

Sörensen, Jil; Garz, Marcel

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Politicians under Investigation:
The News Media's Effect on the Likelihood of Resignation

November 2015

We thank Spiegel Publishing for providing access to their newspaper archives.

Abstract

This paper studies the effect of news media on the probability of resignation from office of politicians being subject to criminal investigation. Using data on cases in which the political immunity of German representatives was lifted, we find that resignations are more common when the media covers the case intensely. The amounts of this news coverage, in turn, depend on the availability of other newsworthy, exogenous events. Therefore, we instrument for coverage of lifts of immunity with the overall news pressure. We estimate the causal effect and find that a 1 standard deviation increase in the amount of the coverage raises the likelihood of resignation by 22.3 percentage points.

Keywords: news media; political accountability; prosecution; resignation

JEL classification: K14; L82

1. Introduction

On September 1, 2014, Christine Haderthauer, head of the Bavarian State Chancellery, resigned over the so called Model Car Scandal; her company sold model cars built by mentally ill prisoners. Haderthauer and her husband had been under investigation for fraud, malfeasance, and tax evasion, and her political immunity was lifted. At first, the investigations did not result in any personal consequences, despite the persisting demands from the opposition. At the end of July, neither the Bavarian Minister-President, Horst Seehofer, nor the party executive saw the necessity for such steps. Haderthauer remained in office. In the following month, the pressure from the press and the parliamentary opposition grew too large and Haderthauer finally resigned. The experiences with the news coverage in the previous weeks raised concerns that her office, and the political agenda related to it, would take damage, she stated in her resignation speech.¹

This example illustrates how the media can raise public awareness, exercise its role as a watchdog, and contribute to political accountability. However, it is important to note that the Haderthauer case took place when the parliament was on summer break and political news was scarce: It could be argued that the investigations were a convenient business opportunity for news outlets to catch the attention of their audiences. What if the investigations had been taking place at different a time; for instance, when the parliament was in session, maybe debating the implementation of a new, highly controversial law? Or, to construct an even more extreme example, what if the investigations had been occurring right after a major catastrophe, such as the Fukushima nuclear disaster? It is conceivable that the media would have focused on these competing, potentially more newsworthy events, paying less attention to the Haderthauer case, and the politician might still be in office.

To study, whether the media affects the likelihood that a politician under criminal investigation will resign, we consider cases in which the immunity of German national and state representatives was lifted. A lift of immunity is always related to criminal prosecution, an event that is usually newsworthy to the public. It is reasonable to assume that politicians under investigation lose approval in the electorate. However, citizens do not have any direct means to react to the new situation. Until the following election, it is very difficult in Germany to lose the political mandate by external forces. The Federal Elections Act regulates the attainment and loss

¹ See <http://www.spiegel.de/politik/deutschland/modellauto-affaere-haderthauer-ruecktritt-im-wortlaut-a-989316.html>.

of membership of the National Parliament. An expulsion from the party is also hard to achieve, due to rights granted by the Act on Political Parties. Thus resignation is the most common way of early termination of a political mandate, office, or function.

The media can be a key factor in this environment. First, coverage of a lift of immunity raises public awareness and possibly provides details about the severity of the alleged offense. Because of the role model function of representatives, many voters consider (allegedly) criminal behavior incompatible with the fulfillment of a political mandate. If the party or parliamentary group of the accused does not condemn the criminal behavior, voter approval likely declines. It can be a reasonable strategy for the political allies to dissociate themselves from the accused, to avoid or minimize the potential loss in popularity. Powerful forms of dissociation are public demands to step down, or to enforce the resignation by other, often covert tactics. Second, increased public awareness might induce political donors to pull back if they are afraid that the misbehavior of an individual politician is damaging their own reputation. A company that frequently makes donations to a specific party, for example, might refrain from future support of the party to avoid the risk of losing customers. Third, media coverage provides arguments and possibly leverage for the opposition or other political rivals. If, for instance, the votes of one party are needed in parliament to pass a law, this party might condition its compliance on the resignation of the accused. Finally, journalistic investigations might uncover new details, further incriminating the accused and strengthening the case of the prosecution, which in turn would also increase the likelihood of resignation.

In our empirical setting, we cannot distinguish between these and other potential channels of media effects. However, we are able to evaluate whether the probability of resignation of German delegates is greater when the media reports more intensely about the lift of immunity. To test this hypothesis, we use parliamentary databases and publicly available information to identify all cases in which the immunity of a parliamentary member was lifted between January 1, 2005 and December 31, 2014. Full-text archives of the most important German national daily newspapers Bild, Frankfurter Allgemeine Zeitung, Handelsblatt, Süddeutsche Zeitung, Die Tageszeitung, and Die Welt are searched for corresponding news coverage. We also determine whether or not a politician resigned in the course of the lift from a political post, duty, or function.

Identification of a causal effect faces endogeneity problems, though. It may indeed be the case that stronger media coverage of some lifts leads to a higher probability of resignation. However,

it is also plausible that cases with an initially higher likelihood of resignation catch more media attention. Both observations, more coverage and a higher probability of resignation, might be influenced by unobservable determinants, such as the severity of the offense. We address this problem by instrumenting for media coverage with a news pressure variable, as proposed by Eisensee and Strömberg (2007) in the context of disaster relief. Our main news pressure variable is based on the length of the cover story of the *Frankfurter Allgemeine Zeitung*: Evaluating over 3,000 daily issues shows that the number of characters of the cover story increases substantially when newsworthy events occur.

Across all specifications, we find a positive and statistically significant relationship between news coverage and the probability of resignation. For the day after the lift, we also find that the corresponding coverage is crowded out by other newsworthy events. Instrumenting with the overall news pressure, our baseline specification indicates that 1 additional standard deviation of lift coverage increases the likelihood of resignation by 22.3 percentage points.

Previous studies evaluate how media affect political accountability through elections and voting behavior (e.g., Strömberg, 2004a; Besley and Prat 2006; Gentzkow, 2006; DellaVigna and Kaplan, 2007; Chiang and Knight, 2011; Enikolopov et al., 2011; Gentzkow et al., 2011; DellaVigna et al., 2014; Falck et al., 2014; Martin and Yurukoglu, 2014; Adena et al., 2015; Larreguy et al., 2015; Schroeder and Stone, 2015). We extend this literature by providing evidence on the role of media in political accountability, especially for effects taking place aside from elections. By estimating the impact of news coverage of lifts of immunity on the likelihood of resignation, we show that the media can help holding representatives accountable prior to the regular end of their mandate or function. Because we investigate the behavior of representatives, our study also relates to the literature on the effects of media on policy making (Besley and Burgess, 2002; Strömberg, 2004b; Eisensee and Strömberg, 2007; Snyder and Strömberg, 2010) and political elites (Campante and Hojman, 2013; Clinton and Enamorado, 2014; Arceneaux et al., 2015; Garcia-Jimeno and Yildirim, 2015).

The remainder of the paper is structured as follows. The next section provides background information on political immunity in Germany. Section 3 describes the data and the empirical identification strategy. Section 4 presents the estimation results and discusses various robustness checks. The last section concludes.

2. Political immunity in Germany

One fundamental principle of the German democracy is the “free mandate” (Article 38 Basic Law). It is central to the rights of each member of the National Parliament (“Bundestag”) as well as the state parliaments (“Landtage”). It states that delegates are subject only to their conscience and not bound by any external instructions. To ensure the free mandate each delegate is protected by the rights of indemnity and immunity (Article 46 Basic Law). Indemnity guarantees free speech in parliament and provides a member with protection against proceedings or other sanctions outside the parliament for remarks or casting of votes within the parliament, with the exception of offensive comments. Immunity grants members of parliament protection from any judicial and police measures.

Unlike in the case of indemnity, the immunity right can be lifted by a special parliamentary committee.² Thus, a member of parliament can only be prosecuted or arrested after the parliament grants authorization, as far as the delegate is not immediately arrested during the commission of acts or one day later.³ Furthermore, the national parliament approves – for the duration of a parliamentary term – a number of instances in which prosecution can take place against its members, without the need for an explicit decision for a lift. This approval is restricted to one constraint: The investigating authorities have to inform the parliament about their intentions 48 hours before taking actions. Several judicial and police measures, such as the search of the politicians’ flats or offices, calling for public charge or imprisonment, are not covered by this general approval. In these occasions the investigating authorities have to request a lift of immunity and the parliament has to grant authorization on the suggestion of the responsible committee.

However, the lift of immunity does not automatically result in the loss of the mandate, as the Haderthauer case shows. In Germany the withdrawal of a political mandate during an office term is hard to achieve. The Federal Elections Act regulates the attainment and loss of membership of

² On the national level, the Committee for the Scrutiny of Elections, Immunity and the Rules of Procedure (“Ausschuss für Wahlprüfung, Immunität und Geschäftsordnung”) is the guardian of members’ immunity. On the state level, each parliament has an own committee for that purpose.

³ The state parliaments of Brandenburg and Hamburg are exceptions to this rule. In contrast to the other states, members of these parliaments do not have the immunity right. Instead, immunity may be granted by parliament on a special request.

the National Parliament. A member shall lose his or her membership only in six occasions: if the attainment of membership is invalid; if the election result is newly established; if he or she fails to meet one of the prerequisites for permanent eligibility for election; if he or she resigns; if the Federal Constitutional Court rules that a member's party or party branch is unconstitutional; and in case the member dies. Between 1990 and 2015, for instance, there were no cases in which the mandate was removed. A few members passed away during their time in office, and most members resigned. Additionally, party expulsion proceedings are hardly feasible because party members are well protected by the Act on Political Parties.

Lifting somebody's political immunity is always related to prosecution, which constitutes a newsworthy event. The constituency will be obviously interested in the circumstances of the lift and the related allegations. However, the lift of immunity is not mandatorily tied to the loss of the political mandate. As forced withdrawal is quite uncommon due to legal regulations, a politician's resignation is the most common way to prematurely terminate the term in office or other political functions. We assume that the media are a key player in this environment, because they can exert public pressure on politicians, and therefore potentially contribute to the decision to step down.

3. Data and identification strategy

3.1 Lifts of political immunity

We use the public databases of the German Parliament and the state parliaments, respectively, to identify all cases in which the immunity of a member of parliament was lifted, based on a request ("Beschlussempfehlung") by the responsible committee. Lifts that are not covered by a general parliamentary authorization are always documented in the parliamentary databases, due to the administrative process related to it. However, documentation varies across national and state parliaments. Some states do not announce the name of the politician under question. These cases are considered as anonymously lifted. In compiling the data, we distinguish two steps of the lifting procedure: the decision on the request taken by the special committee and the final decision on the lift made by parliament. As the separate institutions are usually in session on different dates, the time between these two acts can vary. The press covers not only the final

decision by parliament but also the decision to request the lift. Therefore, one case of a lift of immunity may cause press coverage at two points in time.

Unfortunately, the databases of the national and state parliaments do not reliably document lifts that are subject to a general authorization granted by parliament, because no active decision-making is required; the president of the parliament has to be informed and the investigations may start if no objections are raised within the next 48 hours. To identify these cases, we rely on publicly available information using press archives and search engines. These external sources add 71 cases to the 198 ones documented in the parliamentary databases, which results in a total of 269 cases between 2005 and 2014. We conduct a robustness check to show that the inclusion of the non-official information does not affect our results.

We do not control for the reason of the lift, because there is neither an objective way to compare different offenses, nor is it feasible to somehow weight them according to normative principles. Even among judicial experts, the evaluation of most cases is highly controversial, and for the same case there are often opposing verdicts at the different instances of jurisdiction. For the same reason, we do not attempt to determine whether the allegations turn out to be true. However, we distinguish politically motivated from other offenses. Politically motivated offenses are usually based on some form of protest, such as an illegal demonstration against nuclear energy or against right-wing extremism. Other politically motivated offenses, for instance, involve the incitement to hatred or the dissemination of propaganda material of unconstitutional organizations. Approximately 40% of the alleged offenses are politically motivated, and none of these politicians resigned (cp. Table 1, variable “protest”). Furthermore, we distinguish between lifts at the national and the state level, as well as the politician being a minister or not. Both variables likely affect the newsworthiness of the case, because lifts at the national level and cases concerning ministers are more relevant to the electorate.

3.2 Resignations

Our dependent variable, resignation, indicates whether or not the politician resigned in the course of the lift of immunity from a political post, duty, or function. This includes resignation as governmental office holder (e.g., state minister), party office holder (e.g., general secretary, treasurer, or spokesperson), and member of the national or a state parliament. We only consider

resignations that are obviously connected to the lift; for example, if the resignation speech explicitly states that the criminal behavior is the reason for stepping down. Based on these criteria, we record 17 resignations, six of which occurred immediately (i.e., within one day after lift), and the other ones up to 480 days later. Cases, in which the person resigned before his or her immunity was lifted, are not included in this selection. If a politician renounces future candidature, or if the person was dismissed by his or her party are neither treated as resignations. Moreover, we assume that there were no resignations in case the immunity was lifted anonymously, because these cases were not covered by the media. The robustness section contains a check to show that this assumption is unproblematic.

We argue that news coverage at the day after the lift/request may affect the likelihood of resignation even over longer time horizons. Because criminal investigations do not automatically have immediate, personal consequences, we do not initially impose a restriction on the time between the lift and the resignation. First reactions to accusations are often driven by defense mechanisms and denial. Future events – such as elections, new incriminating evidence, or court decisions – might prove to be the last straw to break the camel’s back towards a resignation. To account for the time factor, we construct three versions of our dependent variable: (1) resignation after the lift (binary); (2) resignation within one day after the lift (binary); (3) resignation weighted by the amount of time since the lift, where resignations within one day after the lift equal 1, later resignations equal the square root of $(1/\text{number of days since the lift})$, and all other cases equal 0.

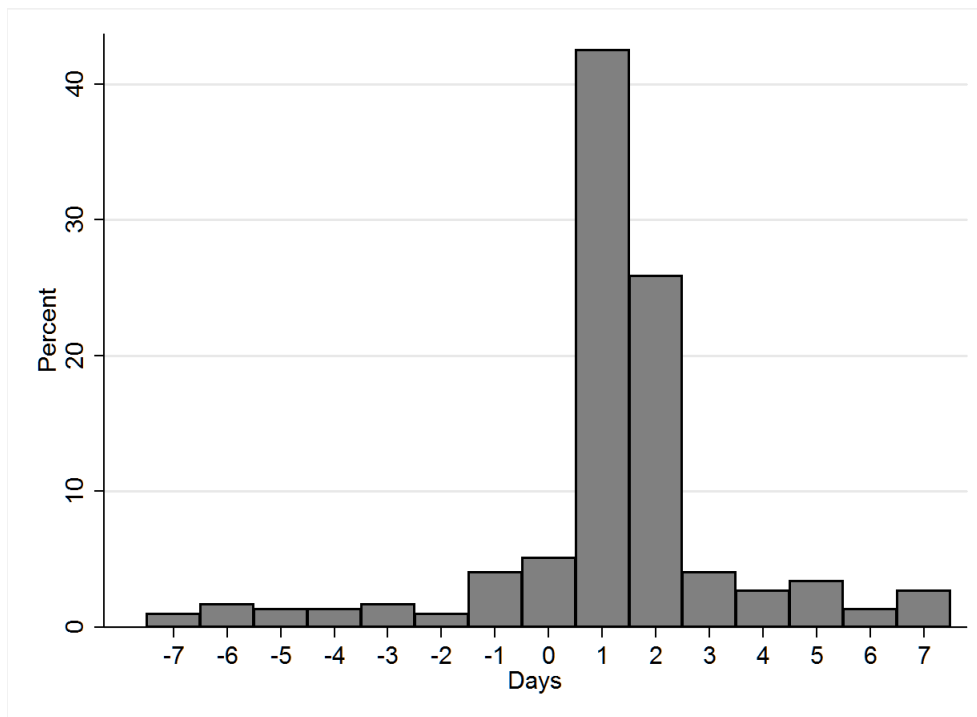
3.3 News coverage of lifts of immunity

Our explanatory variable of interest is the amount of news coverage of the lift. We use the electronic archive of Spiegel Publishing, which is based on the DIGAS database by Axel Springer Syndication, to conduct keyword searches on full-text press articles. Our sample of newspapers comprises the six highest-circulation daily national German newspapers Bild, Frankfurter Allgemeine Zeitung, Handelsblatt, Süddeutsche Zeitung, Die Tageszeitung and Die Welt. We extract all articles that contain the first and the last name of the politician in question, based on our list of lifts of immunity, plus the German word for immunity (“Immunität”, truncated at the end). These search parameters are very narrow, but they guarantee that almost

only true articles on lifts are extracted. Using only the last name and the word immunity, for instance, would lead to a retrieval of too many false positives, because German last names sometimes also represent verbs or are too common. With this procedure, we consider a total of 715 news reports.

The time-wise distribution of these articles indicates a clear publication pattern. As Figure 1 shows, news coverage is most pronounced at the day after the decision was issued by the respective parliament or committee. Our strategy to identify causal effects depends on the crowding out of this news coverage by other newsworthy events. Because of the publication pattern and the transitory nature of crowding-out effects, we only consider those reports that are published the day after the lift/request; for longer time windows, the crowding-out effect is much more difficult to detect as it averages out.

Figure 1: Timing of publication of articles on lifts and request, seven days before and after the decision



We use four different measures of news coverage of lifts of immunity: (1) sum of characters; (2) sum of characters divided by the page number; (3) number of articles; (4) covered yes/no (binary). The sum of characters is the most detailed measurement, informing about the volume of the article; it is sensitive to small changes within the coverage. Second, we divide the sum of characters by the page number of publication, to give articles placed in the front of the newspaper a greater weight than those in the back, because there might be differences in the attention of readers. As another alternative, we merely use the number of articles to measure the intensity of the reporting. Finally, a binary variable that indicates whether a lift was covered or not can be considered as the most basic way to capture the news coverage.

3.4 News pressure

We expect a crowding out of news on lifts of immunity by other newsworthy events. In particular, we assume that two identical lifts have a different chance of being covered by the media depending on the general news pressure. A lift has a greater chance to be covered when little other newsworthy material is available. We use the number of characters of the cover story of the *Frankfurter Allgemeine Zeitung*, as documented by DIGAS, to construct our measure of news pressure. An evaluation of this measure shows that the length of this newspaper's cover story captures the difference between days with low and high news pressure very well. Over the whole time period, the number of characters increases substantially when newsworthy events occur. We exclusively rely on the *Frankfurter Allgemeine Zeitung*, because the other newspapers in our sample do not or barely exhibit such a pattern.

The newspaper's mean cover story is 4,443 characters long, whereas top cover story can reach a length up to 14,158 characters. Table A1 in the appendix illustrates this pattern by showing each year's largest cover stories. The list mainly includes political coverage that refers, for instance, to major election results, as well as important domestic, foreign affairs, and economic policy events. A few top cover stories report about extraordinary disasters and catastrophes, such as the downing of Malaysian Airlines Flight 17 over Ukraine or the 2010 Earthquake in Haiti. Furthermore, some top cover stories relate to terrorist attacks and armed conflict, such as the 2013 Rabaa massacre in Cairo or the 2012 Turkish military intervention in Syria. Due to the

newspaper's political focus, major sports events, such as Germany winning the soccer world cup, do not appear as top cover stories.

Figure 2 shows the daily news pressure between 2005 and 2014. It indicates two structural changes in the composition of the Frankfurter Allgemeine Zeitung front page, one in 2007 and one in 2013. In October 2007, the newspaper introduced a cover picture on the front page, which led to a permanent reduction in the length of the cover story. In November 2013, the Frankfurter Allgemeine Zeitung stopped continuing its cover story on another page of the newspaper. Until that date, the cover story was sometimes continued on page 2 or 3, leading to a longer cover story on average. We include weekday, month, and year fixed effects in the regressions to pick up this type of variation. In addition, the robustness section provides a test to show that the results do not substantially change when using the occurrence of the most important German disasters as an alternative measure of news pressure.

Figure 2: Length of the cover story of the Frankfurter Allgemeine Zeitung

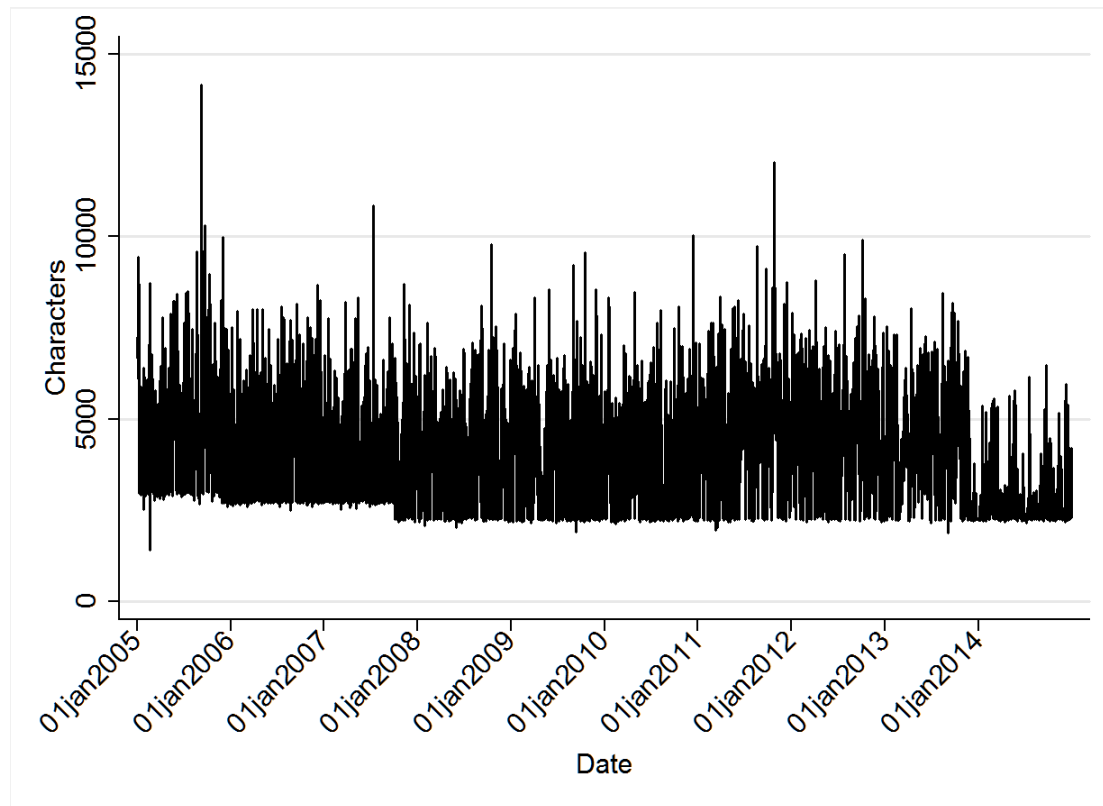


Table 1 indicates that each case of lift of immunity was on average covered with 888 characters, whereas this number amounted to 5,752 characters when the politician later resigned. Our news pressure variable had an average value of 4,443 characters. In cases that entailed a resignation, however, the average cover story of the Frankfurter Allgemeine Zeitung was only 4,028 characters long.

Table 1: Summary statistics

	Lifts				Resignations			
	mean	sd	min	max	mean	sd	min	max
Resignation before lift	0.04	0.2	0	1	0	0	0	0
Resignation after lift	0.06	0.2	0	1	1	0	1	1
Resignation within 1 day after lift	0.02	0.1	0	1	0.4	0.5	0	1
Resignation weighted by days since lift	0.03	0.2	0	1	0.4	0.4	0.05	1
Sum of characters	887.9	3053.8	0	28111	5752.1	9178.9	0	28111
Sum of characters/page number	288.2	1257.5	0	16408	2127.2	4114.1	0	16408
Number of articles	0.5	1.2	0	11	2.4	3.1	0	11
Case covered	0.2	0.4	0	1	0.6	0.5	0	1
News pressure (number of characters)	4443.3	1856.4	1907	14158	4028.2	1366.9	1907	6143
Request	0.4	0.5	0	1	0.1	0.3	0	1
Protest	0.4	0.5	0	1	0	0	0	0
National level	0.2	0.4	0	1	0.4	0.5	0	1
Minister	0.03	0.2	0	1	0.2	0.4	0	1
<i>N</i>	269				17			

3.5 Validity of the instrument

Certain conditions need to be fulfilled for our identification strategy to be valid. First, the overall news pressure must have a significant effect on the intensity of the news coverage of lifts of immunity. Previous research suggests that this is an unproblematic assumption. When other newsworthy events cause a congestion of the news agenda, there is a crowding out of disasters news (Eisensee and Strömberg, 2007), scandal coverage (Nyhan, 2014), and campaign coverage (Garcia-Jimeno and Yildirim, 2015). We present evidence that this relationship also holds for lift coverage.

Moreover, the news pressure variable must be uncorrelated with any other determinant of the probability of resignation, and it must not have any effect on this probability other than through the news coverage of lifts. After controlling for obvious differences between cases and temporal

patterns (i.e., weekday, month, and year fixed effects), there is no reason why the instrument should not meet these conditions.

Durante and Zhuravskaya (2015) show that Israeli authorities strategically time their attacks on Palestine according to predictable newsworthy events, in order to minimize negative publicity. Could a similar behavior also be relevant in the context of our study? That is, could the investigating authorities or the responsible committees time the decisions to lift somebody's immunity according to predictable newsworthy events? We believe that this is very unlikely. The underlying procedures are highly regulated by different laws and administrative rules. The investigating authorities usually have to organize their work according to certain deadlines and fixed session dates of the relevant parliamentary committees. For instance, the Council of Elders determines the session weeks of the German Parliament and the presidents of the committees set their session dates according to this schedule.

Table 2: Lifts of immunity and news pressure

	(1)	(2)	(3)	(4)
News pressure (thousand), t	0.00488 (0.00435)	0.00455 (0.00439)	0.00508 (0.00438)	0.00475 (0.00442)
t+1		0.00795 (0.00496)		0.00815 (0.00495)
t+2		0.000701 (0.00390)		0.000981 (0.00390)
t-1			-0.00181 (0.00432)	-0.00202 (0.00433)
t-2			-0.00364 (0.00429)	-0.00392 (0.00428)
N	3037	3035	3035	3033

Notes: OLS estimates. All models include a constant and weekday, month, and year fixed effects. Newey-West standard errors (in parentheses) have been corrected for autocorrelation up to order 14.

* p<0.10, ** p<0.05, *** p<0.01

These considerations are confirmed by the data. In Table 2 we regress the number of lifts per day on the overall news pressure at the same and the surrounding days. For current values, two lags, two leads, or both, the estimates suggest that the relationship is not significantly different from

zero for over 3,000 issues of the Frankfurter Allgemeine Zeitung. Thus it is reasonable to assume that the timing of the lifts and requests is independent of our instrument.

4. Results

We first discuss the relationship between coverage of lifts and the likelihood of resignation. Afterwards, we estimate the causal effect in this relationship using the exogenous variation provided by the overall news pressure. The end of this section contains a series of robustness checks to test the validity of our most important assumptions. Throughout, we prefer to use linear probability rather than probit models. Linear probability models allow for the consistent estimation of the relationship under weaker assumptions than probit models, and they provide a larger set of tools for the statistical diagnosis in the instrumental variable approach. To ensure that our instrument is uncorrelated with the residuals, we control for a number of other factors potentially influencing the probability of resignation. In particular, we control for the party affiliation of the politician, whether or not he or she is a minister, whether it is a case at the national or state level, whether the cause of reporting is the formal request to lift the immunity (as opposed to the actual lift), whether or not it is a politically motivated offense, and whether or not the politician resigned before the lift. All models also contain weekday, month, and year fixed effects to account for temporal influences, such as seasonal patterns or election cycles.

4.1 Relationship between lift coverage and resignations

Table 3 shows correlations between different measures of resignation and news coverage of lifts of immunity. In the baseline specification (Column 1), we ask whether resignations correlate with the number of characters the newspapers devote to the individual case at the day after the lift. This relationship is positive and statistically highly significant: 1,000 extra characters increase the likelihood of resignation by approximately 3.2 percentage points. This finding is confirmed when using only immediate resignations (Column 2) and resignations weighted by the amount of time between lift and resignation (Column 3). The estimates remain also stable when altering the measurement of the lift coverage: Weighting the number of characters by the page number of the corresponding article (Column 4), counting the number of articles (Column 5), and asking whether or not the case has been covered (Column 6), lead to positive and statistically significant

coefficient estimates. With an R-square value of 0.40, our preferred specification in Column 1 provides the best model fit.

Table 3: Relationship between news coverage and the likelihood of resignation

	(1) Baseline	(2) Within 1 day	(3) Weighted	(4) Baseline	(5) Baseline	(6) Baseline
Sum of characters (thousand)	0.0318*** (0.00752)	0.0227** (0.00992)	0.0213** (0.00939)			
Sum of char./page number (thousand)				0.0647*** (0.0192)		
Number of articles					0.0705*** (0.0193)	
Covered						0.157*** (0.0526)
Request	0.00455 (0.0241)	0.0168 (0.0202)	0.00970 (0.0191)	-0.0138 (0.0247)	0.0170 (0.0248)	0.0423 (0.0304)
Resignation before lift	-0.174*** (0.0577)	-0.0841** (0.0411)	-0.0848** (0.0398)	-0.163*** (0.0602)	-0.179*** (0.0570)	-0.188*** (0.0618)
Protest	-0.167*** (0.0495)	-0.0556* (0.0320)	-0.0670** (0.0313)	-0.157*** (0.0492)	-0.176*** (0.0494)	-0.196*** (0.0527)
National level	0.0540 (0.0456)	0.0121 (0.0332)	0.0109 (0.0324)	0.0548 (0.0467)	0.0402 (0.0452)	0.0850* (0.0502)
Minister	0.0306 (0.212)	-0.145 (0.0967)	-0.0234 (0.140)	0.112 (0.192)	0.0989 (0.196)	0.293 (0.182)
R-square	0.402	0.291	0.326	0.385	0.394	0.365

Notes: OLS estimates. N = 269. All models include a constant and party, weekday, month, and year fixed effects. Robust standard errors in parentheses.

* p<0.10, ** p<0.05, *** p<0.01

4.2 Effect of news pressure on coverage of lifts

We use two stage least squares (2SLS) to estimate the causal effect of lift coverage on the probability of resignation. Table 4 provides the first-stage estimates, i.e., the effect of the overall news agenda on the amount of coverage of lifts. An increase in our news pressure variable – e.g., 1,000 extra characters in the cover story of the Frankfurter Allgemeine Zeitung – leads to a statistically significant decrease in the sum of characters devoted to coverage of lifts by 196 (Column 1). We find a similar, significant effect when using the weighted sum of characters

(Column 2). When using the number of articles or the binary measure as dependent variables (Column 3 and 4, respectively) the coefficient has the correct negative sign, but lacks statistical significance. We presume that the lack of significance is the result of these dependent variables being much cruder measures of lift coverage. This implies that the crowding out of lift coverage takes place at a rather subtle level; other newsworthy material does not so much affect the decision of whether or not a lift is covered; it rather affects the extent of the coverage.

There are two mechanisms that can explain this finding. First, a crowding out of lift coverage might occur because of newspapers' space restrictions, which they face on a day-to-day basis. If the coverage of another newsworthy event uses up printing space, the coverage of a lift of immunity will be shorter, or the case might drop out of the news agenda entirely. Second, newspapers' limitations in human resources might lead to a crowding out of lift coverage. In the presence of other newsworthy events, journalists and editors will possibly devote less efforts on researching and writing about a lift of immunity.

Table 4: Effect of news pressure on coverage of lifts (first stage)

	(1) Sum of characters	(2) Sum of characters/page	(3) Number of articles	(4) Covered
News pressure	-0.196** (0.0812)	-0.0777** (0.0351)	-0.0000411 (0.0000369)	-0.00000498 (0.0000136)
Request	64.20 (483.3)	307.1 (336.8)	-0.169 (0.212)	-0.242*** (0.0567)
Resignation before lift	1518.4* (787.5)	593.9 (365.7)	0.777** (0.375)	0.404** (0.156)
Protest	179.7 (366.8)	-59.31 (155.9)	0.225 (0.166)	0.228*** (0.0814)
National level	1683.2** (652.5)	815.5** (378.7)	0.955*** (0.302)	0.144* (0.0833)
Minister	10257.8*** (3663.3)	3801.5* (2035.0)	3.710*** (1.289)	0.442*** (0.149)
R-square	0.516	0.453	0.449	0.361

Notes: OLS estimates. N = 269. All models include a constant and party, weekday, month, and year fixed effects. Robust standard errors in parentheses.

* p<0.10, ** p<0.05, *** p<0.01

Looking at the control variables we see that the amount of coverage of lifts rises significantly, if the politician under question is acting at the national level, and especially if he or she is a minister. According to the baseline specification in Column 1, for example, a case at the national level involves around 1,700 additional characters, and being a minister more than 10,000.

4.3 Effect of news coverage on the likelihood of resignation

Table 5 shows the second-stage estimates. Again, we specify models with three alternative dependent variables and three different measures of lift coverage. According to the baseline specification in Column 1, an increase of 1,000 characters in lift coverage raises the resignation probability by 7.3 percentage points; or, a 1 standard deviation increase raises the probability by 22.3 percentage points. This coefficient is more than twice as large as the one estimated by OLS in Table 3, Column 1. With 2SLS, we estimate the average magnitude especially for those cases that barely have a chance to be covered by the media on days with normal or high news pressure, whereas the OLS estimate refers to the average value for all cases. The larger coefficient in the 2SLS specification therefore implies that the media effects are stronger for those cases that are only covered when the overall news pressure is particularly low. It is also worthy to note that the standard error of the coefficient quadruples from 0.008 in the OLS case to 0.033 when using 2SLS, which implies that the estimation uncertainty increases when only using the variation in the lift coverage that is caused by the instrument.

For all specifications, the Kleibergen-Paap F-statistic on the exclusion of the instrument is below the often used reference point of 10. Thus our coefficients of interest might be biased due the potentially weak correlation between the news pressure variable and the coverage of lifts. We therefore rely on the Anderson-Rubin F-statistic and p-value – which are robust to weak instruments – to evaluate the statistical significance of the effect of lift coverage on the likelihood of resignation. Accordingly, this effect is significant at the 5% (Column 1 and 3 to 6) and 10% (Column 2 and 3) level. However, due the negative R-square values, we have doubts about the reliability of the specifications in Column 5 and 6. These doubts are in line with the performance of the news pressure variable in explaining the lift coverage when measured in terms of the number of articles or as a binary variable (cp. Table 4, Columns 3 and 4).

Table 5: Effect of news coverage on the likelihood of resignation (second stage)

	(1) Baseline	(2) Within 1 day	(3) Weighted	(4) Baseline	(5) Baseline	(6) Baseline
Sum of characters (thousand)	0.0730** (0.0329)	0.0422* (0.0221)	0.0390* (0.0215)			
Sum of char./page number (thousand)				0.184* (0.0943)		
Number of articles					0.349 (0.270)	
Covered						2.879 (6.930)
Request	0.00539 (0.0284)	0.0172 (0.0170)	0.0101 (0.0167)	-0.0465 (0.0448)	0.0688 (0.0836)	0.707 (1.717)
Resignation before lift	-0.238*** (0.0833)	-0.115* (0.0592)	-0.113** (0.0565)	-0.237** (0.0948)	-0.398* (0.239)	-1.291 (2.857)
Protest	-0.176*** (0.0501)	-0.0600* (0.0336)	-0.0710** (0.0325)	-0.152*** (0.0478)	-0.242*** (0.0936)	-0.819 (1.630)
National level	-0.0151 (0.0685)	-0.0207 (0.0468)	-0.0188 (0.0463)	-0.0426 (0.0782)	-0.225 (0.263)	-0.306 (1.023)
Minister	-0.399 (0.443)	-0.349 (0.283)	-0.208 (0.293)	-0.351 (0.436)	-0.943 (1.072)	-0.923 (3.122)
Kleibergen-Paap Wald rk F-statistic	5.846	5.846	5.846	4.904	1.242	0.133
Anderson-Rubin F-statistic	4.672	3.741	3.271	4.672	4.672	4.672
Anderson-Rubin p-value	0.0317	0.0543	0.0718	0.0317	0.0317	0.0317
R-square	0.271	0.211	0.264	0.174	-0.710	-12.12

Notes: 2SLS estimates, using news pressure as an instrument. N = 269. All models include a constant and party, weekday, month, and year fixed effects. Robust standard errors in parentheses.

* p<0.10, ** p<0.05, *** p<0.01

4.4 Robustness

We verify the validity of our results by checking their robustness towards crucial changes in variable measurement, sample selection, and estimation method. Table 6 summarizes the results of these tests.

First, we check whether our assumption that the overall news pressure is actually exogenous to the coverage of lifts of immunity. It would be possible that the lift coverage itself increases the number of characters of the cover story, our main measure of news pressure. We can rule this possibility out, because over the whole time period, coverage of lifts has never been the cover

story. However, it is also possible that lift coverage outside of the cover story affects the length of the cover story in a negative way. We cannot be sure about that, but we can check the robustness of our findings using another instrument for which this is not possible, namely the occurrence of major natural and technological disasters. We use the EM-DAT disaster database to compile a list of the worst disasters between 2005 and 2014 in Germany (cp. Table A2 in the appendix). Using the alternative instrument does not change our results. The effect of lift coverage on resignations is still positive and significant, although the magnitude decreases slightly (6.6 percentage points, see Table 6, Column 1). In the first stage, the alternative instrument has a coefficient of -2.674 and is significant at the 5% level (output omitted).

Table 6: Robustness checks

	(1)	(2)	(3)	(4)	(5)
Sum of characters (thousand)	0.0664** (0.0338)	0.0781** (0.0344)	0.129*** (0.0451)	0.0730** (0.0320)	0.0152 (0.0400)
Request	0.00525 (0.0266)	-0.00635 (0.0341)	0.0921** (0.0387)	0.00539 (0.0265)	-0.0225 (0.0250)
Resignation before lift	-0.228*** (0.0802)	-0.237*** (0.0847)	-0.184*** (0.0708)	-0.238*** (0.0827)	
Protest	-0.175*** (0.0480)	-0.169*** (0.0509)	-0.0440 (0.0463)	-0.176*** (0.0535)	-0.0617** (0.0294)
National level	-0.00409 (0.0613)	-0.00912 (0.0721)	0.129** (0.0649)	-0.0151 (0.0676)	-0.0933 (0.0909)
Minister	-0.330 (0.334)	-0.444 (0.465)	-1.312*** (0.473)	-0.399 (0.435)	-0.374 (0.436)
Kleibergen-Paap Wald rk F-statistic	4.313	6.055	2.992	6.054	6.023
Anderson-Rubin F-statistic	3.703	5.364	5.033	5.029	0.121
Anderson-Rubin p-value	0.0555	0.0217	0.0262	0.0260	0.728
R-square	0.309	0.258	0.252	0.271	0.207
N	269	214	198	269	269

Notes: 2SLS estimates. All models include a constant and party, weekday, month, and year fixed effects. (Cluster) robust standard errors in parentheses.

Model 1: Using the occurrence important natural and technological disasters as an instrument instead of the baseline measure of news pressure.

Model 2: Sample without anonymous cases.

Model 3: Using only cases from official parliament databases.

Model 4: Cluster-adjusted standard errors for 207 cases.

Model 5: Explaining resignations before the lift (placebo test).

* p<0.10, ** p<0.05, *** p<0.01

Second, we re-run the baseline specification with a smaller sample of only 214 lifts and requests. We exclude all cases, in which the parliamentary databases do not report the name of the politician under question (i.e., the anonymous cases). These cases are not covered by the media, but we cannot exclude the possibility that these politicians resigned. Thus we exclude these cases from the sample. Our results are robust to this modification (Column 2).

Third, we exclude all cases that are not documented in the official databases of the respective parliaments. Information obtained from media reports and other public sources might not be as reliable as the institutional information. The exclusion reduces the number of observations to 198, and we find a larger effect of lift coverage on the likelihood of resignation; the magnitude increases to 12.9 percentage points (Column 3). This increase is plausible, because cases that are not documented in the parliamentary databases are subject to general authorization rules, which often cover minor offenses, such as driving under influence and hit and runs with material damage only.

Because our sample comprises both requests of lifts and final decisions, some politicians are observed more than once within the same case. To account for intra-case correlation, we estimate the model with cluster-robust standard errors (Column 4). Because these standard errors are very similar to the conventional ones, cluster correlation is not a concern.

Finally, Column 5 summarizes the results of a placebo test. Here we use the indicator of resignations that took place before the lift as the dependent variable. If our results are meaningful, the coefficient should not be significant, because media effects from the coverage at the day after the lift are chronologically impossible. The outcome of this test is as expected; the estimate is close to zero and insignificant. However, the first stage of this specification – which is not shown in the table – still indicates a crowding out of the lift coverage; the coefficient of the news pressure variable is negative and significant at the 5% level.

5. Conclusion

We present systematic evidence of the effect of news coverage on politicians' decisions to resign. It is more likely that a representative resigns in the course of the lift of immunity from a political post, duty, or function, if there are large amounts of news coverage of the lift. Quantitatively, the

likelihood of resignation increases, on average, by 22.3 percentage points, if news coverage of the lift rises by 1 standard deviation. We show that the variation in the coverage of lifts, in turn, depends on how congested the overall news agenda is. These findings are robust to several changes in variable measurement, sample selection, and estimation method.

Why are lifts of political immunity important and should be considered for analysis? In Germany the right of immunity grants members of parliament protection from any judicial and police measure. However, immunity can be lifted on request. The request of a lift of immunity and the lift are always related to prosecution. The prosecution of a political office holder is of major interest for the citizens and the democratic system. Independent of the particular case and the detailed circumstances of the allegations, citizens do not have any means to hold politicians accountable besides elections. The news media might be an essential actor in these situations, as it first provides information, and second, exerts public pressure on the politicians which might lead to resignation.

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Appendix

Table A1: Each year's top 3 cover stories, according to number of characters

Date	Characters	Headline	Topic/Event
25.09.2014	6476	Obama ruft die Welt zum Kampf gegen IS auf	Obama's speech in UN General Assembly regarding IS
19.07.2014	6165	Trauer und Entsetzen über Flugzeugabschuss	Malaysian Airlines MH370 flight incident
11.12.2014	5950	Streit in Amerika über brutale Verhöre	Publication of SSCI's report on CIA torture
16.08.2013	8452	Muslimbrüder demonstrieren auch nach dem Massaker weiter	Rabaa Massacre in Cairo
23.09.2013	8172	Union gewinnt Bundestagswahl klar	Results of German parliamentary elections
15.04.2013	8041	EU will stärker gegen Steuerflüchtlinge vorgehen	Resolution against tax evasion at EU summit of ministers of
05.10.2012	9911	Parlament gibt Erdogan die Erlaubnis für Militäreinsätze in Syrien	Turkish parliament approves military intervention in Syria
26.07.2012	9524	Karlsruhe verlangt weitere Wahlrechtsreform	German Federal Constitutional Court decision on electoral law
05.04.2012	8790	Keine Nachtflüge am Frankfurter Flughafen	German Federal Administrative Court decision on night flights
27.10.2011	12042	Bundestag stärkt Kanzlerin vor EU-Gipfel den Rücken	German Parliament backs up Merkel's plans for EU summit
20.08.2011	9733	Erziehermangel bremst Ausbau der Krippenplätze	Lack of pre-school teachers
23.09.2011	9131	Benedikt XVI.: Politik muss dem Recht dienen und Unrecht	Benedict XVI's speech in German parliament
13.12.2010	10042	Stockholm entgeht nur knapp einer Katastrophe	Prevention of terrorist attacks in Stockholm
29.04.2010	8490	Strauss-Kahn: Griechenland braucht 120 Milliarden bis Ende	Financial support for Greece
18.01.2010	8329	Die UN sprechen von der größten Katastrophe in ihrer Geschichte	Earthquake in Haiti
17.10.2009	9573	Noch liegen Schwarz und Gelb weit auseinander	Coalition negotiation after elections to German parliament
31.08.2009	9219	Schwarz-Gelb und Rot-Rot fast gleichauf	Results of German state elections
02.09.2009	8852	Merkel: Verantwortung Deutschlands steht am Anfang von allem	WWII memorial in Danzig
17.10.2008	9799	Bund und Länder verständigen sich auf Rettungspaket	Agreement on bailout (German financial markets)
08.09.2008	8103	Steinmeier Kanzlerkandidat - Beck tritt zurück	Steinmeier candidate for chancellorship
08.02.2008	7629	Erdogan: Ludwigshafen bietet die Chance für einen Neubeginn	Severe house fire in Ludwigshafen
13.07.2007	10839	Merkel weist "Ultimaten" türkischer Verbände zurück	National integration scheme/summit
08.11.2007	8691	Abdullah: Nicht über Frieden reden, sondern den Frieden festigen	State visit of Saudi Arabian King
14.05.2007	8319	Die kleinen Parteien legen kräftig zu	Results of German state elections
05.12.2006	8677	Steinmeier lockt Syrien mit Angeboten aus der EU	German foreign minister Steinmeier meets Syrian president Assad
18.12.2006	8250	Angriff auf das Büro von Abbas	Attack on Palestinian president Abbas
18.09.2006	8147	Verluste für Rot-Rot	Results of German state elections
08.09.2005	14158	Letzte ordentliche Sitzung des 15. Deutschen Bundestags	Final parliamentary debate before elections to German Parliament
21.09.2005	10314	Merkel bestätigt Fischer wartet ab	Exploratory talks after elections to German Parliament
01.12.2005	9985	"Mehr Freiheit wagen" Die Kanzlerin verspricht Taten	Merkel's first government declaration

Table A2: Most significant natural and technological disasters, Germany, 2005 – 2014

Disaster	Deaths	Damage (USD)	Time	
Cold wave	10	-	22.01.2006	01.02.2006
Transport Accident Lathen	23	-	22.09.2006	02.10.2006
Storm	11	5500000	18.01.2007	28.01.2007
Storm	7	-	23.01.2007	02.02.2007
Transport Accident Hannover	20	-	04.11.2008	14.11.2008
Love Parade Duisburg	19	-	24.07.2010	03.08.2010
Floods	4	12900000	03.06.2013	13.06.2013
Storm	-	4800000	27.07.2013	06.08.2013

Notes: The table shows all events that are listed in the top three of German disasters in the following categories: (a) natural disasters, number of deaths; (b) natural disasters, damage in USD; (c) technological disasters, number of deaths; (d) technological disasters, damage in USD. Events for which no specific time window can be assigned are skipped. The time frame covers the day of the event plus the following 10 days. Source: EM-DAT International Disaster Database.