed that political connections have negative effects on the post-IPO performance of firms. Thus, the empirical results on whether political connections add to firm value are mixed.

This paper investigates the extent and implications of the political connections of firms with a focus on prewar Japan. Prewar Japan has a number of features that make it attractive for research on this issue. First, many firms had political connections in prewar Japan. In fact, political connections were much more pervasive in prewar Japan compared to not only contemporary Japan but also the rest of the contemporary world.

Second, it is remarkable that democracy was fairly developed in Japan by the early 1930s. The

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[1] Khwaja and Mian (2005) and Claessens et al. (2008) investigate whether politically connected firms actually obtain preferential treatments for debt financing based on data collected from Pakistani and Brazilian firms, respectively. Faccio et al. (2006) examine whether politically connected firms are likely to be bailed out based on cross-country data. Goldman et al. (2013) analyze whether political connections affect government procurement contracts using data from the U.S.

Constitution of the Great Japan Empire, which was promulgated in 1889, prescribed the status of the Diet (*Teikoku Gikai*). Although the role of the Diet was formally limited to the support of the Emperor (*kyosan*), in reality the Diet had legislative power and the power to approve the national budget. The Diet was composed of the House of Peers (*Kizoku-in*) and the House of Representatives (*Shugi-in*), both of which had essentially the same powers. While the members of the House of Peers were appointed by the Emperor from among peers, high tax payers, scholars, and so on, the members of the House of Representatives were appointed by the public through a general election. By the amendment of the Election Law in 1925, universal male suffrage was introduced, where all male citizens aged 25 and above had the right to vote in the general election. Simultaneously, the authority of the House of Representatives increased, which was reflected in the appointment of the Prime Minister. Throughout the prewar period, the Prime Minister was appointed by the Emperor based on the recommendation of a small number of informal political leaders called *Genro*, who were the people with merits in the Meiji Restoration. It was the de facto rule (*Kensei no Jodo*) that the *Genro* recommended the leader of the political party that had the majority at the House of Representatives as the Prime Minister from 1925 until 1932, when a military coup overthrew Inugai Tsuyoshi's cabinet (the May 15 Incident). Thus, the de facto parliamentary cabinet system worked in Japan from 1925 to 1932.

It has been said that under this system, the role of political parties and Diet members became more significant, and business people were interested in establishing connections with Diet members. For instance, Masumi (1979), which is a standard reference on Japanese political history, stressed that the relationship between the major political parties and private firms became closer during (and after) the WWI period because the political parties came to need more money for elections, while the private firms wanted to have connections with the political parties to obtain more political power (pp.

232–233).[2] However, to the best of our knowledge, there is no study that provides hard evidence about the effects of political connections on private firms.

Therefore, this paper investigates the political connections of firms, the changes in these connections before and after the general elections of February 1928 and February 1930 (the sixteenth and seventeenth general elections), and the implications of these connections. The 1928 General Election was the first general election after universal male suffrage was established. These were the only two general elections held under the de facto parliamentary cabinet system that was discussed earlier. Thus, we explore the extent and implications of the political connections of firms in prewar Japan during the peak of democracy.

From the perspective of the economy, the development of the Japanese economy was accelerated during WWI. Many new industries (including the metal, machinery, and chemical industries) grew rapidly because imports from Europe declined sharply due to the war. In addition, the industries that provided public utilities (such as electricity, transportation, and communication) to these industries expanded as well. In the late 1910s, many of the growing firms raised funds from the capital market, and the number of firms listed on the Tokyo Stock Exchange increased sharply (Hamao et al., 2009). After WWI, the Japanese economy experienced a long period of depression until the early 1930s because of harsh international competition and the instability of the financial system; many firms faced financial distress. The expansion of the industries and the capital market during WWI enables us to use the stock price data as well as the financial data of a sufficient number of firms. Further, we assume that the difficult environment for industries and firms after WWI would make political connections valuable.

Thus, we assume that focusing on Japan in the late 1920s and the early 1930s would be advantageous in the examination of the role of the political connections of firms in a democracy. The

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[2] See also Masumi (1988, pp. 97–98).

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rest of the paper is organized as follows. Section 2 describes the characteristics of political connections in prewar Japan. Section 3 explains the empirical methodology of this study, and Section 4 presents the empirical results. Section 5 concludes the paper.

2. Identifying connections between firms and politics

We identify the connections between firms and politics following Faccio's (2006) definition of politically connected firms. Faccio (2006) identified a firm as politically connected if at least one of the top officers or large shareholders either is a member of parliament or a minister or has a close relationship with a member of parliament or a minister.[3] In this paper, we identify a firm as politically connected if the firm had at least one director or auditor who was simultaneously a member of the House of Representatives. For the reasons stated in the Introduction, we focus on the political connections of firms before and after the general elections in February 1928 and February 1930 (the sixteenth and seventeenth general elections).

The sample firms are those firms whose directorship data and financial data are available in the *Kabushiki Nenkan* ("Corporate Stock Yearbook") published by Osakaya Shoten and the *Ginko Kaisha Yoroku* ("Directory of Banks and Companies") issued by Tokyo Koshinjo, and whose stock price data are simultaneously available in *Diamond*, a major economic magazine published every ten days. Using the 1928 and 1930 issues of *Kabushiki Nenkan* and *Ginko Kaisha Yoroku*, we obtained the data about the directors and auditors of the sample firms just before the general elections in 1928 and 1930.

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[3] In Faccio (2006), the definition of "close relationships" is used to capture the boarder connections between firms and politicians. Firms that have close relationships are defined as those that are closely related to a top official. The definition of close relationship is split into several types of connections. For instance, close relationships include cases where one of firms' top officers or large shareholders is a relative or friend of a member of parliament (or a minister) as well as cases where one of firms' top officers or large shareholders is a politician in another country or is known to be associated with a political party.

Diamond provides the stock price data of major companies every ten days. From this source, we constructed the dataset of the monthly stock prices for the sample firms. Since we want to calculate the stock returns for specific time windows (from 1 month to 5 months before and after the general elections in February 1928 and February 1930), we collected the stock price data from August 1927 to July 1928 and from August 1929 to July 1930.

The information about politicians was taken from the *Shugiin Meikan* ("Directory of the House of Representatives") by Nihon Kokusei Chosa-kai, which provides detailed information at the candidate level about the results of the general elections from 1890 to 1976. From this source, we obtained the list of the members of the House of Representatives who were elected in the general elections of 1928 and 1930. By matching the list of these Diet members with the list of the directors and auditors of the sample firms for 1928 and 1930, we identified the politically connected firms after the general election of 1928 and 1930, respectively. The politically connected firms in 1928 and 1930 in this context are those that had at least one director or auditor who was elected in the general election of 1928 and 1930, respectively.

In order to identify the effects of political connections on firm values, we need to understand the changes in the political connections within firms. That is, we want to know whether a firm already had political connections before the general elections in 1928 and 1930. Therefore, we collected data on the political connections of firms before the general elections in 1928 and 1930 by matching the list of the firms' directors and auditors in 1928 and 1930 with the list of the members of the House of Representatives who were elected in the general elections in 1924 and 1928, respectively.

Finally, we exclude those firms whose accounting years ended after February of the election year, from the samples, because we want to focus on cases where the existing directors and auditors of the firms were elected to be Diet members. In addition, to reduce the effect of outliers, we exclude

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those firms whose monthly stock returns were higher than 100%. Consequently, the samples included 398 firm-year observations—194 firms for year 1928 and 204 firms for year 1930.

Table 1 shows how pervasive the political connections were among the major firms in Japan in the 1920s. Panel A represents all the firms whose directorship information is available in the *Kabushiki Nenkan*; Panel B shows our sample firms defined above. In Panel A and Panel B, the rows classify the firms by their political connections after the elections, while the columns present the firms by their political connections before the elections.

Column 3 of the sample for all firms (1) in Panel A ("Total") shows that 176 of the 1,136 firms were politically connected after the elections (ratio: 15.5%). Of these 176 politically connected firms, 129 firms had been politically connected before the election as well, which implies that the political connections were consecutively retained. Splitting the sample for the years 1928 and 1930 ((2) and (3)), we find that while the number of politically connected firms in the post-election period was 100 out of 559 firms (17.9%) for 1928, the number of politically connected firms was 76 out of 577 firms (13.2%) for 1930. That is, the percentage of politically connected firms decreased substantially from 1928 to 1930.

The results in Panel B about our sample firms are qualitatively the same as those in Panel A. Of the 398 firms in our samples, 78 firms (19.6%) had political connections after the election. The ratio of politically connected firms in the post-election period in our sample is a little higher than that of the total major firms in Panel A. When we split the samples into those for 1928 and for 1930, the percentage of politically connected firms in the post-election period was 22.2% in the former, while it was 17.2% in the latter. As in Panel A, the percentage of politically connected firms in the post-election period declined substantially from 1928 to 1930.

We can compare the results of Panel B with the results reported in Faccio (2006), who used data on publicly traded companies from 47 countries. According to Faccio (2006), in 2001, the ratio

of politically connected firms to the total number of publicly traded firms was 1.34% in Japan and 2.68% in the world. That is, the ratio of politically connected firms in prewar Japan was much higher than that in contemporary Japan and the world. The ratio is close to the ratios in contemporary Indonesia (22.8%), Malaysia (19.8%), and Russia (20.0%), where political connections are the most prevalent among the 47 countries that were studied.

The difference in the results between prewar and contemporary Japan may reflect the difference in institutional quality. Faccio (2006) found that the incidence of political connections is higher in countries with political corruption and weak restrictions on political conflicts of interest. According to the recent corruption perception index compiled by Transparency International, Japan is evaluated as a relatively clean country.[4]

Table 2 shows the percentages of politically connected firms in the post-election period by industry based on our sample firms. We classify the sample firms into 13 industries according to the industry categories in the *Kabushiki Nenkan*. The percentage of politically connected firms was higher in the electric utilities industry (45.0%), the sugar industry (31.2%), and the railroad industry (29.6%). For public utilities industries such as the electric utilities and railroad industries, government licensing is generally important. Ramseyer and Rosenbluth (1995) state that, according to the Light Railroad Subsidy Act amended in 1921, the Japanese government gave generous subsidies to private railroad companies, especially to small and unprofitable ones. Moreover, the government had immense influence on private railroad companies since it granted licenses. It is notable that companies in the sugar industry had many offices and plants in Taiwan, which was a Japanese colony. Therefore, we can infer that the value of political connections was higher in these industries.[5]

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[4] According to the corruption perception index of 2001, Japan ranks 21 out of 91 countries (http://www.transparency.org/research/cpi/cpi_2001). A high ranking indicates a lower level of perceived corruption.
[5] We confirmed the results using data on all the firms in the *Kabushiki Nenkan* (Appendix Table 1).

Table 3 breaks down the results of Panel B of Table 1 based on the position of the politician in the firm. The positions that we consider are president, executive director, ordinary director, and auditor.[6] Panel A of Table 3 reports the number of politically connected firms by the position of the politician directors in their firms and their percentages in the 398 sample firms. While the number of firms where at least one of the directors or auditors was a member of the House of Representatives was 45 (11.3%) and 28 (7.0%), respectively, the number of firms where at least the president or one of the executive directors was a member of the House of Representatives was 10 (2.5%) and 8 (2.0%), respectively. Even when we examine the data by year, the results are similar. Hence, we can conclude that the firms tended to have political connections through ordinary directors and auditors rather than through presidents and executive directors.

Panel B of Table 3 reports the number of politician directors by their position in the firms.[7] We find that the number of ordinary directors and auditors is much larger than that of presidents and executive directors. On the other hand, the percentage of politician directors among the total directors in each position was not substantially different across the positions. These observations suggest that the result in Panel A of Table 3 reflects only the difference in the number of people across the positions. Finally, the results for 1928 and 1930 show that the percentage of politician directors decreased from 2.50% to 1.94% between these two years, which is consistent with the results in Table 1.

3. Empirical strategy

Using the samples described in the previous section, we examine what characteristics the

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[6] Some politically connected firms had multiple connections with politics. Therefore, the sum of the number of politically connected firms by four positions does not correspond to the total number of politically connected firms.
[7] Since some companies did not have a chairperson or a president, the number of top executives is less than the number of firms in our sample.

politically connected firms had, and how the political connections affect firm values. In order to identify the effects of political connections, we split the sample firms into the following four groups based on the political connections that the firms did or did not have and assigned those groups four dummy variables: *PC01*, *PC11*, *PC00*, and *PC10*. The dummy variable *PC01* takes the value one if a firm had no political connections in the pre-election period but had political connections in the post-election period, and zero otherwise. Hereafter, we refer to those firms whose *PC01* equals one as PC01 firms. The PC01 firms were firms that newly obtained political connections through the election.

The dummy variable *PC11* takes the value one if a firm already had political connections in the pre-election period and had political connections in the post-election period as well, and zero otherwise. In other words, the PC11 firms continuously had political connections before and after the election. The dummy variable *PC00* takes the value one if a firm had no political connections in the pre-election and post-election periods, and zero otherwise. We use the PC00 firms as a benchmark to estimate the effect of political connections on firm values. Finally, the dummy variable *PC10* takes the value one if a firm had political connections in the pre-election period but no political connections in the post-election period, and zero otherwise. That is, the PC10 firms are those that lost political connections through the election.

3.1 Determinants of political connections

We estimate the determinants of politically connected firms, i.e., what attributes of firms affected the probability that a firm has political connections. To see that, we conduct simple Probit regressions using panel data consisting of firms for the years 1928 and 1930. The equation to be estimated is given in Eq. (1):

$$\Pr(PC\_type_{it} = 1) = F(\alpha_0 + \alpha_1 SIZE_{it} + \alpha_2 ROA_{it} + \alpha_3 Debt_{it} + \alpha_4 DUM\_1928_{it}) \qquad (1)$$

where *PC_type* is a dummy variable that indicates whether a firm is politically connected or not. We use the four dummy variables *PC00*, *PC01*, *PC11*, and *PC10* as well as another dummy variable *PC*, which takes the value one if a firm was politically connected in the post-election period, and zero otherwise. In other words, *PC = PC01 + PC11*. We estimate Eq. (1) using these dummy variables as the dependent variable. By comparing the estimated results, we can examine the relationship between the types of political connections and the firms' attributes.

With respect to explanatory variables, *Size* indicates the firm size measured by the log of total assets. Agrawal and Knoeber (2001) used firm size as a measure of the importance of politics; they assumed that larger firms tend to face more intensive political oversight. They found that firm size had a positive and significant effect on the number of politically experienced directors in manufacturing firms in the U.S. in the late 1980s. However, small firms could also have incentives to have political connections. For instance, smaller firms might have competitive disadvantages over larger ones. If this were the case, smaller firms would have more incentives to obtain benefits from the government through political connections. Hence, the net effect of firm size on the incidence of political connections is not clear in advance.

The variables *ROA* and *Debt* indicate the return on assets (ROA) and the debt to asset ratio, respectively. These variables indicate a firm's profitability and financial risk. We use industry-adjusted values of these variables in the estimation. These variables are used to examine the relationship between firm performance and the incentive to have political connections. We expect firms that are performing badly to be more likely to have political connections in order to revive their performance than those that are performing well. If this is indeed the case, the coefficient of the industry-adjusted ROA is expected to be negative and that of the industry-adjusted debt ratio is

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expected to be positive. The dummy variable *DUM_1928* takes the value one if the observation is for year 1928, and zero otherwise. The industry dummy variables are also included in the explanatory variables. In the estimation, we use the robust-standard errors clustered at the industry and year levels.

3.2 Effect of political connections on firm value

To examine the value of political connections, we compare the monthly stock returns of the politically connected firms and those of the non-connected ones.[8] For the analyses, we should be careful about the endogeneity between the stock returns and the firm's decision about political connections. That is, although the general election was exogenous to each firm, a firm's decision to make some of its board members run for the election may be related to the firm's characteristics and performance. Taking this potential endogeneity between stock returns and political connections into consideration, we use the difference-in-differences (DID) approach in our analysis. To be specific, we compare the differences in the stock returns of the politically connected firms (treatment group) and those of the non-connected firms (control group) from the pre-election period to the post-election period. The PC00 firms, which had no political connections in the pre-election and post-election periods, are used as the control group. For the treatment group, we principally focus on the PC01 firms (which had no political connections before the election but had political connections after the election) to capture the effect of the event where a firm newly obtained political connections on the firm's value. We also conduct DID analyses using the PC11 and PC10 firms as the treatment groups to compare the DID results of the three categories of firms (PC01, PC11, and PC10 firms). By comparing the DID results of the PC01 and PC11 firms, we can evaluate the effect

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[8] It is difficult to conduct analyses based on daily stock returns due to data availability. The number of firms whose daily stock price information is available is much smaller than that of firms whose monthly stock price information is available.

of the event where a firm newly obtained political connections using the performance of the firms

that continuously had political connections (i.e., the PC11 firms) as the benchmark. Further, by

comparing the DID results of the PC10 and PC00 firms, we can evaluate the effect of losing political

connections.

The key variable in this context is the stock return of each firm, which is supposed to capture

the evaluation of the firm by the capital market. We measure the stock return by the buy-and-hold

abnormal returns (BHARs) using the monthly stock price data. The intervals to measure the BHARs

are from one month to five months in both the pre-election period as well as the post-election period.

The n-month BHAR in the pre-election period (*PRE_BHAR*) is defined in Eq. (2):

$$PRE\_BHAR_{i,t}^{n} = \prod_{m=-n}^{-1} (1 + R_{im}^{t}) - \prod_{m=-n}^{-1} (1 + R_{bm}^{t}) \qquad n = 1\ldots5 \qquad (2)$$

where R_{im}^{t} is the monthly stock return of firm i in month m of year t; m equals zero in the election

month. R_{bm}^{t} indicates the benchmark return. The average value of the returns for all the firms in the

sample is used as the benchmark return. *PRE_BHAR*$_{i,t}^{n}$ indicates the BHAR for the n month before

the election. We estimate *PRE_BHAR* with respect to each interval from one month to five months (n

= 1…5). We calculate these *PRE_BHAR* values using the samples of firms for the years 1928 and

1930 (t = 1928 and 1930).

The n-month BHAR in the post-election period (*POST_BHAR*) is defined in Eq. (3):

$$POST\_BHAR_{i,t}^{n} = \prod_{m=1}^{n} (1 + R_{im}^{t}) - \prod_{m=1}^{n} (1 + R_{bm}^{t}) \qquad n = 1\ldots5 \qquad (3)$$

where *PRE_BHAR*$_{i,t}^{n}$ indicates the BHAR for the n month after the election. As with the case for

PRE_BHAR, we estimate *POST_BHAR* with respect to each interval from one month to five months.

In the DID analyses, we compare the changes in the BHAR values of the treatment groups and

the control group from the pre-election period to the post-election period. The difference in BHAR is

defined in Eq. (4):

$$dBHAR_{it}^{n} = POST\_BHAR_{it}^{n} - PRE\_BHAR_{it}^{n} \qquad n = 1\ldots5 \qquad (4)$$

where $dBHAR^{n}_{i,t}$ indicates the difference between the n-month BHAR in the post-election period (i.e.,

POST_BHAR) and that in the pre-election period (i.e., *PRE_BHAR*). In the DID analyses, we

compare the *dBHAR* values of the treatment groups (i.e., the PC01, PC11, and PC10 firms) and the

control group (the PC00 firms).

   Table 4 reports the basic statistics. The buy-and-hold returns that are not adjusted by market

returns (BHR) indicate the movement of the whole stock market before and after the election. While

the BHR values were positive in all the intervals before and after the 1928 election (the sample for

year 1928), they were mostly negative before and after the 1930 election. The stock market returns

decreased sharply after the 1930 election. We assume that this result reflects the effects of the Great

Depression in 1930–1931. Thus, we should control for the movement of the whole stock market.[9]

This is why we use BHAR as the measure of firm performance in the analyses in the following

section that use the pooled samples for 1928 and 1930.

4. Empirical results

4.1 Results of the determinants of political connections

   Table 5 shows the estimated results of the determinants of political connections (calculated

using Eq. (1) in Section 3.1). In Columns 1–3, we use the dummy variable that indicates whether a

firm was politically connected in the post-election period (*PC*) as the dependent variable. The

coefficient of firm size is negative and statistically significant in Columns 1–3, which suggests that

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[9] For instance, if the ratio of the sample for year 1928 to that for year 1930 in politically connected firms is higher than that in non-connected firms, the changes in BHRs from the pre-election to the post-election periods in politically connected firms will have an upper bias compared to those in non-connected firms.

smaller firms were more likely to have political connections compared to larger firms. This result can be interpreted as an indication that smaller firms had greater incentives to have political connections in order to get support from the government for competing with large firms. The dummy variables representing the electronic utilities, railroad, and sugar industries have positive and statistically significant coefficients, which suggests that firms in these industries were more likely to have political connections compared to firms in other industries. The coefficient of the industry-adjusted ROA is negative and that of the industry-adjusted debt ratio is positive in Columns 1 and 2, respectively. Both the coefficients are statistically significant. These results indicate that the firms that were performing badly were more likely to have connections with politics compared to firms that were performing well. However, in Column 3, while the negative effect of the industry-adjusted ROA disappears, the effect of the industry-adjusted debt ratio is still negative and statistically significant at the 1% level. That is, the effect of the debt ratio on political connections is stronger. From this result, we can infer that firms with higher risk would try to obtain benefits from their political connections to revive their performance.

We estimate Eq. (1) using *PC01*, *PC11*, and *PC10* as the dependent variables.[10] We use the dummy variables *PC01*, *PC11*, and *PC10* as the dependent variable in Columns 4–6, Columns 7–9, and Columns 10–12, respectively. In the estimation, we consolidate some industry-dummy variables into the dummy variable indicating all the manufacturing industries (*All manufacturing*) and the dummy variable indicating the other industries because the original industry classification was so small that several industries had no firms for which *PC01*, *PC11*, or *PC10* takes the value one.

In Columns 4–6 and 7–9 (where the dependent variables are *PC01* and *PC11*, respectively), we obtain results similar to those in Columns 1–3. That is, firms that were smaller and performed badly were more likely to have political connections. On the other hand, in Columns 10–12 (where

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[10] In the estimations, we compare the PC01, PC11, and PC10 firms with the PC00 firms.

the dependent variable is *PC10*), the coefficients of firm size, industry-adjusted ROA, and debt ratio are not statistically significant. Since the PC10 firms had political connections in the pre-election period but lost them after the election, it can be interpreted that these firms might have fewer incentives to hold political connections because their performance was no longer bad.[11] With respect to the industry dummies, the coefficient of the dummy variable for the electric utilities industry is positive and statistically significant in all the cases (in Columns 4–12), and that of the railroad industry is positive and statistically significant in Columns 7–12.[12] The PC11 firms and the PC10 firms include the firms that had political connections in the 1924 election (the previous election), and the PC01 firms include the firms that did not.[13] Hence, we can infer that it was important for the railroad industry to build political connections before the mid-1920s. Thus, the results confirm that the firms in those industries where government licensing was important were more likely to have political connections compared to the firms in other industries.

4.2 Results of the effect of political connections on firm value

4.2.1 Difference–in-differences analyses

We conduct difference-in-differences (DID) analyses on the BHAR values (Table 6). That is, we compare the changes in BHARs of the treatment group and the control group from the pre-election period to the post-election period.[14] In the analyses, we use the PC01, PC11, and PC10

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[11]When we compared the industry-adjusted ROA and debt ratio of the PC10 firms and the PC00 firms, the results confirmed that the values were not significantly different between the two groups. However, when we compared these values of the politically connected firms in the post-election period (PC01 and PC11 firms) and the PC00 firms, the results confirmed that the industry-adjusted debt ratio of the politically connected firms was higher and statistically significant than that of the PC00 firms. That is, the financial performance of the PC10 firms was not bad compared to that of the other categories of firms.

[12] Hara (1983) pointed out that some industries (including the public utilities industries and the construction industry) that depended on public orders tended to have connections with politics (pp. 191–192).

[13] The PC11 and PC10 firms in the sample for year 1928 had directors on their board who won the 1924 election.

[14] In the analyses, we selected sample firms that are available in the pre-election and post-election

firms as the treatment groups and the PC00 firms as the control group.

First, we compare the BHARs of the PC01 firms (1) and the PC00 firms (4). In the pre-election period, the BHAR of the PC01 firms was substantially lower than that of the PC00 firms. For instance, with respect to the 5-month returns, the BHAR of the PC01 firms was lower than that of the PC00 firms by 8.37% (-7.46% vs. +0.91%).[15] On the other hand, the BHAR of the PC01 firms in the post-election period was higher than that of the PC00 firms. Thus, the difference in the BHARs of the PC01 firms between the pre-election and post-election periods was substantially larger than that of the PC00 firms. Moreover, the results of the DID analyses ((1)-(4)) are statistically significant in the case of the 4-month and 5-month intervals. In other words, the stock returns of the PC01 firms showed more improvement from the pre-election period to the post-election period compared to those of the control group (the PC00 firms). These results indicate that the stock market anticipated that firms would benefit from connections to politics, which is consistent with Faccio's (2006) result based on cross-country data.

Second, we conduct DID analyses of the PC11 (3) and the PC00 firms (4). The BHAR of the PC11 firms was negative or near zero in the pre-election and post-election periods. As confirmed in the results of the DID analyses ((3)-(4)), the difference in the BHARs of the PC11 firms between the pre- and post-election periods was not significantly different from that of the PC00 firms. That is, the stock returns of the PC11 firms did not improve from the pre-election period to the post-election period compared to those of the control group (the PC00 firms). This result suggests that the firms that had political connections before the election did not obtain additional benefits from continuing

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periods to calculate the difference of the BHARs from the pre- to post-election periods (*dBHAR*) with respect to each sample firm.

[15] The share of the PC00 firms among all the sample firms is more than 75%. Therefore, the movement of stock returns in the PC00 firms was similar to the market returns (i.e., the benchmark return), which was defined as the average value of the stock returns of all the sample firms. Actually, the BHARs of the PC00 firms are near zero compared to those of the other categories (i.e., the PC01, PC11, and PC10 firms).

their connections to politics. On the other hand, as saw above (the results of DID (1)-(4)), firms obtained benefits from the political connections that were newly generated in the election Thus, the stock market positively evaluated the new political connections of firms.

Third, we conduct DID analyses of the PC10 firms (2) and the PC00 firms (4). Since the PC10 firms had political connections before the election but lost them after the election, the DID results can be interpreted as the value of losing political connections. The BHAR was negative in all the intervals in the pre- and post-election periods, which suggests that the PC10 firms performed badly in these periods. The DID ((2)–(4)) results are not statistically significant. Therefore, there is no evidence that losing political connections causes firms to suffer from a decline in stock returns.[16] Additionally, we conduct DID analyses of the PC01 firms (1) and the PC10 firms (2) to examine the difference between the value of building political connections and that of losing them. The DID ((1)-(2)) results indicate that the change in the stock reruns of the PC01 firms was significantly higher than that of the PC10 firms in the 4-month and 5-month intervals. However, the DID ((1)–(2)) results (between the PC01 and PC10 firms) are hardly different from those of the DID ((1)–(4)) analysis (between the PC01 and PC11 firms). Therefore, we conclude that these results are most likely caused by the effect of having political connections.

In summary, we obtained strong evidence that the stock market anticipated that firms would benefit from building political connections. However, even though firms that already had political connections before the election retained these connections after the election, these firms did not obtain additional benefits from the political connections. Therefore, the stock market evaluated new political connections to be valuable. Further, we could not confirm the negative effect of the loss of political connections on firm value.

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[16] Further, we conducted DID analyses of the PC10 and PC11 firms ((2)–(3)) to equalize the condition of the presence of political connections before the election. However, the DID ((2)–(3)) results were not statistically significant in all the intervals (1M–5M).

We can find anecdotal evidence that is consistent with our findings that the firms in the public utilities industry tended to have more political connections, and that such political connections generally added to the value of these firms. The *Records of the culture and geography of Shinshu district* speak of Gorouemon Ihara, who was an executive director of Ina Electric Railroad Co. Ihara was a famous entrepreneur who ran for the general election twice. Although he lost the election in 1915, he won the election in 1928. His decision to run for the election indicates that he considered the best way to complete his railroad business was to become a politician. He seems to have had a clear intention of obtaining some benefits for his business by becoming a politician.[17]

4.2.2 Robustness checks

In this study, we conducted DID analyses to control for the endogeneity of the political connections of firms. However, the DID analyses assumed that the treatment groups and the control group have the same trend of change in the stock returns over the pre-election and post-election periods, except for the effect of the election. If this assumption does not hold, we have no guarantee that the DID results are unbiased. Therefore, to validate the robustness of the results, we extend the DID analyses conducted in Table 6 by combining them with propensity score matching. This approach allows us to compare two homogeneous groups. Consequently, the assumption described earlier is more likely to hold. First, we calculate Eq. (1) in the propensity score estimations, where the dependent variables are *PC01*, *PC11*, and *PC10*; that is, we use the estimated results of Columns 6, 9, and 12 of Table 5, respectively, to calculate the propensity scores. Second, we conduct treatment effect estimations based on these propensity scores. The matching algorithm to find the

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[17] The differences in the BHARs of Ina Electric Railroad from the pre- to post-election periods of 1928 were 21.1% (1-month period), 6.8% (2-month period), 10.9% (3-month period), -4.5% (4–month period), and -0.4% (5-month period). Therefore, Ina Electric Railroad enjoyed higher stock returns just after the election; however, the returns were not always higher than those of the control sample 4–5 months after the election.

closest controls (the PC00 firms) is three-nearest neighbor matching.[18]

Table 7 presents the results of the treatment effect estimations of the impact of political connections on the value of firms. In Panel A of Table 7, we compare the differences in the BHARs of the PC01 and PC00 firms from the pre-election to post-election periods. The differences in the BHARs of the PC01 firms are higher than those of the PC00 firms in all the intervals (from 1-month to 5-month intervals), and the DID values are significant in the 2-month, 4-month, and 5-months intervals. That is, the stock returns of the PC01 firms improved during the pre- and post-election periods compared to the corresponding control group (the PC01 firms). The DID values in Table 7 are larger than those in Table 6. For instance, the change in the 5-month stock return of the PC01 firms is higher than that of the PC00 firms by 14.8%. In Panel B of Table 7, we compare the changes in the BHARs of the PC11 and PC00 firms from the pre-election to the post-election periods. We find that the changes in the BHARs of the PC11 firms are not statistically different from those of the PC00 firms in all the intervals. Further, in Panel C of Table 7, we compare the changes in the BHARs of the PC10 and PC00 firms. The changes in the BHARs of the PC10 firms are not statistically different from those of the PC00 firms in all the cases. In summary, we obtain results consistent with the results of Table 6 even when the method of propensity score matching is applied. Thus, the finding that the stock market anticipated that firms would benefit from building new political connections is a robust result.

5. Conclusion

In this paper, we investigated the extent, determinants, and implications of the political connections of firms at the peak of democracy in prewar Japan. We defined a firm to be a politically connected if at least one of its directors or auditors was a member of the House of Representatives.

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[18] We conducted further examinations using five-nearest neighbor matching as the matching algorithm to find the closet controls. The results were found to rarely change.

We examined what determined the incidence of political connections, and how political connections affected firm values. We used the data of publicly traded companies in the periods before and after the 1928 and 1930 general elections, when democracy and the power of political parties were at their peak in prewar Japan.

First, we found that the percentage of politically connected firms in prewar Japan was 19.6%. This is much higher than 1.34%, the ratio of politically connected firms in contemporary Japan. Second, we revealed that smaller or badly performing firms and firms in the electric utilities and railroad industries (where government licenses were important) were more likely to have political connections. Third, we found that the stock returns of firms that had new political connections improved from the pre-election period to the post-election period. On the other hand, the stock returns of firms that already had political connections before the election and retained them after the election did not increase in that period. This implies that the stock market highly evaluated new political connections.

From our results that firms with poor performance tended to have more incentives to have political connections and that they could improve their firm values, we can derive a welfare implication. If politically connected firms actually enjoyed rent in the form of some benefits from the government, political connections could distort the efficiency of resource allocation. However, this paper does not directly conduct any welfare analysis. The evaluation of political connections in terms of social welfare remains to be addressed in future research.

References

Agrawal, A., Knoeber C. R., 2001. Do Some Outside Directors Play a Political Role? *Journal of Law & Economics,* 44, 179-198

Claessens, S., Feijen, E., Laeven, L., 2008. Political connections and preferential access to finance: the role of campaign contributions. *Journal of Financial. Economics,* 88, 554–580.

Faccio, M., 2006. Politically connected firms, *American Economic Review,* 96, 369–386

Faccio, M., Masulis, R., McConnell. J. 2006. Political connections and corporate bailouts. *Journal of Finance*, 61, 2597-635.

Fisman, R., 2001. Estimating the value of political connections, *American Economic Review*, 91, 1095–1102.

Fan, J. P.H., Wong T. J., and Zhang T., 2007. Politically Connected CEOs, Corporate Governance, and Post-IPO Performance of China's Newly Partially Privatized Firms. *Journal of Financial Economics,* 84, 330-357

Goldman, E., So, J., and Rocholl, J. 2009. Do politically connected boards affect firm value? *Review of Financial Studies*, 22, 2331–2360.

Goldman, E., So, J., and Rocholl, J. 2013. Politically connected boards of directors and the allocation of procurement contracts, *Review of Finance*, 13, 1617-1648

Hamao, Y. Hoshi, T. and Okazaki,T. 2009.Listing Policy and Development of the Tokyo Stock Exchange in the Pre-War Period, in Takatoshi Ito and Andrew Rose (eds.), *Financial Sector Development in the Pacific Rim*, (NBER-East Asia Seminar on Economics, Volume 18), University of Chicago Press .

Hara, A. 1983, Zaikai (Business circles) in T. Nakamura and T. Ito eds., *Kindai Nihon Kenkyu Nyumon* (Introduction to the Studies on Modern Japan), augmented edition, University of Tokyo Press

Johnson,S.,Mitton,T.,2003.Cronyismandcapitalcontrol:evidence from Malaysia. *Journal of Financial Economics*, 67,351–382.

Khwaja, I., Mian A., 2005. Do lenders favor politically connected firms? Rent seeking in an emerging financial market. *Quarterly Journal of Economics* 120,1371–1411

Masumi, J. 1979. *Nihon Seitoshi-ron* (Historical Studies on the Political Parties in Japan) Vol.5, University of Tokyo Press

Masumi, J. 1988. *Nihon Seiji-shi* (Political history in Japan) vol.2, University of Tokyo Press

Nihon Kokusei Chosa-kai 1977. *Shugiin Neikan* (Directory of the House of Representatives), : Kokusei Shuppanshitsu

Osakaya Shiten 1928 and 1930. *Kabushiki Nenkan* (Year Book of Corporate Stocks), 1926 and 1928 issues, Osakaya Shoten

Ramseyer, M., Rosenbluth, F., 1995. *The Politics of Oligarchy: Institutional Choice in Imperial Japan*, Cambridge University Press

Tokyo Koshinjo 1928 and 1930. *Ginko Kaisha Yakuinroku* (Directory of the Banks and Firms Directors of Japan), 1926 and 1928 issues, Tokyo: Tokyo Kishinjo.

Table1 Number of politically connected firms

Panel A Samples based on *Kabushi-kenkan*
(1) All firms (Firms for the years 1928 and 1930)

	In pre-election period			
	Non-connected firms	Politically connected firms	Total	%
In post-election period				
Non-connected firms	899	61	960	84.51
Politically connected firms	47	129	176	15.49
Total	946	190	1136	100.0
%	83.27	16.73	100.0	

(2) Firms for the year 1928

	In pre-election period			
	Non-connected firms	Politically connected firms	Total	%
In post-election period				
Non-connected firms	433	26	459	82.11
Politically connected firms	28	72	100	17.89
Total	461	98	559	100.0
%	82.47	17.53	100.0	

(3) Firms for the year 1930

	In pre-election period			
	Non-connected firms	Politically connected firms	Total	%
In post-election period				
Non-connected firms	466	35	501	86.83
Politically connected firms	19	57	76	13.17
Total	485	92	577	100.0
%	84.06	15.94	100.0	

Panel B Selected samples in our study
(1) All firms (Firms for the years 1928 and 1930)

	In pre-election period			
	Non-connected firms	Politically connected firms	Total	%
In post-election period				
Non-connected firms	297	23	320	80.40
Politically connected firms	21	57	78	19.60
Total	318	80	398	100.0
%	79.90	20.10	100.0	

(2) Firms for the year 1928

	In pre-election period			
	Non-connected firms	Politically connected firms	Total	%
In post-election period				
Non-connected firms	142	9	151	77.84
Politically connected firms	14	29	43	22.16
Total	156	38	194	100.0
%	80.41	19.59	100.0	

(3) Firms for the year 1930

	In pre-election period			
	Non-connected firms	Politically connected firms	Total	%
In post-election period				
Non-connected firms	155	14	169	82.84
Politically connected firms	7	28	35	17.16
Total	162	42	204	100.0
%	79.41	20.59	100.0	

Table2 Distribution of politically connected firms among 13 industries

	Total		Political connections		
	All firms	Industry share	Non-connected firms	Politically connected firms	%
Chemicals	13	3.3%	11	2	15.38
Gas	12	3.0%	11	1	8.33
Mining and Refining	21	5.3%	19	2	9.52
Manufacturing	45	11.3%	40	5	11.11
Sugar	16	4.0%	11	5	31.25
Shipping and Transportation	19	4.8%	19	0	0.00
Railroad	54	13.6%	38	16	29.63
Electric utilities	40	10.1%	22	18	45.00
Exchange	14	3.5%	11	3	21.43
Spinning	44	11.1%	36	8	18.18
Ceramics	18	4.5%	14	4	22.22
Financial institutions	79	19.8%	72	7	8.86
Others	23	5.8%	16	7	30.43
Total	398		320	78	19.60

Table 3 political connections by positions of politician directors in firms

Panel A The number of politically connected firms (PCFs) by positions of politician directors

	Number of firms All firms		Firms for the year 1928		Firms for the year 1930	
	Number of PCF	% of total samples (398)	Number of PCF	% of total samples (194)	Number of PCF	% of total samples (204)
Positions of politician directors						
Top executive	10	2.5%	7	3.6%	3	1.5%
Executive directors	8	2.0%	6	3.1%	2	1.0%
Ordinary directors	45	11.3%	23	11.9%	22	10.8%
Auditors	28	7.0%	16	8.2%	12	5.9%

Panel B The number of politician directors (PD) by their positions

	Number of directors Total samples			Firms for the year 1928			Firms for the year 1930		
	Total	PD	%	Total	PD	%	Total	PD	%
Positions of politician directors									
Top executive	375	10	2.67	184	7	3.80	191	3	1.57
Executive directors	654	9	1.38	316	6	1.90	338	3	0.89
Ordinary directors	2136	48	2.25	1,053	24	2.28	1,083	24	2.22
Auditors	1177	29	2.46	569	16	2.81	608	13	2.14
Total	4342	96	2.21	2122	53	2.50	2220	43	1.94

Table4 Descriptive Statistics

Variable	Obs.	Mean	(%)	Std. Dev.	Min	Max
Firms for the year 1928						
Buy and Hold return before the 1928 election						
1 month	194	0.020	(2.04)	0.095	0.603	1.563
2 month	193	0.061	(6.09)	0.135	0.871	1.822
3 month	189	0.056	(5.59)	0.150	0.838	2.103
4 month	184	0.043	(4.33)	0.142	0.706	1.822
5 month	184	0.069	(6.9)	0.164	0.626	2.103
Buy and Hold return after the 1928 election						
1 month	194	0.012	(1.23)	0.080	0.731	1.600
2 month	193	0.004	(0.38)	0.100	0.577	1.548
3 month	189	0.034	(3.45)	0.111	0.657	1.620
4 month	184	0.048	(4.8)	0.141	0.599	1.632
5 month	184	0.059	(5.89)	0.169	0.627	2.020
Firms for the year 1930						
Buy and Hold return before the 1930 election						
1 month	204	0.006	(0.62)	0.066	0.739	1.365
2 month	203	−0.046	(−4.61)	0.081	0.548	1.257
3 month	201	−0.075	(−7.51)	0.106	0.288	1.164
4 month	156	−0.085	(−8.5)	0.110	0.298	1.183
5 month	155	−0.071	(−7.14)	0.131	0.209	1.238
Buy and Hold return after the 1930 election						
1 month	204	−0.056	(−5.57)	0.071	0.617	1.308
2 month	203	−0.131	(−13.08)	0.113	0.400	1.171
3 month	201	−0.139	(−13.86)	0.122	0.330	1.351
4 month	156	−0.271	(−27.07)	0.157	0.209	1.171
5 month	155	−0.241	(−24.14)	0.153	0.282	0.992
Firm financial variables						
Firm size	398	10.473		1.375	7.749	14.084
Industry-adjusted Debt ratio	398	0.000		0.177	−0.421	0.566
Industry-adjusted ROA	398	0.000		0.041	−0.239	0.188
Debt ratio	398	0.470		0.244	0.012	0.997
ROA	398	0.051		0.045	−0.177	0.249

Table 5 Determinants of political connections

Dependent variable	PC			PC01			PC11			PC10		
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
Firm size	−0.0978*	−0.166***	−0.166***	−0.147*	−0.183**	−0.183**	−0.0719	−0.135**	−0.136**	−0.0302	−0.0513	−0.0511
	(0.0523)	(0.0539)	(0.0543)	(0.0825)	(0.0813)	(0.0812)	(0.0474)	(0.0567)	(0.0570)	(0.0769)	(0.0808)	(0.0806)
Industry-adjusted ROA	−4.293**		0.148	−5.280*		−2.920	−3.419**		1.117	−2.300		−1.004
	(1.890)		(2.388)	(2.907)		(3.247)	(1.688)		(2.289)	(2.855)		(3.441)
Industry-adjusted Debt ratio		1.680***	1.701***		1.306***	0.910*		1.649***	1.808***		0.744	0.581
		(0.371)	(0.495)		(0.465)	(0.517)		(0.470)	(0.624)		(0.494)	(0.533)
DUM_1928	0.195**	0.197**	0.197**	0.395**	0.374**	0.386**	0.116	0.133	0.132	−0.144	−0.153	−0.148
	(0.0787)	(0.0782)	(0.0781)	(0.180)	(0.181)	(0.179)	(0.138)	(0.136)	(0.136)	(0.173)	(0.168)	(0.170)
(Industry dummies)												
Railroad	0.498*	0.549*	0.550*	0.199	0.158	0.156	0.727***	0.742***	0.746***	0.496**	0.478*	0.480*
	(0.293)	(0.296)	(0.291)	(0.157)	(0.156)	(0.159)	(0.202)	(0.200)	(0.196)	(0.252)	(0.255)	(0.254)
Electric utilities	1.105***	1.228***	1.229***	1.037***	1.025***	1.044***	1.227***	1.318***	1.323***	1.037***	1.059***	1.059***
	(0.309)	(0.298)	(0.293)	(0.231)	(0.236)	(0.237)	(0.182)	(0.167)	(0.161)	(0.196)	(0.201)	(0.200)
Gas	−0.478	−0.407	−0.406									
	(0.541)	(0.563)	(0.556)									
Financial institutions	−0.265	−0.148	−0.147									
	(0.307)	(0.296)	(0.292)									
Exchange	0.314	0.326	0.327									
	(0.315)	(0.308)	(0.306)									
All Manufacturing				−0.0342	−0.0473	−0.0568	0.200	0.202	0.207	0.260	0.246	0.246
				(0.228)	(0.218)	(0.223)	(0.218)	(0.222)	(0.216)	(0.262)	(0.255)	(0.257)
Mining and Refining	−0.317	−0.292	−0.293									
	(0.303)	(0.301)	(0.304)									
Manufacturing	−0.262	−0.228	−0.226									
	(0.295)	(0.299)	(0.291)									
Sugar	0.555*	0.657**	0.658**									
	(0.306)	(0.301)	(0.293)									
Spinning	0.138	0.190	0.190									
	(0.303)	(0.300)	(0.297)									
Ceramics	0.264	0.221	0.220									
	(0.330)	(0.373)	(0.375)									
Chemicals	−0.0860	−0.0252	−0.0240									
	(0.439)	(0.473)	(0.472)									
Constant	−0.162	0.526	0.528	−0.361	0.0433	0.0365	−0.644	−0.0349	−0.0308	−1.378	−1.148	−1.153
	(0.591)	(0.641)	(0.650)	(0.945)	(0.922)	(0.917)	(0.607)	(0.713)	(0.713)	(0.931)	(0.964)	(0.963)
NOB	375	375	375	318	318	318	354	354	354	320	320	320
Pseudo R-sq	0.108	0.128	0.128	0.092	0.095	0.099	0.086	0.110	0.110	0.059	0.061	0.062
Log likelihood	−171.0	−167.2	−167.2	−70.26	−70.01	−69.73	−142.8	−139.1	−139.0	−77.85	−77.66	−77.61

Significance at 1%,5% and 10% level are denoted by ″***″ ″**″ and ″*″. The figures in parentheses indicate the standard errors.

Table 6 Difference in difference analyses

BHAR (Buy and Hold Abnormal Return)

(1)BHAR of PC01firms

Pre-election period				Post-election period				Difference				Difference in difference((1)–(4))			Difference in difference((1)–(2))		
Pre_BHAR	NOB	Mean	%	Post_BHAR	NOB	Mean	%	dBHAR	NOB	Mean	%	DID	t-statistics	p-value	DID	t-statistics	p-value
1month	21	−0.005	−0.45	1month	21	0.021	2.10	1month	21	0.0255	2.552	0.025	1.049	0.295	0.035	1.236	0.223
2month	21	−0.033	−3.33	2month	21	0.014	1.45	2month	21	0.0478	4.780	0.050	1.568	0.118	0.046	1.455	0.153
3month	21	−0.031	−3.11	3month	21	0.010	1.01	3month	21	0.0412	4.120	0.048	1.360	0.175	0.041	1.177	0.246
4month	17	−0.058	−5.80	4month	17	0.032	3.24	4month	17	0.0904	9.038	0.089	**1.952**	**0.052**	0.112	**2.583**	**0.014**
5month	17	−0.075	−7.46	5month	17	0.009	0.87	5month	17	0.0833	8.329	0.089	**1.741**	**0.083**	0.097	**1.795**	**0.081**

(2)BHAR of PC10firms

Pre-election period				Post-election period				Difference				Difference in difference((2)–(4))		
Pre_BHAR	NOB	Mean	%	Post_BHAR	NOB	Mean	%	dBHAR	NOB	Mean	%	DID	t-statistics	p-value
1month	23	−0.001	−0.12	1month	23	−0.011	−1.08	1month	23	−0.0096	−0.963	−0.010	−0.446	0.656
2month	23	−0.031	−3.09	2month	23	−0.029	−2.93	2month	23	0.0016	0.161	0.004	0.124	0.901
3month	23	−0.027	−2.75	3month	23	−0.027	−2.69	3month	23	0.0006	0.058	0.007	0.206	0.837
4month	22	−0.016	−1.64	4month	22	−0.038	−3.83	4month	22	−0.0219	−2.191	−0.023	−0.584	0.560
5month	22	−0.031	−3.08	5month	22	−0.044	−4.43	5month	22	−0.0135	−1.345	−0.007	−0.164	0.870

(3)BHAR of PC11firms

Pre-election period				Post-election period				Difference				Difference in difference((3)–(4))		
Pre_BHAR	NOB	Mean	%	Post_BHAR	NOB	Mean	%	dBHAR	NOB	Mean	%	DID	t-statistics	p-value
1month	57	0.002	0.18	1month	57	0.001	0.14	1month	57	−0.0003	−0.032	−0.001	−0.051	0.959
2month	56	−0.005	−0.53	2month	56	−0.003	−0.28	2month	56	0.0024	0.243	0.005	0.229	0.819
3month	55	−0.003	−0.28	3month	55	0.000	−0.02	3month	55	0.0026	0.261	0.009	0.393	0.694
4month	51	−0.009	−0.90	4month	51	−0.025	−2.53	4month	51	−0.0163	−1.635	−0.018	−0.649	0.517
5month	51	−0.018	−1.79	5month	51	−0.020	−1.98	5month	51	−0.0019	−0.191	0.004	0.137	0.891

(4)BHAR of PC00 firms

Pre-election period				Post-election period				Difference			
Pre_BHAR	NOB	Mean	%	Post_BHAR	NOB	Mean	%	dBHAR	NOB	Mean	%
1month	297	−0.001	−0.14	1month	297	−0.001	−0.09	1month	297	0.0005	0.049
2month	296	0.002	0.21	2month	296	0.000	−0.01	2month	296	−0.0022	−0.219
3month	291	0.004	0.37	3month	291	−0.003	−0.27	3month	291	−0.0063	−0.634
4month	250	0.004	0.36	4month	250	0.005	0.50	4month	250	0.0015	0.148
5month	249	0.009	0.91	5month	249	0.003	0.30	5month	249	−0.0061	−0.614

Table 7 Propensity score matching

Panel A:Difference in BHAR (PC01 vs. PC00)

	3-Nearest matching			
	PC01	PC00	Difference in difference	t-statistics
dBHAR	Treatment	Control		
1M	0.026	−0.011	0.036	1.18
2M	0.048	−0.016	0.064	1.84*
3M	0.041	−0.012	0.053	1.29
4M	0.090	−0.009	0.100	1.95*
5M	0.083	−0.064	0.148	2.17**

Panel B:Difference in BHAR (PC11 vs. PC00)

	3-Nearest matching			
	PC11	PC00	Difference in difference	t-statistics
dBHAR	Treatment	Control		
1M	0.000	−0.004	0.004	0.17
2M	0.002	0.009	−0.007	−0.27
3M	0.003	0.009	−0.006	−0.22
4M	−0.016	0.015	−0.031	−0.95
5M	−0.002	0.023	−0.025	−0.69

Panel C:Difference in BHAR (PC10 vs. PC00)

	3-Nearest matching			
	PC11	PC00	Difference in difference	t-statistics
dBHAR	Treatment	Control		
1M	−0.010	−0.015	0.005	0.23
2M	0.002	−0.010	0.011	0.39
3M	0.001	−0.007	0.008	0.25
4M	−0.022	0.025	−0.046	−1.22
5M	−0.013	0.017	−0.030	−0.81

Significance at 1%,5% and 10% level are denoted by ″***″ ″**″ and ″*″

Appendix Table1 Distribution of politically connected firms among 13 industries, based on *Kabushi-kenkan*

	Total		Political connections		
	All firms	Industry share	Non-connected firms	Politically connected firms	%
Chemicals	38	3.3%	34	4	10.53
Gas	34	3.0%	33	1	2.94
Mining and Refining	52	4.6%	46	6	11.54
Manufacturing	110	9.7%	98	12	10.91
Sugar	26	2.3%	19	7	26.92
Shipping and Transportation	52	4.6%	45	7	13.46
Railroad	130	11.4%	100	30	23.08
Electric utilities	100	8.8%	72	28	28.00
Exchange	40	3.5%	34	6	15.00
Spinning	111	9.8%	99	12	10.81
Ceramics	34	3.0%	28	6	17.65
Financial institutions	236	20.8%	215	22	9.32
Others	173	15.2%	138	35	20.23
Total	1136	100.0%	961	176	15.49