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ABSTRACT

Sudden Deaths: Taking Stock of Political Connections*

Many firms voluntarily incur the costs of attempting to influence politicians. However, estimates of the value of political connections have been made in only a few cases. We propose a new approach to valuing political ties that builds on these previous studies. We consider connected to a politician all companies headquartered in the politician's hometown, and use an event study approach to value these ties at their unexpected termination. Analysis of a large number of sudden deaths from around the world since 1973, yields a 2% decline in market value of connected companies. Our stronger results are likely due to the lack of a clear event in earlier studies, and lead us to conclude that previous estimates understate the value of political ties.

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Keywords: political connections and sudden deaths

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SUDDEN DEATHS: TAKING STOCK OF POLITICAL CONNECTIONS

I. Introduction

Seminal work by Krueger (1974) argues that the value of government awarded licenses generates competitive rent-seeking by firms, which in turn, results in aggregate welfare losses. Indeed, she estimates these rents to be substantial (as a percentage of a nation's GDP) for the cases of India and Turkey. Subsequent models by Murphy et al. (1991, 1993) argue that rent-seeking lowers the returns to productive enterprise, and creates incentives for the most talented would-be entrepreneurs to become engaged in further rent-seeking activities.[1] Both effects lower economic growth.

A growing literature documents a wide range of benefits provided by governments to favored firms, such as: preferential access to credit (Chiu and Joh, 2004, Cull and Xu, 2005, Johnson and Mitton, 2003, Khwaja and Mian, 2005); preferential treatment by government owned enterprises (Backman, 1999, Dinç, 2005); relaxed regulatory oversight of the company in question or stiffer regulatory oversight of its rivals (Stigler, 1971, Kroszner and Stratmann, 1998, De Soto, 1989); lighter taxation (De Soto, 1989); and government bailouts of financially distressed firms (Faccio, Masulis and McConnell, 2005).

More to the point, studies by Roberts (1990), Fisman (2001) and Faccio (2005) provide direct evidence that the benefits exceed the costs of establishing political connections to specific firms. These authors show that the value of companies close to politicians (because of campaign contributions or personal and family ties) is sensitive to events such as the establishment or termination of a connection. In particular, Roberts (1990) looks at stock

[1] Note that rent-seeking activities can involve legal as well as illegal means; with definitions that vary across countries and time. In this study, we consider political connections established by either means, i.e., we make no distinction between legal versus illegal ties.

returns at the announcement of the sudden death of Senator Henry Jackson, for firms that made contributions to his campaign. He finds that the death of Senator Jackson significantly (and negatively) affected the value of firms that contributed to his campaign, especially those from his constituency. At the same time, firms related to his successor experienced a significant positive abnormal return.

Fisman (2001) studies events surrounding rumors of Indonesian President Suharto's worsening health conditions during his final years in office, and compares returns across firms with differing degrees of political exposure. His study shows that, at around the time of the dissemination of this bad news, stock prices of tightly connected firms dropped more than the prices of less connected firms. Furthermore, for connected firms, the severity of the stock price reaction increases when the news is more negative. In a more recent event study using data from 35 countries, Faccio (2005) identifies cases where directors or large shareholders enter politics, or when politicians join corporate boards, and finds a significant increase in corporate value, but only when businesspeople enter politics. She also finds that the stock price impact of a new connection is larger whenever a businessperson is elected as Prime Minister, rather than as member of the Parliament, and when the new connection is a large shareholder (rather than a director) that enters politics.

These three papers provide independent evidence that political connections add value to corporations. However, several criticisms may be raised. First, the results may lack generality; e.g., the Roberts and Fisman studies focus on one death (or rumors of an impending death) in one country, the U.S. and Indonesia, respectively. Additionally, since Faccio studies events that (although representing "surprises") were not completely unanticipated, it is not possible to determine the full value of connections. Similar valuation

problems exist when using 'events' that either differ in degree or did not ultimately materialize (as in Fisman's study of the deterioration of Suharto's health). Finally, there is the risk of contamination of announcements (e.g., the death examined by Roberts coincided with a major corporate event at the company most tightly connected to Senator Jackson – Boeing). Given these critiques, we propose an alternative approach. Specifically, in this paper we attempt to precisely measure the full value of corporate ties by focusing on the sudden death of politicians. We study a large number of sudden deaths from around the world since 1973, and document a large (2%) decline in market value of connected companies relative to the overall market.

The primary definition of political connections that we employ follows Roberts (1990), Bertrand, Kramarz, Schoar, and Thesmar (2004), and Siegel (2005), who argue that the basis of social and political networks is primarily based on geographic origin and education. The notion that location is important is echoed in the financial economics literature on local investment bias. It is well known that individual portfolio holdings display a strong bias towards overweighting firms based in the geographical location of the investor. Moreover, this home-bias has been demonstrated in both international, and domestic, portfolios of equities and bonds, and it persists despite well-documented benefits from international portfolio diversification. For example, French and Poterba (1991) document that U.S. equity traders allocate nearly 94 percent of their funds to domestic securities, despite the fact that the U.S. equity market accounts for less than 50 percent of the global equity market. Coval and Moskowitz (1999) find that home bias is prevalent even within a country. Specifically, they find that U.S. investment managers exhibit a similar strong bias for locally (e.g., same city) headquartered firms. Similar evidence is documented for Finland by

Grinblatt and Keloharju (2001). Loughran and Schultz (2004) additionally show that stock trading is localized in the city where the company is headquartered.

Hence we posit that politicians systematically favor 'local' enterprises, and thus location forms the basis of political connections. Most likely, the home city of the deceased politician will differ from that of his successor, implying a shift in the basis of political connections after the death. Moreover, since political power develops over time (e.g., placement on important committees, including more important ministerial and cabinet positions, is usually awarded to more senior politicians), a sudden death represents a capital loss of potential future political patronage that typically cannot immediately be replaced.[2] Our results strongly support our intuition. Not only do geographic connections matter a lot, but they matter even more for those companies that are likely to be more influential from a political standpoint, such as those controlled by dominant business families (Morck, Stangeland, and Yeung, 2000, Morck and Yeung, 2004).

For robustness however, we also follow previous work by Fisman (2001), Faccio (2005) and others, and focus on more narrow definitions of political ties. Although keyword searches for family and personal links yield a substantially smaller sample, the results are in line with those for geographic ties in documenting a substantial importance of political ties. Not only are ties important in terms of their value to companies (for both kinds of connections studies, prices on average drop by roughly 2% when a politician dies), but also in terms of numbers of companies affected. Thus, the results support earlier findings by Krueger (1974), and additionally indicate that political connections have a large economic impact also in more developed and in less corrupt countries.

[2] Roberts (1990) summarizes the literature on seniority in the United States.

The rest of the paper is organized as follows. Section II discusses the data sources used to identify the sudden death of politicians, and the geographic political connections. Section III presents the event study results. Section IV presents various sensitivity analyses, including an alternative definition of (personal and family) connections. Finally, Section V provides our conclusions.

II. Sudden death of politicians and political ties

A. Politicians who died suddenly

We employ a number of data sources to identify politicians who died suddenly. First, we conducted keyword searches in *Factiva* using the terms "died" or "dies" or "dead" or "stroke" or "crash" or "heart attack" or "killed" or "shot" plus the terms "member of parliament" or "minister." Occasionally, our search procedure retrieves cases of sudden death of local politicians, government advisors, and governors. We keep these cases in the analysis. The search is restricted to those deaths occurring prior to the end of July 2004. Results from these key word searches were combined with additional (and corroborating) information from several web sites, such as rulers.org, the Canadian Parliament (www.parl.gc.ca), and the political Graveyard (politicalgraveyard.com).[3] We then verified that the politician was still in office at the time of the death and that the death was sudden (for example, we exclude all deaths due to cancer). These criteria resulted in an initial sample of 329 deaths. For each recorded sudden death, we collected equity price data for every publicly traded firm available from *Datastream*, along with the location of each firm's headquarters (from *Worldscope*).

[3] The specific web sites were:
http://www.parl.gc.ca/information/about/people/key/ParlDeath.asp?lang=E&Hist=Y&param=S,
http://www.parl.gc.ca/information/about/people/key/ParlDeath.asp?lang=E&Hist=Y&param=H, and,
http://politicalgraveyard.com/offices/pdio.html.

After excluding observations from countries not covered in *Datastream* and *Worldscope*, we are left with 206 sudden deaths.

Thus, to qualify for inclusion in this study, the deceased politician must have (a) died suddenly, (b) come from a country with individual stock price data in *Datastream*, and (c) corporate location available in *Worldscope*. A few additional inclusion conditions are discussed in the next section.

B. Definition of political "geographic" ties

In extreme cases, connections have been identified by the news media, or from public records – as in the case of the Philippines under Marcos.[4] Given that typically only the most egregious cases are investigated, studies focusing on these cases alone might overstate the value of political connections due to a sort of survivorship bias. That is, since observing the establishment and maintenance of political connections is so difficult, many potentially unprofitable connections are never fully revealed. Hence generalizing from such cases may lead to an exaggerated estimate of their value.

Some researchers (e.g., Roberts, 1990; Kroszner and Stratmann, 1998) have attempted to identify ties by tracing political donations. However, public information on such donations are made available in only a few (e.g., the U.S.) countries. Moreover, even in the U.S., many connections are missed due to reported efforts at disguising specific ties, e.g., by spreading them out over many contributors, or by diverting monies to political action committees, or via even perfectly legal means such as book sales or speaking fees. Still others infer ties via public information on politicians' (or their relatives) holdings of corporate stock and/or

[4] See, e.g., the list produced by Asiaweek, at http://www.asiaweek.com/asiaweek/98/0731/nat_3.html.

membership on corporate boards (Faccio, 2005), educational background (Bertrand et al., 2004), or rely on historical friendships (Fisman, 2001; Johnson and Mitton, 2003).

In this study, we take a 'geographic' approach to inferring political connections. Specifically, we rely on the location of corporate headquarters to establish ties. In particular, we consider connected to a politician all companies located in the same town as the one in which the politician lived or the town in which the politician was born.[5] The politician's geographic ties are identified from *Factiva* and the political Graveyard web site. We were able to obtain this information for 190 politicians who died suddenly.

As mentioned earlier, the location of corporate headquarters is identified based on the corporate address reported in *Worldscope*. In a number of cases we are unable to find any company located in the same city as the politician, or stock prices are unavailable (this is often the case for earlier dates), or the stocks never trade during our event window. Clearly this geographic approach identifies too many firms. In principle, this should bias our results toward not finding value.[6] However we refine our measure by using several characteristics (country, firm, and politician specific) that other researchers have reported as features of political ties.

In Table 1, *Panel A*, we describe how the various data limitations combine to determine our final sample of sudden deaths of politicians. Using our geographic measure of political ties, we end up with a sample of 123 sudden deaths where we could identify city of birth or city of residence, and 7,080 companies based in those cities at the time of the death. In *Panel B*, we present information on the geographic coverage of sudden deaths and the number of companies with city ties.

[5] We also considered the location of funerals or burials, but found that when available, the location generally coincided with the city where the politician lived.
[6] Our procedure will also miss those ties unrelated to geography, and hence may underestimate their prevalence.

A Few caveats are in order. First, since we focus on countries with available data in *Datastream* and *Worldscope*, we inevitably end up with relatively developed economies. We recognize our average results cannot be used to make inferences on the value of connections in many less developed economies such as, for example, Uganda. Nonetheless, we believe the evidence we report for more corrupt or less developed (low per capita GDP) countries may be used (with caution) as rough proxy to measure the value of connections in those countries. Second, our procedure to identify "geographic" connections picks up a large number of companies when the deceased politician lived in a major city (e.g., Tokyo). Likely, politicians will have to allocate bounded resources among connected firms. Thus, it is possible that benefits for individual firms will be smaller for companies headquartered in major cities. We will address this concern later in the robustness tests section. Third, a disproportionate number of deaths are identified in the United States, likely because of better data sources. To the extent that connections are worth less in countries with relatively low corruption, this may bias our results toward insignificance. Although the focus on the location of corporate headquarters follows previous studies of investor bias, we recognize that it may not fully capture geographic connections. The location of the production plants, for example, may be very important as well. Unfortunately, the data does not allow controlling for that.

III. Event study results

A. Univariate results

We follow standard event study methodology to calculate the market-adjusted cumulative abnormal returns (CARs). The results reported in the paper are based on the event windows (-1,+1), (-1,+5) and (-1,+10), where time 0 is the date of the sudden death. Since

the deaths are sudden, we believe there is no reason or benefit to extending the event window further prior to the death (we subsequently check this). However, since many small stocks in our sample countries do not always trade, we extend the window a few days after the death in order to adjust for the non-trading problem. As a further precaution, only firms whose price changes at least once during the event window considered are included (it is very unlikely that, if traded, the price never changes in the window considered).[7] An alternative would be to directly control for trading volumes; however, turnover information is often unavailable in *Datastream*, especially for small stocks, those in less developed markets, and for events further back in time.

Stock prices used to compute the CARs are taken from *Datastream*. We also use *Datastream* value-weighted aggregate market indexes to compute market adjusted returns. When *Datastream* market indexes are not available, we employ the country's local market index.

Table 2, Panel A, shows that the sudden death of the politician results in a statistically and economically significant drop in the price of companies from the same city. This drop is (-0.70%) in the (-1,+1) event window, and increases to a particularly meaningful -1.93% in the (-1,+10) window. Thus, markets seem to require time to reflect the full value of political ties. Part of this effect may be due to lack of trading or thin trading in small/rural stocks (Loughran and Schultz, 2005). These results are not driven by clustering or by outliers.[8] Medians and sign tests in fact confirm large and negative drops. The median CAR in the (-1,+10) window is in fact a still large drop of -1.19%.

[7] This precaution, i.e., dropping firms with no price changes, has little effect empirically.
[8] In the presence of clustering observations may not be independent, and traditional standard errors may be biased. To address this problem, we correct standard errors using the procedure described in Wooldridge (2002, pp. 405-410).

B. Country and firm specific factors affecting the value of firms

It is clearly unreasonable to expect that all companies located in the politician's home or residential city will suffer from his or her death. In fact, whether political connections indeed add value is an empirical question. Although, there are strong reasons to believe geographic location matters, some firms might benefit from the death of the politician. It may suffice here to notice that prices drop for 58% of firms in the (-1,+10) window, while they increase for 42% of companies. Thus, it is certainly true that the *majority* of firms suffer. On the other hand, prices may drop not because connections are valuable to specific companies, but because they result in substantial benefits for a whole geographic area (e.g., related to infrastructure or other projects).[9] To rule out that this effect is driving our results, we therefore need to show that the price drop is even larger for those companies that are more likely to have *stronger* political ties.

Put another way, if the stock price reaction we document is not due to political ties, we should not observe larger stock price reactions for companies with (expected) stronger political ties. As we will discuss shortly, given the evidence in previous papers, we expect companies with family ties, high market-to-book, and those operating in highly corrupt countries to be able to extract larger benefits from their connections. If our measure of geographic connections is indeed capturing political ties (rather than just a location effect) we should then observe larger stock price drops among companies with these characteristics. For

[9] Morck and Yeung (2004) show that economies where family firms (with presumably more political ties) are more prevalent are characterized by less physical infrastructure. This suggests that very likely the stock price reaction we document does not reflect a reduction in local government spending for infrastructure in general (since this tends to be marginal), but rather picks up the cut in subsidies to family firms. Data limitations prevent us from testing this difference directly.

this reason, we investigate the impact of a number of firm and country-specific factors on the value of connections.

Previous work has suggested that some companies are more likely to have political ties: firms controlled by dominant business families (Morck et al., 2000, Morck and Yeung, 2004). To capture the influence of dominant business families, we include a *Family* indicator, which takes the value one if the company's largest ultimate shareholder (at the 20% level) is a family (including an individual), and zero otherwise. This is the same definition of family-control used in prior work such as La Porta et al. (1999), Claessens et al. (2000), and Faccio and Lang (2002). Several sources are used to identify family ownership including Claessens et al. (2000) for East Asian corporations, Faccio and Lang (2002) for Western European corporations. We newly collect data for Argentina, Australia, Brazil, Canada, and Poland from the sources listed in Appendix A. Since this data is for most countries measured as of 1996 or 1997, when we use these two variables we only include deaths occurring on or after January 1, 1996. If family ties are important, the price drop for family-controlled companies should be larger than that for companies not controlled by a dominant family.

Table 2, Panel B, documents that the price drop around the death of the politician is larger for family firms. The mean drop for 491 family firms is -1.41% (p-value = 0.00) vs. a drop of -0.89% (p-value = 0.02) for 1,510 non family firms. The median drop for family firms is -1.62% (p-value = 0.00) vs. a median drop of -0.67% (p-value = 0.00) for non family firms. The difference in the mean drops is not statistically significant at conventional levels (p-value = 0.18), while the difference in the median drops is statistically significant with a p-value of 0.06. This provides some support to the notion that family firms are more closely tied to politicians and suffer the most from the termination of the connection.

Several of the cited papers have documented various forms of patronage in favor of connected firms, including awarding direct contracts, granting licenses, inhibiting competitors, providing preferential access to credit, and bailouts, etc. Thus an additional test can be couched in terms of connected firms' market to book ratios. That is, if markets are aware of such benefits and discount them, we should observe that better connected firms trade at higher prices, e.g., have higher market-to-book, and therefore the price drop for these firms should be larger. Hence, we additionally control for the *M/B ratio*, defined as a market value of equity plus book value of debt over the sum of book value of equity plus book value of debt prior to the event.

Panel B of Table 2, shows that that the price decline is larger for firms with a higher market-to-book ratio. The mean drop for companies with an *M/B* in the top quartile is -4.00% (with a p-value of 0.02), while the mean drop is -1.27% (with a p-value of 0.16) for companies with an *M/B* in the lowest quartile. The median drops for these two samples are of -1.92% and -1.10% respectively (both significant at the 0.01 level). The difference in the median declines in prices statistically significant with a p-value of 0.02 (the p-value for the difference of means is 0.11)

Finally, we control for the level of perceived *Corruption* in the country. Several previous papers have documented that connections are especially valuable in highly corrupt countries. We therefore check whether sudden deaths in more corrupt countries elicit larger price effects. For the analysis, we use the Corruption Perceptions Index, produced by Transparency International (TI). For our purposes, TI's index has some key advantages. In particular, it is well known, and is available for a large number of countries (as of 2004 there

were 145), annually, since 1995.[10] Moreover, the index combines multiple information sources, and covers multiple aspects of corruption and transparency within each country. In 2004 for example, Transparency International combined information from 18 independent sources, including the Economist Intelligence Unit, the World Bank, the World Economic Forum, and Columbia University. If a sudden death occurred in a country prior to that country being included in TI's index, we use the corruption value that first appears in the TI index (e.g., the 1995 value). Similarly, if a country does not appear in the index (in a given year) but had previously been included, we use the most recent index value for that country. Since corruption does not change rapidly this procedure should not be grossly inaccurate. However, as a check, we also restrict the sample to only post-1994 sudden deaths, and use the index in its original form. Finally, in the robustness section, we use an alternative and newly developed corruption measure.

Results in Table 2 support the notion that connections are more valuable in highly corrupt countries; at least when we focus on median CARs. In fact, the median price change around the death of the politician is of -0.56% (p-value = 0.00) in countries with corruption in the top quartile, and of 0.22% (p-value = 0.32) in countries with corruption in the bottom quartile. The difference between the two sets of countries is significant with a p-value of 0.01. Results are however less strong when we look at means (probably due to the presence of outliers): Prices on average drop by -0.15% (p-value = 0.81) in countries with corruption in the top quartile, and drop by -0.85% (p-value = 0.31) in countries with "low" corruption.

[10] Transparency International's corruption perceptions index has been used in recent studies, e.g., Alesina and Weder (2002), and, Treisman (2000). As Alesina and Weder (2002) point out, alternative rankings compiled by different institutions using very different methodologies and sources are highly correlated. Current and past corruption rankings, as well as further information on their construction, is available at: http://www.icgg.org/

Although the average price drop is larger in countries with low corruption, the difference between the two estimates is not statistically significant (p-value = 0.49).

C. Regression results

Up to this point, we have only individually considered those variables that should pick up the effect of stronger political ties. We still need to show that these variables are indeed relevant to the cross-section of returns in a multivariate framework. In this section we present and discuss the results of a number of OLS regressions, where the dependent variable is the companies' CAR, in the (-1,+10) window. To check whether our results are driven by outliers, we also report regressions that exclude the top and bottom 1% of observations on the dependent variable – specifically, those companies with a CAR below -40.4% or above 32.4%.[11] In addition to the proxies of connectedness identified so far, i.e., family ownership, M/B ratios, and corruption, we add controls for a number of firm- and politician-specific attributes that may explain the event returns. Those variables are company size, the age of the politician and his/her position (as proxies for seniority), and whether the death was due to an assassination rather than an accidental or health-related sudden death. We provide some explanation for the inclusion of these variables below.

Johnson and Mitton (2003) find that large companies are more likely to be politically connected (although they don't provide evidence that connections are particularly valuable for those firms). As a proxy for size, we use the company's market value of equity prior to the death of the politician (mkcap). This variable comes from *Worldscope*. We need to point out that the impact of size on the event CARs is not obvious. In fact, although connections may

[11] We also used (though not reported) a median regressions framework to check the influence of outliers and found the results to be similar.

be worth more to large firms, expecting larger percentage price drops for those may be too strong of an assumption. At least, one needs to consider that large firms may find it easier to re-establish a connection with a newly appointed politician (e.g., via more extensive networks) after the death of the incumbent.[12]

We control for two politician-specific attributes. First, we include a dummy that takes the value one if the politician was a cabinet level or higher official (*Gov't*), rather than a member of the parliament or a 'local' politician (including a Governor of a state). Previous work (e.g., Faccio, 2005) has shown that specific connections with prime ministers or head of states are more valuable than connections with MPs. Second, to investigate the importance of seniority (Roberts, 1990), we control for the *Age* of the politician at the time of the sudden death. Ideally, the number of years in office would be a more accurate proxy for seniority however, this is typically unavailable (other seniority-type information, e.g., committee position, would not be comparable across countries). The question we want to address by including these variables is whether senior connections are worth more than junior connections.[13]

Finally, we control for whether the death was accidental or not. We include the variable *Assassination* that takes the value one if the cause of death was murder/assassination and zero otherwise. To some extent, assassinations may represent more of a surprise, at least if compared to the sudden death of a politician who had long standing health problems. For example, the market probably didn't take as a complete surprise the death by heart attack of

[12] Company size is dramatically different across countries and across cities. To verify that our size variable indeed picks up a large firm (relative to the city) effect, we use a number of alternative definitions. For example, we build an indicator that picks up the top 20% of companies in each city, in terms of market capitalization or total assets. The results we obtain when employing these alternative measures are qualitatively in line with those discussed in the paper.

[13] In the context of national political leaders, Jones and Olken (2005, p. 853) nicely summarize arguments on both sides, i.e., that a politician's impact can either increase or decrease with age or tenure. Empirically, they find no effect of either age or tenure on economic growth subsequent to a leader's death.

U.K. member of parliament Mr. J. Blackburn (October 1994), who had a history of heart trouble. Alternatively, companies associated with corrupt politicians may be subject to stiff penalties (or retribution) subsequent to assassinations (since they may more clearly indicate a 'regime change'), which would also explain a stronger price drop.

Table 3 shows a number of interesting results. In the regressions, we start by including the variables for which we have the highest number of observations, namely corruption, size, age of the politician, position, whether they were assassinated or not, and the proxy for the size of the city. We then include the M/B ratio (which is available for over two-thirds of the sample), and finally include the family indicator, which is available only for one-fourth of the sample. This is done to make sure that the results for the smaller sample are not sample specific. We start by reporting OLS results for the whole sample, and then we assess their robustness after the exclusion of outliers.

We find that connected firms that are also family dominated suffer more upon the death of the politician, although the relation is not statistically significant when we estimate it for the whole sample. The drop, as suggested by earlier univariate tests, becomes statistically significant and economically large when we exclude outliers. Thus, the results provide support to the Morck et al. (2000) and Morck and Yeung (2004) argument.[14] Connected firms that have higher *M/B* ratios (e.g., those whose prices discount more heavily the value of connections) experience significantly larger price drops. And, in 4 out of 6 regressions, we find that connected companies in more corrupt countries suffer significantly more at death.

Our results also show that large firms suffer less due to a sudden death. This result is consistent with their greater capability of quickly establishing new connections, post death, as

[14] Notice that the *Family* dummy is only available for the countries listed in Appendix A, which does not include the U.S. Thus, the regressions that include this variable can also be seen as robustness tests after the exclusion of the U.S., which is the country with the highest number of observations.

well as a greater ability to maintain multiple simultaneous connections. Such diversification strategies are a hallmark of political contributions by many large U.S. companies. Seniority, as proxied by age, does not appear to matter. This is in line with the findings of Roberts (1990) and Jones and Olken (2005).

When the leader was higher up in the government, the price effect on companies is muted. Perhaps this indicates that more prominent politicians find it harder to actively promote firms from their hometown, or that they have a lesser need to do so because higher level officials (e.g., ministers) are often not elected on a local basis. When the leader dies by assassination however, connected companies experience a substantial decline in price, which is in line with the bigger surprise component or retaliation effect.

Finally, we recognize that, despite the fact that many of our proxies are statistically significant, we do not explain very much of the price decline following sudden death. This is however common to most event studies. Most important from our perspective, the multivariate results confirm that stronger connections are worth more, and provide support to our conjecture that a valid proxy for political connections is the location of corporate headquarters.

IV. Robustness tests

A. CARs in millions of dollars

It is well known that the dollar values of gains or losses following an event can give different inferences than percentage equally-weighted returns. To assess the robustness of our results, we also calculate the dollar value of the announcement period excess returns by multiplying each company's CAR by the market value of its equity prior to the event. These

results may be particularly sensitive to the presence of outliers, suggesting that greater emphasis should be placed on the regressions excluding outliers.

For the most part, Table 4 confirms the results in Table 3. First, we find that the decline in value for family firms is significantly greater than for companies that are not controlled by a dominant family. The economic impact is also large: the average price drop is US$34m larger for family firms in the whole sample ($18m larger after the exclusion of outliers). We also confirm that high *M/B* companies suffer a larger decline in value around the death of the politician, although in dollar terms, this result is statistically significant only after we include the family indicator. Connections are worth more in highly corrupt countries; though the effect is statistically significant only after excluding outliers. Interestingly, firm size does not matter when we look at absolute changes in value. This suggests that the bigger percentage drop in prices we documented earlier for small companies simply reflects a higher relative (but not absolute) value of connections. Here (when looking at dollar value changes), we find some support that seniority matters: in fact, prices decline more when older (more senior) politicians die. And, we continue to find support that the termination of a connection with a government member is less dramatic for companies, though again only after excluding outliers. The cause of death, however, now seems to matter less.

B. Specific company ties

Since previous papers have shown that family ties between corporations and entrepreneurs represent stronger types of connections, we assess the robustness of our results to an alternative definition of connections. In particular, we read all articles in *Factiva* (in any available language) concerning the death of each of the politicians in our sample to identify ties (of any kind) with specific companies. We additionally read, whenever available, the

entries in the Marquis "*Who's who*." Third, we conduct a number of keyword searches in *Factiva* (using all dates available) for the name of the politician along with a number of keywords.[15]

In Table 5, we report the results of *Factiva* keyword searches for specific ties to corporations. Here the sample is dramatically reduced, as expected, to 39 firms. For example, we uncover that Florida Governor Lawton Chiles was an "original investor in Red Lobster restaurants." Similarly, Baroness Brigstocke (of the UK House of Lords) was connected to Westminster Health Care Holdings Plc, since her husband Lord Griffiths was chairman of that company. As a third example, French Senator Claude Cornac was labeled as connected to Renault and Gas de France because of prior directorships. We exclude two cases where we could not determine the name of the connected company, and 16 politicians who only had ties with privately held (not publicly traded) companies. We are able to identify 29 connections for the remaining 21 politicians. For some of these companies, however, stock prices are unavailable in *Datastream* around the time of the death of the politicians.[16] After excluding those cases, we are left with a sample of 17 sudden deaths, affecting 19 companies. In Table 5, we also present information on the geographic coverage of companies with identified ties.

Panel C presents the event study results: stock prices of companies connected to the politician drop substantially following the sudden death. In the (-1,+10) window, for example, the average stock price decline is of -2.24% (very similar to the price reaction documented for geographic ties), while the median decline is of -2.73%. However, due to the very small

[15] In particular, we included the terms "board" or "director" or "officer" or "manager" or "management" or "CEO" or "CFO" or "COO" or "chairman" or "president" or "consultant" or "consulting" or "partner" or "official" or "administrator" or "counselor" or "adviser" or "advisor" or "owner" or "founder" or "founding" or "shareholder" or "insider" or "controlling" or "investor" or "developer" or "friend*" or "corrupt*" or "illegal" or "allied" or "ally" or "allies" or "alliance" or "tie*" or "relationship*" or "link*" or "interlink" or "associate*" or "bribe*" or "kickback*" or "scandal" or "ethic*".

[16] We also looked for stock price availability in *Bloomberg* and *CRSP*, but could find no additional data.

sample size, results are not statistically significant at conventional levels (p-value ranging between 0.12 and 0.17 for the longer event windows). These results are in contrast with earlier findings by Johnson, Magee, Nagarajan, and Newman (1985) and Hayes and Schaefer (1999), who document a significant increase in the stock price of companies following the sudden death of executives who are not involved in politics.

C. Further robustness tests

Table 6 reports a variety of additional robustness tests discussed in this section. First, we re-estimate the regressions after adding an indicator that takes the value one if the location of the corporate headquarters is the city where the politician was born. To prevent a dramatic reduction in the sample size, we exclude the *Family* indicator and the *M/B* variable from these regressions. In models (1) and (2), we find this indicator to be positively associated with the company's CARs, suggesting that the price reaction is less negative for firms headquartered in the city where the politician was born, and more negative for firms from the city where the politician lived. This suggests that current, rather than historical, ties are more important.

Second, to rule out that the results are driven by high tech (or other firms), which have extremely high *M/B* ratios we exclude 13 firms with *an M/B* above 10. Results in regressions (3) and (4) show that, after the exclusion of these "outliers", all our previous findings are qualitatively unchanged. Thus, they completely corroborate our earlier evidence.

Next we consider an alternative event window. In the previous analysis, we compute stock returns beginning one day prior to the death of the politician in order to control for the possibility that newspapers report the death with some small delay. However, it is possible that a number of politicians had a heart attack on a day (or two) before their ultimate death. To address concerns related to this choice, we re-estimate the CARs starting two days prior to

the death of the politician, and ending 10 days after. We find that the average CAR is -1.42% (p-value = 0.01) and a median CAR is -0.83% (p-value = 0.00). These results are almost identical to those previously reported. Thus, there seems no benefit in further extending the event window.

Fourth, we try an alternative measure of corruption. In particular, a recent paper by Kaufmann and Vicente (2005), develops indices of corruption based on surveys in which firms are asked questions on "corporate ethics, illegal political funding, state capture cost, average of frequency of bribery in procurement and active capture, corruption in banking" (corporate illegal corruption) as well as questions "on influencing legal political funding and undue political influence" (corporate legal corruption). The two measures are built so that higher values represent lower corruption. Since the two measures are highly correlated, we use their average as an alternative measure of corruption. The results in regressions (7) and (8) confirm that higher corruption results in significantly higher stock price declines when a connection is terminated.

Fifth, we examine the influence of city size. Companies located in bigger cities may have to compete harder to access to resources, resulting in lower net gains. Alternately, Murphy et al. (1991) argue that rent-seeking activities are subject to increasing returns, perhaps due to fixed costs, or to the self-generating 'arms-race' character of such activities. Given this technology, firms in 'large' cities suffer more because they possess more politician-specific capital. As a proxy for city size, we use the number of publicly traded companies headquartered in a given city (*#companies*).[17] The results support the Murphy et

[17] As an alternative, we re-run our regressions after excluding events occurring in cities with more than 1,000 companies. After that exclusion, we are left with a sample of 5,357 firms (and 122 deaths). For this reduced sample, the average CAR in the (-1,+10) window is -1.64% (p-value = 0.02). We re-run all regressions in Table

al. (1991) argument; i.e., firms in 'large' cities suffer more. Finally, we attempt to isolate these 'scale' effects by including a dummy that identifies whether the deceased politician was from the capital of the country. This indicator turns out to be insignificantly related to the stock price reaction to the sudden death.

Finally, in some unreported tests, we include industry dummies to check whether the termination of a connection for firms operating in typically regulated industries, i.e., financial companies and utilities, are important for our results. These two industry dummy are always insignificant.

D. Aggregate market effects

So far, we have focused on the response of firm-level market adjusted returns to sudden political deaths. Here, we investigate whether the sudden death of the politicians has any effect on the aggregate market. For this purpose, we compute the change in the value of the market index for the country of the politician, starting one day prior to the death, and ending one, five and ten days after. We adjust this return by a proxy for the expected return for the overall market over the window considered. We proxy the expected return with the average daily market return over the period starting 23 trading days and ending 2 days prior to the death (approximately one calendar month). We then subtract the daily average return prior to the event (multiplied by n, where n is the length of the event window) from the cumulative abnormal return of the market over the window considered. We are able to run this experiment for a sample of 189 sudden deaths, for which aggregate stock market indexes

3 for this smaller sample. Though not reported, the main results are qualitatively similar to those reported in Table 3.

are available in *Datastream* at the time of the event. Average and median market returns are reported in Table 7.

Perhaps surprisingly, the results indicate no significant market reaction to the death of politicians. In the (-1,+10) day window, the average adjusted drop in the stock market index is -0.64% (p-value = 0.23), while the median drop is -0.47% (p-value = 0.40). This further emphasizes the importance of geographic based political connections for specific firms. The insignificant overall market response does not however, preclude the effects on other firms of a positive reassessment of the value of their own (possibly future) political ties.

V. Conclusions

Our study has provided direct evidence on the value of corporate political connections, by looking at stock price reactions around the sudden death of a politician. We have shown that political ties, identified from the (common) location of a company's headquarters and the city of the deceased politician, are particularly valuable for shareholders. Our event study results in fact have shown an average price drop of -1.93% around the death of the politician for a sample of 7,080 companies, and 123 sudden deaths from around the world.

Clearly, connections matter a lot. They matter especially more for family firms, firms with high growth prospects, and firms headquartered in highly corrupt countries. Moreover, the value of connections documented in this paper exceeds what could be inferred from prior studies. We believe this is due to the fact that we study unanticipated terminations of political ties, which from a statistical viewpoint, are the cleanest possible events. For example, Fisman (2001) reports that rumors of the worsening health of Indonesian president Suharto resulted in an average price drop of -0.59% for 79 connected firms. And, for a sample of 157 firms,

Faccio (2005) finds a price increase of 1.43% when a connection was established. The average price drop around the death of Senator Jackson reported by Roberts (1990), who uses the approach closest to ours, is -1.33%. These comparisons suggest the value of political connections has previously been underestimated.

We also show that connections matter for a *large* number of companies, thus implying a substantial aggregate economic impact. We document that geographic connections are as important as more close (e.g., family) ties, at least at their inception. This likely reflects the importance of social networks, and confirms the importance of location recently highlighted in the financial economics literature. Overall, we find that the losses incurred by connected firms are not reflected in a statistically significant decline in the aggregate market. This is consistent with the losses of connected firms being redistributed among other firms whose prospects may now look brighter, due perhaps to expectations of future benefits from political ties.

One area this research cannot speak to is whether corruption pays. That is, to the extent that illegally 'buying' a politician brings a firm rents, the equilibrium response may be for the politician to demand a larger kickback, perhaps resulting in zero net gains for the firm. In contrast, the value of connections we document includes all forms of political patronage, including legal tax and spend policies.

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Table 1. Sudden deaths and connections samples.

***Panel A:* Selection criteria**

All sudden deaths identified from keyword searches and web pages	329
- Deaths occurred in countries with no data in *Datastream* (DS) or *Worldscope* (WS)	-123
Sudden deaths of politicians from countries covered in DS and WS	206
Identification of geographic connections (from the 206 cases above)	
Sudden deaths: with information on city of birth or city where politician was living	190
with companies in their city (6,571 companies)	123

***Panel B:* Distribution of sudden deaths and geographic ties by country**

Country	Sudden Deaths	Companies	Country	Sudden Deaths	Companies
Argentina	1	11	Mexico	1	32
Australia	3	456	Netherlands	2	36
Belgium	1	51	Norway	2	77
Brazil	1	79	Pakistan	1	1
Canada	5	126	Philippines	1	70
Colombia	1	8	Poland	1	11
Egypt	1	14	Portugal	1	41
France	2	265	Russia	10	106
Ghana	1	1	Singapore	1	5
Greece	1	48	South Africa	3	34
Hungary	1	9	Spain	2	2
India	6	76	Sri Lanka	8	156
Israel	1	26	Sweden	2	163
Italy	5	15	Switzerland	1	1
Japan	1	1,723	United Kingdom	10	1,812
Luxembourg	1	27	United States	40	1,571
Malaysia	2	6	Zimbabwe	3	21
			Total	**123**	**7,080**

Table 2. Cumulative abnormal returns (*CARs*) around the sudden death of politicians: The value of "geographic" ties.

Companies' *CARs* and associated statistics. The *CAR* for each company is calculated by summing the difference between the firm's stock return and the return of the *Datastream* stock market index of the firm's home country over the interval beginning one day prior to the sudden death, and ending one, five or ten trading days after the event. To avoid problems related to lack of trading, only firms whose price changes at least once during the event window considered are included.

Panel A: Overall sample

Event window:	(-1,+1)	(-1,+5)	(-1,+10)
Mean	-0.70%	-1.08%	-1.93%
p-value (adjusted for clustering)	*0.07*	*0.01*	*0.00*
Median	-0.39%	-0.50%	-1.19%
Negative *CAR* (%)	54%	53%	58%
Sign-test p-value	*0.00*	*0.00*	*0.00*
Number of observations	6,064	6,674	7,080

Panel B: Results by strength of the political connection; (-1,+10) event window.

	N. of Obs.	Mean *CAR*	p-value*	Median *CAR*	p-value**
Family firms	491	-1.41%	0.00	-1.62%	0.00
Non-family firms	1,510	-0.89%	0.02	-0.67%	0.00
Difference	2,001	-0.52%	0.18	-0.95%	0.06
Top quartile *M/B*	1,259	-4.00%	0.02	-1.92%	0.00
Bottom quartile *M/B*	1,259	-1.27%	0.16	-1.10%	0.00
Difference	2,518	-2.74%	0.11	-0.82%	0.02
Top quartile Corruption	1,057	-0.15%	0.81	-0.56%	0.00
Bottom quartile Corruption	1,735	-0.85%	0.31	0.22%	0.32
Difference	2,792	0.70%	0.49	-0.78%	0.01

* Adjusted for clustering
** Bootstrapped

Table 3.Cumulative abnormal returns (*CARs*) around the sudden death of politicians: Regression results.

The dependent variable is the company's *CAR*, calculated by summing the difference between the firm's stock return and the return of the *Datastream* stock market index of the firm's home country over the interval beginning one day prior to the sudden death, and ending ten trading days after the event (in %). *Family* is an indicator that takes the value one if the company's largest ultimate shareholder (at the 20% level) is a family (including an individual) or a firm that is unlisted on any stock exchange, and zero otherwise. The *M/B ratio* is the ratio of market value of equity plus book value of debt over the sum of book value of equity plus book value of debt prior to the event. *Corruption* is Transparency International's Corruption Perception Index, rescaled so that 0 corresponds to the lowest possible level of corruption, and 10 corresponds to the highest level. *Ln{mkcap}* is the natural log of the company's market value of equity in US$. *Age* is the age of the politician at the time of his or her sudden death. *Gov't* is an indicator that denotes whether the politician's office was cabinet level or higher. *Assassination* is a dummy that takes the value one if the cause of sudden death was assassination and 0 otherwise. All models are ordinary least squares estimates. In the regressions, standard errors are adjusting for heteroskedasticity and clustering of observations at the time of the death of the politicians. P-values are reported in parentheses below the coefficient estimates. Regressions (4)-(6) are run after excluding companies in the top/bottom 1% of the distribution of *CAR*.

Model:	(1)	(2)	(3)	(4)	(5)	(6)
Family			-0.40			-0.87
			(0.21)			(0.02)
M/B ratio		-0.70	-0.66		-0.30	-0.56
		(0.01)	(0.02)		(0.01)	(0.01)
Corruption	-0.06	-0.26	-0.77	-0.29	-0.48	-0.70
	(0.82)	(0.28)	(0.00)	(0.11)	(0.01)	(0.00)
Ln{mkcap}	0.57	0.75	0.68	0.44	0.53	0.66
	(0.02)	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)
Age	-0.05	-0.07	0.01	-0.01	-0.01	0.01
	(0.32)	(0.18)	(0.72)	(0.73)	(0.75)	(0.53)
Gov't	2.84	3.10	1.15	1.64	1.83	1.10
	(0.03)	(0.01)	(0.07)	(0.04)	(0.02)	(0.13)
Assassination	-0.40	-0.41	-1.01	-0.94	-0.97	-0.94
	(0.64)	(0.66)	(0.00)	(0.06)	(0.06)	(0.00)
Intercept	-1.73	0.01	-1.87	-2.19	-1.70	-2.15
	(0.44)	(1.00)	(0.15)	(0.20)	(0.40)	(0.08)
Number of obs.	6,538	4,955	1,679	6,412	4,863	1,670
Adjusted $\overline{R}^2$	0.95%	2.65%	5.32%	1.79%	3.23%	6.13%

Table 4.Cumulative abnormal returns (*CARs*) in millions of dollars.

The dependent variable is the company's *CARs in millions of (US) dollars*, computed by multiplying the firm's (-1,+10) event window CAR by its dollar market capitalization prior to the event. *Family* is an indicator that takes the value one if the company's largest ultimate shareholder (at the 20% level) is a family (including an individual) or a firm that is unlisted on any stock exchange, and zero otherwise. The *M/B ratio* is the ratio of market value of equity plus book value of debt over the sum of book value of equity plus book value of debt prior to the event. *Corruption* is Transparency International's Corruption Perception Index, rescaled so that 0 corresponds to the lowest possible level of corruption, and 10 corresponds to the highest level. *Ln{mkcap}* is the natural log of the company's market value of equity in US$. *Age* is the age of the politician at the time of his or her sudden death. *Gov't* is an indicator that denotes whether the politician's office was cabinet level or higher. *Assassination* is a dummy that takes the value one if the cause of sudden death was assassination and 0 otherwise. All models are ordinary least squares estimates. In the regressions, standard errors are adjusting for heteroskedasticity and clustering of observations at the time of the death of the politicians. P-values are reported in parentheses below the coefficient estimates. Regressions (4)-(6) are run after excluding companies in the top/bottom 1% of the distribution of *CARs in millions of (US) dollars*.

Model:	(1)	(2)	(3)	(4)	(5)	(6)
Family			-34.10			-17.61
			(0.07)			(0.00)
M/B ratio		-21.36	-8.53		-1.61	-5.80
		(0.18)	(0.03)		(0.18)	(0.10)
Corruption	-0.84	-4.77	-12.30	-1.69	-2.31	-3.30
	(0.86)	(0.26)	(0.30)	(0.07)	(0.07)	(0.44)
Ln{mkcap}	13.42	15.16	21.83	0.77	1.40	7.39
	(0.15)	(0.11)	(0.30)	(0.66)	(0.54)	(0.13)
Age	-0.52	-0.83	-2.45	-0.32	-0.45	-1.28
	(0.23)	(0.14)	(0.02)	(0.01)	(0.01)	(0.01)
Gov't	14.44	-3.30	30.52	9.54	11.30	23.13
	(0.32)	(0.77)	(0.22)	(0.03)	(0.01)	(0.01)
Assassination	-1.68	-8.58	-68.42	2.74	2.93	-9.98
	(0.91)	(0.60)	(0.04)	(0.39)	(0.51)	(0.34)
Intercept	-26.50	23.88	114.10	16.01	24.24	59.60
	(0.48)	(0.73)	(0.32)	(0.13)	(0.09)	(0.02)
Number of obs.	6,538	4,955	1,679	6,396	4,820	1,638
Adjusted $\overline{R}^2$	0.33%	1.18%	2.41%	0.25%	0.48%	2.72%

Table 5. Specific company ties: Sample and value (*CARs*).

This table describes the selection of the sample of specific company ties. The *CAR* for each company is calculated by summing the difference between the firm's stock return and the return of the *Datastream* stock market index of the firm's home country over the interval beginning one day prior to the sudden death, and ending one, five or ten trading days after the event.

***Panel A:* Selection criteria**

Sudden deaths of politicians from countries covered in DS and WS	206
Identification of specific company ties:	
Politicians with specific ties identified from the press	39
- Politicians with only ties to privately held companies/unspecified companies	-18
Remaining sample	21
- Companies without stock prices in DS	-4
Deaths w/specific company ties (19 companies)	17

***Panel B:* Distribution of sudden deaths and specific company ties by country**

Country	Sudden Deaths	Companies
Canada	1	1
Colombia	1	1
France	1	1
Greece	1	1
Italy	1	1
Russia	1	1
Singapore	1	1
South Africa	1	1
Sweden	1	1
United Kingdom	2	2
United States	6	8
Total	**17**	**19**

***Panel C:* The value of specific connections**

Event window:	(-1,+1)	(-1,+5)	(-1,+10)
Mean	-0.08%	-1.56%	-2.24%
p-value (adjusted for clustering)	*0.92*	*0.12*	*0.17*
Median	-0.02%	-1.21%	-2.73%
Negative *CAR* (%)	53%	68%	68%
Sign-test p-value	*0.81*	*0.17*	*0.17*
Number of observations	19	19	19

Table 6.Cumulative abnormal returns (*CARs*) around the sudden death of politicians: Robustness tests.

The dependent variable is the company's *CAR*, calculated by summing the difference between the firm's stock return and the return of the *Datastream* stock market index of the firm's home country over the interval beginning one day prior to the sudden death, and ending ten trading days after the event (in %).*Family* is an indicator that takes the value one if the company's largest ultimate shareholder (at the 20% level) is a family (including an individual) or a firm that is unlisted on any stock exchange, and zero otherwise. The *M/B ratio* is the ratio of market value of equity plus book value of debt over the sum of book value of equity plus book value of debt prior to the event. *Corruption* is Transparency International's Corruption Perception Index, rescaled so that 0 corresponds to the lowest possible level of corruption, and 10 corresponds to the highest level. *Ln{mkcap}* is the natural log of the company's market value of equity in US$. *Age* is the age of the politician at the time of his or her sudden death. *Gov't* is an indicator that denotes whether the politician's office was cabinet level or higher. *Assassination* is a dummy that takes the value one if the cause of sudden death was assassination and 0 otherwise. *Born* is an indicator that takes the value one if the company is headquartered in the city where the politician was born, and zero otherwise. *Average legal & illegal corruption* is the average between the index of Corporate Illegal Corruption and the index of Corporate Legal Corruption developed by Kaufmann and Vicente (2005) (http://www.worldbank.org/wbi/governance/pdf/ETHICS.xls). Corporate Illegal Corruption is the "percentage [of] firms in the country giving satisfactory ratings (answers 5, 6 or 7) to questions on corporate ethics, illegal political funding, state capture cost, average of frequency of bribery in procurement and active capture, corruption in banking (average of formal money laundering and bribery for loans), and percentage firms reporting 0 percent procurement and administrative bribe shares". Corporate Legal Corruption is the "percentage [of] firms in the country with satisfactory ratings (answers 5, 6 or 7) to the questions on influencing legal political funding and undue political influence." Higher ratings represent lesser corruption. *Ln{#companies}* is the natural log of the number of publicly traded companies headquartered in a given city. *Capital* is an indicator that takes the value one if the company in question is incorporated in the capital of the country, and zero otherwise. All models are ordinary least squares estimates. In the regressions, standard errors are adjusting for heteroskedasticity and clustering of observations at the time of the death of the politicians. P-values are reported in parentheses below the coefficient estimates.

Robustness test:	Control for the city where the politician was born		Exclusion of companies with *M/B ratio* above 10		Alternative event window (-2,+10)		Alternative proxy for corruption		Control for size of the city		Control for capital of the country	
Model:	(1) Whole sample	(2) Outliers excluded	(3) Whole sample	(4) Outliers excluded	(5) Whole Sample	(6) Outliers excluded	(7) Whole sample	(8) Outliers excluded	(9) Whole sample	(10) Outliers excluded	(11) Whole sample	(12) Outliers excluded
Family			-0.42	-0.81	-0.24	-0.79	-0.40	-0.86	-0.51	-0.98	-0.40	-0.88
			(0.16)	(0.02)	(0.42)	(0.04)	(0.24)	(0.03)	(0.10)	(0.01)	(0.21)	(0.01)
M/B ratio			-0.66	-0.68	-0.44	-0.34	-0.66	-0.57	-0.66	-0.56	-0.66	-0.56
			(0.08)	(0.04)	(0.00)	(0.00)	(0.02)	(0.01)	(0.02)	(0.01)	(0.02)	(0.01)
Corruption	0.05	-0.25	-0.78	-0.71	-0.85	-0.77			-0.85	-0.77	-0.77	-0.70
	(0.84)	(0.13)	(0.00)	(0.00)	(0.00)	(0.00)			(0.00)	(0.00)	(0.00)	(0.00)
Ln{mkcap}	0.56	0.44	0.68	0.67	0.59	0.57	0.69	0.67	0.68	0.65	0.68	0.66
	(0.03)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)

Age	-0.06 (0.27)	-0.01 (0.66)	0.01 (0.68)	0.01 (0.58)	0.04 (0.02)	0.05 (0.01)	0.02 (0.50)	0.02 (0.34)	0.02 (0.33)	0.02 (0.28)	0.01 (0.73)	0.01 (0.49)
Gov't	2.13 (0.06)	1.36 (0.06)	1.15 (0.07)	1.09 (0.12)	1.05 (0.12)	1.01 (0.21)	1.31 (0.18)	1.28 (0.22)	-0.35 (0.70)	-0.27 (0.78)	1.16 (0.06)	1.24 (0.06)
Assassination	-0.22 (0.79)	-0.87 (0.06)	-1.07 (0.00)	-0.98 (0.00)	-0.71 (0.01)	-0.67 (0.03)	-1.19 (0.00)	-1.09 (0.00)	-0.18 (0.69)	-0.18 (0.69)	-1.01 (0.00)	-0.98 (0.00)
Born	1.94 (0.04)	0.77 (0.18)										
Average legal & illegal corruption							0.06 (0.01)	0.06 (0.02)				
Ln{#companies}									-0.65 (0.02)	-0.60 (0.04)		
Capital											0.02 (0.98)	0.36 (0.65)
Intercept	-1.94 (0.38)	-2.27 (0.17)	-1.89 (0.16)	-2.00 (0.12)	-3.44 (0.01)	-3.73 (0.00)	-8.57 (0.01)	-8.48 (0.01)	1.38 (0.38)	0.84 (0.58)	-1.89 (0.27)	-2.58 (0.12)
Number of obs.	6,538	6,412	1,666	1,658	1,679	1,670	1,679	1,670	1,679	1,670	1,679	1,670
Adjusted $\overline{R}^2$	1.11%	1.86%	4.74%	5.87%	3.71%	4.50%	5.07%	5.90%	5.76%	6.60%	5.32%	6.14%

Table 7. Market effect of sudden deaths.

This table includes all deaths with market index data available in *Datastream*. The table reports the country distribution of deaths, as well as their aggregate market impact. The market impact of sudden deaths is calculated by summing the *Datastream* stock market index's (or the local index, if the DS index is unavailable) stock return for the country of the deceased politician over the interval beginning one day prior to the sudden death, and ending one, five or ten trading days after the event, minus the expected return over that same window. As a proxy for the expected return, we employ the average daily market return over the period starting 23 trading days and ending 2 days prior to the death (approximately one calendar month).

***Panel A:* Number of Sudden deaths, by country**

Country	Sudden deaths	Country	Sudden deaths
Argentina	1	Malaysia	2
Australia	4	Mexico	1
Austria	1	Morocco	1
Belgium	2	Netherlands	2
Brazil	1	Norway	2
Britain	12	Pakistan	1
Canada	7	Philippines	1
China	1	Poland	1
Colombia	2	Portugal	1
Egypt	1	Russia	21
Finland	1	Singapore	1
France	7	South Africa	5
Ghana	2	South Korea	1
Greece	2	Spain	3
Hungary	1	Sri Lanka	11
India	15	Sweden	2
Ireland	1	Switzerland	1
Israel	1	Turkey	1
Italy	11	United States	52
Japan	1	Zimbabwe	4
Luxembourg	1		
		Total	**189**

***Panel B:* The market impact of sudden deaths**

Event window:	(-1,+1)	(-1,+5)	(-1,+10)
Mean	0.07%	-0.15%	-0.64%
p-value	*0.74*	*0.68*	*0.23*
Median	-0.05%	-0.21%	-0.47%
Positive market adjusted return (%)	49%	46%	46%
Sign-test p-value	*0.80*	*0.53*	*0.40*
Number of observations	189	189	189

Appendix 1: Data sources used to collect data on family ownership and group affiliation.

Countries	Book/Internet Sources
Argentina	"Argentina Company Handbook 95/96," The Reference Press, Austin, Texas
Australia	Australian Stock Exchange, 1997, "ASX all Ordinary Index. Company Handbook", Sydney, N.S.W.
Belgium	Brussels Stock Exchange (www.bxs.be)
Brazil	Bovespa, "Brazil Company Handbook," Edition 2000/2001, São Paulo Stock Exchange
Canada	"Survey of Industrials", 1998, The Financial Post Datagroup, Toronto, Ontario
France	The Herald Tribune, 1997, "French Company Handbook 1997," SFB-Paris Bourse; Financial Times, 1997, "Extel Financial"; http://www.bourse-de-paris.fr/fr/market8/fsg830.htm
Italy	CONSOB, 1997, "Bollettino – edizione speciale n. 4/97 – Compagine azionaria delle società quotate in borsa o ammesse alle negoziazioni nel mercato ristretto al 31 dicembre 1996" (http://www.consob.it/trasparenza_soc_quot/trasp_soc_quot.htm); Il Sole 24 ore, 1997, "Il taccuino dell'azionista"
Japan	Japan Company Handbook, 1998
Malaysia	Asian Company Handbook, 1998
Norway	Hugin, Annual Report CD, 1998
Philippines	Asian Company Handbook, 1998, & Philippine Stock Exchange, 1997
Poland	Komisja Papierów Wartościowych i Gield ("Ownership of Polish listed firms"; obtained from the Polish SEC)
Portugal	Bolsa de Valores de Lisboa, "Sociedades Cotadas 1997"
Singapore	Asian Company Handbook, 1998
Spain	Comision Nacional del Mercado de Valores, 1998, "Participaciones significativas en sociedades cotizadas" (http://www.cnmv.es/english/cnmve.htm)
Sweden	Hugin, Annual Report CD, 1998
Switzerland	Union Bank of Switzerland, 1998, "Swiss Stock Guide 96/97," Zurich
U.K.	Financial Times, 1997, "Extel Financial"; London Stock Exchange, 1997, "The London Stock Exchange Yearbook;" Financial Times; http://www.hemscott.com/equities/firm/