

The GroKo Effect: Does the Popularity of CDU/CSU and SPD Suffer from Grand Coalitions?

Thomas Drechsel*

London School of Economics

*This is work in progress.
Please contact me if you have suggestions.*

April 4, 2018

Abstract

This paper attempts to systematically assess the effect of government coalitions between the CDU/CSU and the SPD (“GroKos”) on subsequent election outcomes of the two parties, using data on both federal and state elections in Germany over around 70 years. The key idea is to use the recurring presence of more than 30 of such coalitions at the state level to gain insight on their subsequent effects, exploiting the relative stability and homogeneity of the German party system across time and space. I show purely descriptively that the average change in vote shares after being the junior (senior) partner in a GroKo is -2.68 (-0.34) percentage points for the CDU/CSU and -2.58 (+0.85) percentage points for the SPD. This suggests a generally asymmetric effect between junior and senior coalition partners, and different effects between the two parties. A more formal statistical analysis, in which I control for other election and government characteristics as well as year and/or state fixed effects, reveals that junior (senior) partners consistently lose out (gain) after GroKos, and that the effects are stronger and statistically more significant for the SPD than for the CDU/CSU.

*Department of Economics and Centre for Macroeconomics, London School of Economics. Houghton Street, London, WC2A 2AE, United Kingdom; E-Mail: t.a.drechsel@lse.ac.uk; Web: <http://personal.lse.ac.uk/drechsel/>; For sharing some thoughts, I thank Miguel Bandeira, Kilian Huber, Jonathan Pinder and Guo Xu.

1 Introduction

“Die Unzufriedenheit ist sehr groß an der Basis der Union. Das waren keine guten Tage, und es brodelt eigentlich an allen Stellen.” (Paul Ziemiak, Head of the Young Union in the CDU, in February 2018)

“Wir haben ein Interesse daran, dass hier noch was übrig bleibt von diesem Laden, verdammt nochmal.” (Kevin Kühnert, Head of the Young Socialists in the SPD, in December 2017)

The 2017 federal election in Germany was marked by historically poor results for the two major parties CDU/CSU and SPD. Their vote shares amounted to 32.9 percent and 20.5 percent, corresponding to a decline of 8.6 and 5.2 percentage points relative to the previous election, respectively. In the public debate, their declining popularity is often attributed to the fact that they have previously formed Grand Coalitions (known as “GroKos”, short for *Große Koalitionen* among German speakers). For the SPD in particular, the fear of losing further support among voters was one of the reasons why the decision to re-enter a Grand Coalition as the junior partner was a highly contested step.

Do GroKos lead to worse election outcomes for the two parties subsequently? It is not easy to reliably evaluate the size and importance of this postulated effect empirically, given that Grand Coalitions are a historically rare event at the German federal level – the GroKo that was agreed upon in early 2018 is only the fourth one in German postwar history – which makes formal statistical analysis on these events by themselves infeasible. Furthermore, there are confounding factors that influence election outcomes and coalition formation. For example, it is hard to tell whether the SPD’s bad election result has anything to do with the coalition it was in, or whether it is simply a consequence of a general long-run decline of centre-left parties that is observable across continental Europe.

In this paper, I attempt to systematically assess the effect of coalitions between the SPD and CDU/CSU on their subsequent election outcomes, using data on both federal and state elections in Germany over around 70 years. The key idea of the approach is to use

the recurring presence of Grand Coalitions at the state level to gain insight on the effect of interest. Considering state-level data in such an analysis circumvents the problem that GroKos rarely occur at the federal level. The important underlying assumption, maintained throughout this analysis, is that the German party landscape and election system is relatively comparable across federal level and states, and relatively stable over time.

I hand-collect information from online sources to construct a data set of all elections and government coalitions formed in Germany and its 16 states (*Bundesländer*) between 1946 and 2017. My final sample covers 244 elections and includes 36 GroKos, which were agreed upon at the federal level and in 13 out of the 16 states. 21 GroKos are led by the CDU/CSU, while in 15 of them the SPD is the senior partner. The data set by itself provides an interesting overview over political developments in German elections and the corresponding heterogeneity across its states.

In a purely descriptive analysis I show that the average of the subsequent change in vote shares conditional on previously being the junior (senior) partner in a GroKo is -2.68 (-0.34) percentage points for the CDU/CSU and -2.58 (+0.85) percentage points for the SPD. This is suggestive of a generally asymmetric effect between junior and senior partners, consistent with the narrative often told in the public debate. Furthermore, it indicates that the effects are different between the CDU/CSU and the SPD.

The descriptive analysis addresses the problem of the small number of occurrences of GroKos at the federal level by exploiting the information on many more elections across states, but it still does not properly control for other characteristics of elections and governments. I therefore also carry out a more formal econometric analysis, in which I control for other election and government characteristics, such as voter turnout and whichever party forms any government, as well as year and/or state fixed effects.

My findings suggests that across a number of different specifications, the junior (senior) partner in GroKo loses (gains) vote shares in the subsequent election. For the CDU/CSU the point estimates reach from -3.30 percentage point losses after being the junior partner to +1.80 percentage point gains after being the senior. For the SPD, the corresponding numbers

are -3.20 and +7.51 percentage points. Interestingly, the SPD estimates are statistically significant across a range of specifications while the CDU/CSU ones are not. This is again in line with the narrative by which the coalition partners' popularity are asymmetrically affected. The senior partner gains while the junior partner loses.

The analysis I carry out so far is silent on the underlying mechanisms that drive the results. Are the SPD effects stronger because their voters respond differently to compromises with the CDU/CSU? It is not clear. Moreover, this paper still has little to say about whether or not a GroKo should be formed. Expectations about future election outcomes are only one aspect in the political process that is considered when forming coalition in practice. Note that one can in principle extend these results to additional coalition types in order to address some of these limitations. The GroKo was an obvious starting point, not only because it is currently in place, but also from a statistical point of view, as the variation in who is the junior/senior partner in this coalition is relatively balanced. Overall the results have the potential to provide some interesting insights for a more informed debate about coalition formation in German politics

Structure of the paper

The remainder of the paper is structured as follows. Section 2 describes the construction of the data set and presents some summary statistics. Section 3 carries out the descriptive analysis on GroKos and how they are associated with subsequent CDU/CSU and SPD election results. Section 4 lays out the more formal statistical model and presents its results, both in-sample and out-of-sample. Section 5 concludes.

Related literature

To be included.

2 Data, Setting and Summary Statistics

2.1 Construction of data set

To construct the data set I hand-collected information on all German federal and state level election outcomes and corresponding governments formed. I use different online sources.¹ In the construction of the data set I generally limit myself to the postwar period and “regular” parliament elections that are broadly comparable over time. This means that I exclude any governments that were formed not based on a postwar election (such as some intermediary governments just after the war), and drop elections that happened in entities nonexistant today. For example, for Baden-Württemberg I exclude elections that took place in Baden and Württemberg separately before 1952. I also exclude constituent assemblies (*Verfassungsgebende Versammlungen*) which were voted on in some states just after the war. For East German states, I start the sample from 1990, with the exception of Berlin, for which I collect the data for West Berlin pre-1990 and the whole of reunited Berlin post-1990. These restrictions result in a sample of 244 elections out of which 19 are federal elections.

For each election, I collect the voter turnout, the vote share of SPD and CDU/CSU and the information on which parties initially formed the government.² I then match to each election the information if at the end of the term following the election the head of the government was either from the CDU/CSU, the SPD or from another party, and whether the government at the end of the term was a GroKo. Importantly, I define a GroKo narrowly as a government coalition between CDU/CSU and SPD and not as coalitions that also include a third party.³ I also do not consider coalitions of other parties that had the two highest vote shares as GroKos, which under some definition may also be called “Grand Coalition”. For each GroKo I also code in the information on who is the junior and who is the senior partner.

The information on government leaders and GroKos always refers to the end of a term,

¹I am making the data set publicly available on my webpage. This also contains further information on the sources. Please let me know in case you find any errors. Link: <http://personal.lse.ac.uk/drechsel/grokos>.

²The vote share generally corresponds to the proportional share and not the final parliament seats allocated, that is, I use the outcome of the *Zweitstimme* in the German system.

³One example would be the current government in Sachsen-Anhalt, which is a coalition between CDU, SPD and the Green party.

as I am interested in the government that prevails at the time of the following election in order to gauge the effect of the prevailing conditions – GroKos in particular – on subsequent election outcomes. In any case, end-of-term and beginning-of-term governments are only different if the government reshuffles within a term, which does not happen that frequently.⁴ My classification method results in 36 GroKos overall, 4 at the federal levels and 32 spread over 13 out of the 16 states.

2.2 Descriptive statistics

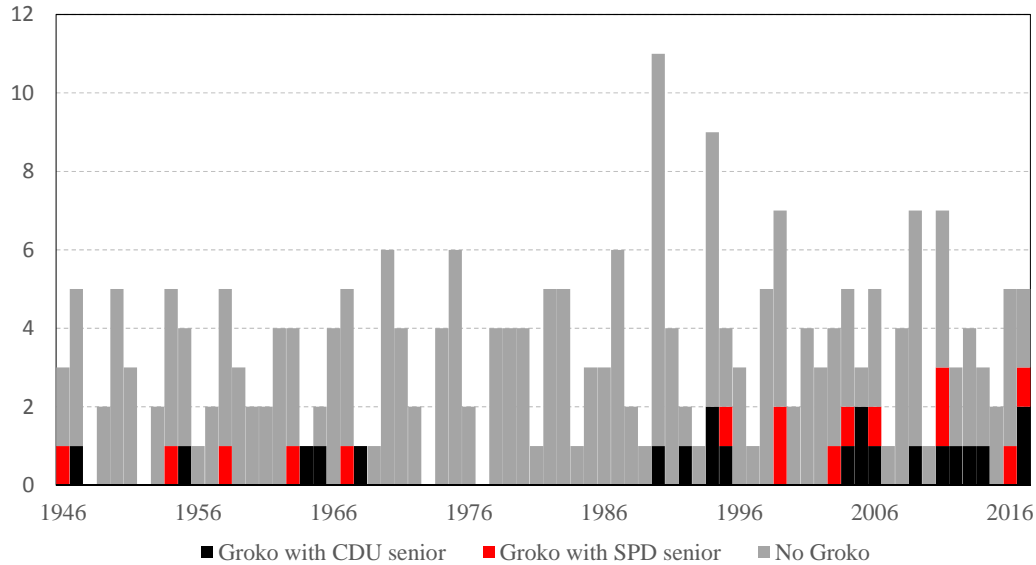
Figure 1 displays the number of federal and state-level elections that are captured by the data set in each year. The colouring indicates the type of coalition that was formed following the respective election. Black (red) bars indicate those elections that led to a Grand Coalition with CDU/CSU (SPD) being the senior coalition partner. Gray bars indicate any other government coalition. As is visible, in some years, such as 1977, no elections took place across Germany. In other years, the number varies between 1 and 11 elections. 1990 is an obvious outlier with 11 elections, since many states had new elections after the reunification of Germany. There are generally more elections post-1990 as there are 5 more states in the reunited republic.

The figure reveals that GroKos are a frequently occurring phenomenon in postwar Germany. Both CDU-led and SPD-led coalitions come into being relatively regular since 1946, giving a basis for the analysis carried out in this paper. Interestingly, the 1970's and 1980's saw somewhat of an interruption, while very recently several Grokos were formed, including at the federal level. This observation makes clear why it is a key topic in the public debate in Germany.

Note that the bars only indicate the elections and corresponding *formation* of government coalitions in a given year. If one were to also plot GroKos that are *active* in any given year in

⁴A key example is the Grand Coalition between 1966 and 1969 headed by Kurt Georg Kiesinger (CDU). This coalition was formed within the 1965-1969 term after the previous coalition between CDU and FDP under Ludwig Erhard broke down. As I am interested in how this coalition affected Willy Brandt's subsequent election in 1969, I use the end of term information, that is, I classify the whole 1965-1969 government term as a GroKo in the data set.

Figure 1: NUMBER OF ELECTIONS IN GERMANY AND GRAND COALITIONS FORMED



Note: Number of elections that took place in a given year at the German federal level or in any of its 16 states (11 states pre-1990). Black (red) bars indicate those elections that led to a Grand Coalition with CDU/CSU (SPD) being the senior coalition partner. Gray bars indicate any other government coalitions.

Germany, there would be at least one GroKo active over the majority of years in the sample, which further highlights their frequent occurrence at the state level.

Table 1 provides summary statistics for the information that I collected for each election and corresponding government formation. The turnout as well as the proportional vote share of CDU/CSU and SPD (calculated as levels and first differences) are continuous variables, and all other variables are indicator variables (dummies) representing the occurrence of an event. Panel (a) covers the full sample of all federal and state-level elections. It is interesting that CDU/CSU and SPD perform similarly well on average, with very close election results. In fact, the share of CDU and SPD led government are exactly equal to each other at 49% with all other parties at 2%.⁵ Importantly, GroKos represent 15% of all governments, 9% with CDU as the senior partner and 5% with the SPD.

⁵Two examples of the rare occasions of non-CDU-non-SPD-led governments are the current governments of Thüringen, which is headed by Bodo Ramelow (Die Linke) and of Baden-Württemberg under Winfried Kretschmann (Green Party).

Table 1: SUMMARY STATISTICS

Panel (a): Full sample

Variable	Mean	Std. Dev.	Min	Max	Obs
Turnout	72.55	10.13	44.40	92.00	244
SPD vote share in election	36.95	10.13	9.80	61.90	244
CDU/CSU vote share in election	38.31	9.86	9.00	62.10	244
SPD vote share in election (change)	-0.54	5.80	-16.30	15.70	227
CDU/CSU vote share in election (change)	-0.24	6.70	-20.70	21.00	227
SPD head = 1 (at end of term)	0.49	0.50	0	1	244
CDU/CSU head = 1 (at end of term)	0.49	0.50	0	1	244
Other head = 1 (at end of term)	0.02	0.13	0	1	244
Groko = 1	0.15	0.36	0	1	244
Groko with CDU senior = 1	0.09	0.28	0	1	244
Groko with SPD senior = 1	0.06	0.24	0	1	244

Panel (b): Federal only

Variable	Mean	Std. Dev.	Min	Max	Obs
Turnout	82.72	6.27	70.90	91.10	19
SPD vote share in election	35.12	7.09	20.50	45.80	19
CDU/CSU vote share in election	42.04	5.90	31.00	50.20	19
SPD vote share in election (change)	-0.48	4.30	-11.20	4.50	18
CDU/CSU vote share in election (change)	0.11	5.59	-8.60	14.20	18
SPD head = 1 (at end of term)	0.32	0.48	0	1	19
CDU/CSU head = 1 (at end of term)	0.68	0.48	0	1	19
Other head = 1 (at end of term)	0.00	0.00	0	0	19
Groko = 1	0.21	0.42	0	1	19
Groko with CDU senior = 1	0.21	0.42	0	1	19
Groko with SPD senior = 1	0.00	0.00	0	0	19

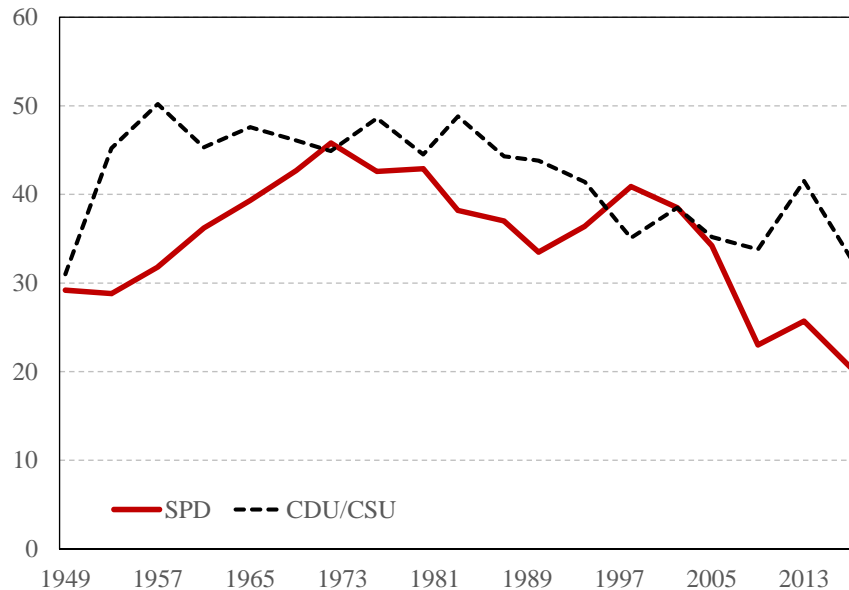
The summary stats are repeated for the 19 federal elections only in Panel (b). As is well known turnout is higher on average at the federal level compared to the state levels. At the federal level 4 Grand Coalitions were formed, all with the CDU/CSU being the senior partner (three of them led by Chancellor Angela Merkel). Roughly two thirds of federal governments were headed by a CDU/CSU chancellor, the remaining ones by SPD chancellors. This is reflected also in a higher average vote share for the CDU at the federal level.

3 Descriptive Analysis

3.1 Election outcomes over time

In this section I first plot the vote shares for CDU/CSU and SPD over time, both for the federal level (see Figure 2) as well as the six biggest German states in terms of GDP (see Figure 3). At election-to-election frequency, the CDU and SPD shares move in opposite directions, reflecting that the two major German parties are competitors for votes. However, roughly since the mid-1970's both major parties appear to be on a downward trajectory at the federal level. This trend is also visible in some of the states, most strongly in Baden-Württemberg, but there are some clear cross-state idiosyncracies visible as well. An example is Bayern, a traditional stronghold for the CSU, the state-level sister party of the CDU.⁶

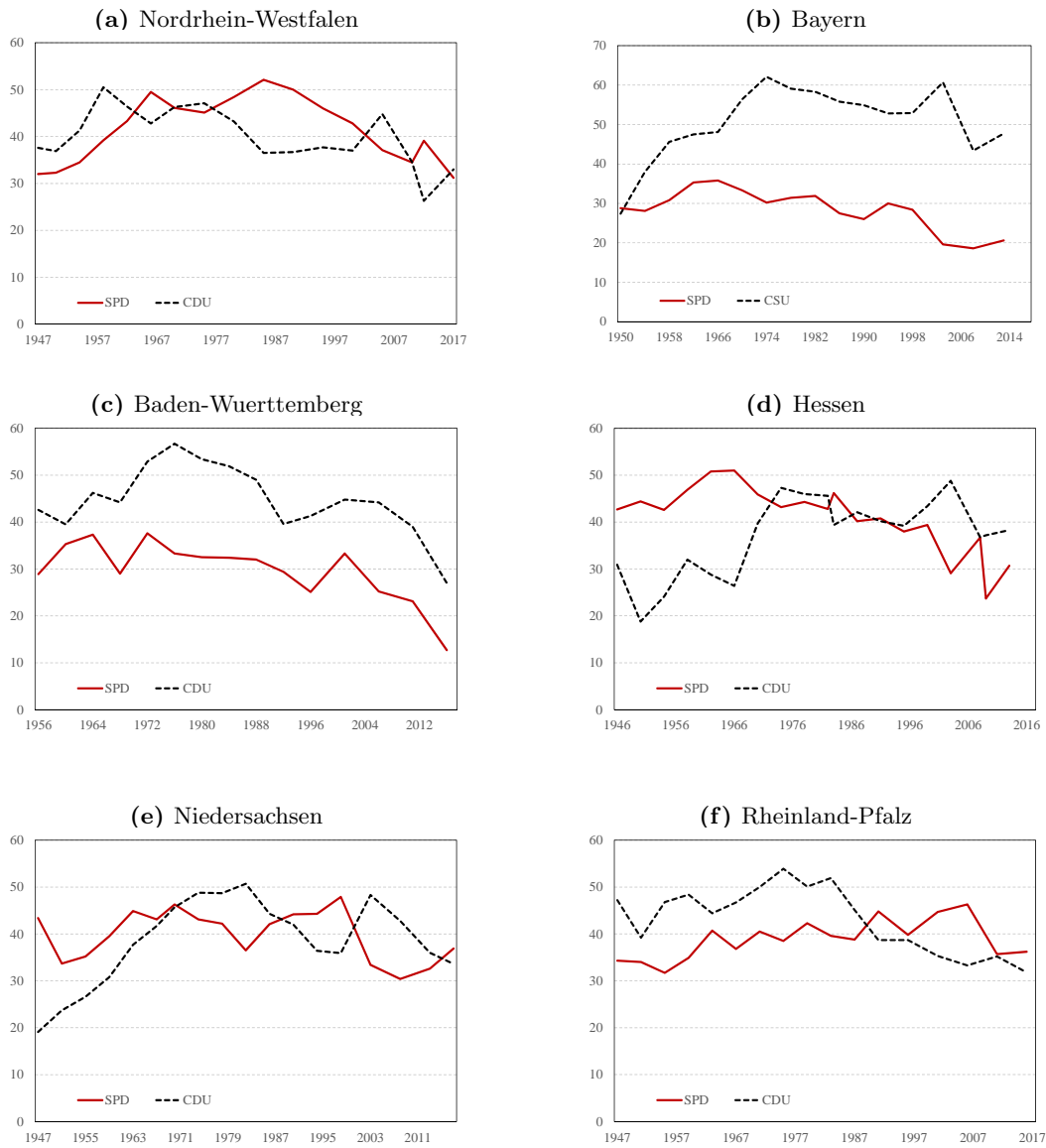
Figure 2: VOTE SHARES IN GERMAN FEDERAL ELECTIONS OVER TIME



To what extent are these fluctuations (and trends) in election outcomes influenced by GroKos? It is not easy to reliably evaluate the actual strength of the effect of GroKos empirically, given the large amount of confounding factors that influence election outcomes

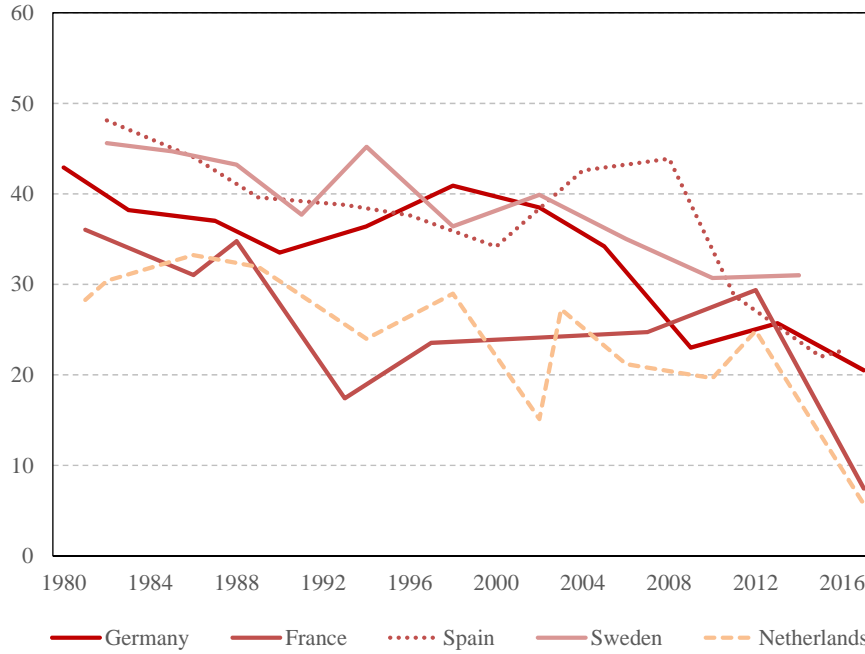
⁶Note that I opted for using the German state names throughout the paper, e.g. *Bayern* rather than *Bavaria*.

Figure 3: VOTE SHARES IN SIX BIGGEST STATE ELECTIONS OVER TIME



and coalition formation. For example, it is hard to tell whether the SPD's bad election result has anything to do with the coalition it was in, given the general long-run decline of centre-left parties across continental Europe. To illustrate this point, Figure 4 plots the vote shares of SPD-analogue parties in other continental European countries since 1980s. It is clearly visible that these are also on a downward trend, while Grand Coalitions were not a salient feature in some of the other continental European countries.

Figure 4: VOTE SHARES OF CENTRE LEFT PARTIES IN CONTINENTAL EUROPEAN COUNTRIES



Note: Election putcomes for centre-left parties in Germany (SPD, Bundestagswahl), France (Parti Socialiste, Elections legislatives), Spain (Partido Socialista, Elecciones generales), Sweden (Social democrats, Riksdag), and the Netherlands (Partij van de Arbeid, Tweede Kamer der Staten-Generaal).

3.2 GroKos and subsequent election outcomes

Table 2 provides the full list of all GroKos that I identified using the classification described in section 2.1, together with additional information associated with the respective coalitions. The rows are sorted first by election level, starting with the federal level and continuing with states alphabetically, and then chronologically within election level. Across the states and the federal level 36 of such coalitions were formed across postwar Germany. Currently 5 GroKos are active – in addition to the recently formed one at the federal level, these are in Mecklenburg-Vorpommern, Niedersachsen, Rheinland-Pfalz and Sachsen. Generally, GroKos were formed at any point in 13 out of the 16 states. The exceptions are Bayern, Hamburg and Nordrhein-Westfalen. Berlin has had the highest number of coalitions between CDU and SPD.

The column “Party Head” indicates the party of the leader of the respective government, which corresponds to the senior coalition partner in the coalition. It is visible that both CDU-led GroKos (21 times) as well as SPD-led GroKos (15 times) have been formed in different states. Even within one state, both types of GroKos have occurred, as the example of Berlin shows.

The table also provides the election outcomes for CDU/CSU and SPD, before and after the Grand Coalitions were formed. The “ Δ ” column calculates the percentage point between these outcomes. A first general insight is that there is a large dispersion in outcomes after Grand Coalitions for both parties. Both senior and junior partners have won and lost vote shares in subsequent elections relative to the elections before the coalitions were formed.

While there is generally a big dispersion, the important question is whether there is any systematic effect connected to GroKos behind the figures in the table. To this end, the information is further condensed in Table 3 where I provide a variety of conditional statistics of the change in vote shares. Panel (a) considers CDU/CSU results while Panel (b) focuses on SPD outcomes. In each case I calculate the number and percentage shares of gains and losses, as well as the average and min/max share loss, conditional on different Grand Coalition types that are in place at the time of the election: All GroKos, Grokos with CDU/CSU being the senior partner, and GroKos with SPD as the senior partner. To put these numbers into perspective I also provide the corresponding statistics conditional any other government types preceding the election, further broken down into CDU-led and SPD-led governments. This table of course does not identify any effects causally but shows how changes in election results are associated with different government scenarios preceding the election.

It is interesting to see that in terms of number of gains and losses, the CDU/CSU loses more often than it gains, both after being the senior and the junior partner (61.11% and 61.54% of cases, respectively). For the SPD, this effect is asymmetric, with more losses after being the junior partner (66.67%) than the senior partner (46.15%). In terms of the average gain or loss, there is an asymmetric effect for both parties, that is stronger in magnitude for the SPD. After being the senior partner in a GroKo, the CDU/CSU (SPD) loses on average

Table 2: GRAND COALITIONS AND SUBSEQUENT ELECTION OUTCOMES ACROSS TIME AND SPACE

Period	State	Head	Head Party	SPD start	SPD after	SPD Δ	CDU start	CDU after	CDU Δ
1966-1969	Fed.	Kurt Georg Kiesinger*	CDU	39.3	42.7	3.4	47.6	46.1	-1.5
2005-2009	Fed.	Angela Merkel	CDU	34.2	23	-11.2	35.2	33.8	-1.4
2013-2017	Fed.	Angela Merkel	CDU	25.7	20.5	-5.2	41.5	32.9	-8.6
2017-	Fed.	Angela Merkel	CDU	20.5			32.9		
1966-1968	BW	Hans Filbinger*	CDU	37.3	29	-8.3	46.2	44.2	-2
1968-1972	BW	Hans Filbinger	CDU	29	37.6	8.6	44.2	52.9	8.7
1992-1996	BW	Erwin Teufel	CDU	29.4	25.1	-4.3	39.6	41.3	1.7
1955-1958	BE	Otto Suhr	SPD	44.6	52.6	8	30.4	37.7	7.3
1958-1963	BE	Willy Brandt	SPD	52.6	61.9	9.3	37.7	28.8	-8.9
1990-1995	BE	Eberhard Diepgen	CDU	30.4	23.6	-6.8	40.4	37.4	-3
1995-1999	BE	Eberhard Diepgen	CDU	23.6	22.4	-1.2	37.4	40.8	3.4
2011-2016	BE	K.Wowereit, M.Mueller	SPD	28.3	21.6	-6.7	23.3	17.6	-5.7
1999-2004	BB	M.Stolpe, M.Platzeck	SPD	39.3	31.9	-7.4	26.5	19.4	-7.1
2004-2009	BB	Matthias Platzeck	SPD	31.9	33	1.1	19.4	19.8	0.4
1995-1999	HB	Henning Scherf	SPD	33.4	42.6	9.2	32.6	37.1	4.5
1999-2003	HB	Henning Scherf	SPD	42.6	42.3	-0.3	37.1	29.8	-7.3
2003-2007	HB	H.Scherf, J.Boerhnsen	SPD	42.3	36.7	-5.6	29.8	25.6	-4.2
1946-1950	HE	Christian Stock	SPD	42.7	44.4	1.7	30.9	18.8	-12.1
1994-1998	MV	Berndt Seite	CDU	29.5	34.3	4.8	37.7	30.2	-7.5
2006-2011	MV	Harald Ringstorff	SPD	30.2	35.6	5.4	28.8	23	-5.8
2011-2016	MV	Erwin Sellering	SPD	35.6	30.6	-5	23	19	-4
2016-	MV	E. Sellering, M. Schwesig	SPD	30.6			19		
1965-1967	NI	Georg Diederichs	SPD	44.9	43.1	-1.8	37.7	41.7	4
1967-1970	NI	Georg Diederichs	SPD	43.1	46.3	3.2	41.7	45.7	4
2017-	NI	Stephan Weil	SPD	36.9			33.6		
1949-1951	RP	Peter Altmeier*	CDU	34.3	34	0.3	47.2	39.2	8
1959-1961	SL	E. Reinert, F.J. Roeder*	CDU	14.3	30	15.7	25.4	36.6	11.2
2012-2017	SL	Annegret K.-Karrenbauer	CDU	30.6	29.6	-1.0	35.2	40.7	5.2
2017-	SL	A.K.-Karrenbauer, T.Hans	CDU	29.6			40.7		
2004-2009	SN	G. Milbradt, S. Tillich	CDU	9.8	10.4	0.6	41.1	40.2	-0.9
2014-	SN	S.Tillich, M.Kretschmer	CDU	12.4			39.4		
2006-2011	ST	Wolfgang Boehmer	CDU	21.4	21.5	0.1	36.2	32.5	-3.7
2011-2016	ST	Rainer Haseloff	CDU	21.5	10.6	-10.9	32.5	29.8	-2.7
2005-2009	SH	Peter Harry Carstensen	CDU	38.7	25.4	-13.3	40.2	31.6	-8.6
1994-1999	TH	Bernhard Vogel	CDU	29.6	18.5	-11.1	42.6	51	8.4
2009-2014	TH	Christine Lieberknecht	CDU	18.5	12.4	-6.1	31.2	33.5	2.3

Note: Numbers are in percent/percentage points. * indicates that the coalition was formed in the middle of the term and not straight after election. Fed.=Federal; BW=Baden-Wuerttemberg; BE=Berlin; BB=Brandenburg; HB=Bremen; HE=Hessen; MV=Mecklenburg-Vorpommern; Ni=Niedersachsen; RP=Rheinland-Pfalz; SL=Saarland; SN=Sachsen; ST=Sachsen-Anhalt; TH=Thuringen.

2.68 percentage points (2.58 percentage points) in the subsequent election. The CDU/CSU also loses after being senior coalition partner, by 0.34 percentage points while the SPD gains 0.85 percentage points. Given the larger negative effects for junior partners, the average effect after any GroKo is negative on average for both parties.

The rows capturing the statistics conditional on any other government types reveal that both parties typically lose out after heading a government, and win after the other party was previously in charge. The magnitudes are in general not as large as the the negative effects after being a junior GroKo member. In light of the comparison between these numbers in Table 3 it would be interesting to check the effects of GroKos *controlling for* these other government characteristics. The econometric analysis in the next section will be an attempt to do so.

Table 3: GOVERNMENT TYPES AND SUBSEQUENT OUTCOMES FOR CDU/CSU AND SPD: STATISTICS

<i>Panel (a): CDU/CSU outcomes after different government types</i>						
	#	# losses	Loss share	Average Δ	Top loss	Top gain
All GroKos	31	19	61.29%	-1.34%	-12.10%	11.20%
GroKos with CDU senior	18	11	61.11%	-0.34%	-8.60%	11.20%
GroKos with SPD senior	13	8	61.54%	-2.68%	-12.10%	7.30%
Any other government	196	97	49.49%	-0.06%	-20.70%	21.00%
Any other govt (CDU led)	94	54	57.45%	-0.99%	-20.70%	21.00%
Any other govt (SPD led)	99	42	42.42%	0.86%	-17.00%	19.90%
<i>Panel (b): SPD outcomes after different government types</i>						
	#	# losses	Loss share	Average Δ	Top loss	Top gain
All GroKos	31	18	58.06%	-1.14%	-13.30%	15.70%
GroKos with CDU senior	18	12	66.67%	-2.58%	-13.30%	15.70%
GroKos with SPD senior	13	6	46.15%	0.85%	-7.60%	9.30%
Any other government	196	96	48.98%	-0.44%	-16.30%	15.60%
Any other govt (CDU led)	94	37	39.36%	0.94%	-13.60%	14.30%
Any other govt (SPD led)	99	57	57.58%	-1.68%	-16.30%	15.60%

Note: Note that 5 out of the original 36 GroKos are not included in this table as they are currently active and no subsequent election outcome is observable.

4 Estimating the Effect of GroKos (*preliminary*)

The purely descriptive analysis in the previous section is indicative of asymmetric effects of GroKos on subsequent performance of the two major parties in elections, as well as effects that appear to be different between CDU/CSU and SPD. For example, for the SPD being the senior coalition partner is associated with gains in the subsequent election, while being the junior partner is associated with losses on average. This analysis was based on comparing simple conditional means and did not control for any other confounding variables, something that I have stressed as important in the motivation for this paper.

This section therefore attempts to set up a more formal statistical analysis, aimed at isolating the effect of interest. To this end, I will propose a regression specification that estimates the effect of being the junior (senior) partner in a GroKo on the change in vote shares following the GroKo period, controlling for a number of other election and government characteristics and/or year and state fixed effects.

4.1 Model

Consider the following regression model, which I run separately for CDU/CSU and SPD elections outcomes:

$$y_{jt} = \alpha + \beta_{jun}GroKo_{jt}^{jun} + \beta_{sen}GroKo_{jt}^{sen} + \gamma X_{jt} + \nu_t + \xi_j + \varepsilon_{jt}, \quad (1)$$

where y_{jt} denotes the change in vote share (in percentage points) in an election taking place in state $j \in \{Fed., BW, BY, BE, \dots\}$ and year t . Note that the data set I constructed and use for the estimation of (1) is not a conventional panel, given that elections only take place every few years within state j . Accordingly, the change in vote share is not a change between t and $t - 1$ but a change from current relative to previous election, which took place for example in $t - 4$. For more details on how the data set is constructed I refer the reader to Section 2. $GroKo_{jt}^{jun}$ and $GroKo_{jt}^{sen}$ represent dummy variables, indicating whether the party is in a Grand Coalition at the time of the election (based on the outcomes of the previous

election) as junior or senior partner, respectively. X_{jt} includes additional control variables: Voter turnout in the election as well two dummies for the CDU/CSU or the SPD being the head of the government at the time of the election. The latter control is important as it specifies β_{jun} and β_{sen} as the effect of GroKos on changes in election outcomes, *conditional on* general effects of CDU/CSU and SPD governments on subsequent elections. This controls for mechanisms such as an “incumbent bonus” or an “opposition bonus” in the election result. Summary statistics on the variables included can be found in Table 1.⁷

I also optionally allow for year fixed effects ν_t and/or state fixed effects ξ_j . Year fixed effects are meant to control for time-varying ‘global’ shifts in popularity of the parties, such as the overall long-run decline of centre-left parties depicted in Figure 4.⁸ State fixed effects absorb idiosyncrasies of individual states. As my left hand side variable captures changes in vote shares, these fixed effects represent state-specific average trends in the levels of the vote shares.⁹

4.2 Results

The results for the estimation of equation (1) are shown in Table 4. Panel (a) presents the results for the CDU/CSU and Panel (b) those for the SPD. In both cases the different columns correspond to different specifications with respect to the inclusion of fixed effects, in the year and state dimension.

The results Panel (a) show that the CDU/CSU vote shares after CDU/CDU senior GroKos increase on average – around 1 percentage points or above depending on the specification – while they fall after GroKos in which the CDU/CDU is the junior partner. The latter magnitudes are larger, around 2 to 3 percentage points. Apart from the year fixed effects specification these estimates are not statistically significant at conventional levels.

⁷Going forward, I am planning to include additional controls, such as local economic conditions.

⁸I also ran the regression that included polynomial time trends, which gave broadly similar results to the year fixed effects specification.

⁹Since my right hand side variables are related to past realizations of my left hand side variables (e.g. coalition formation in the past depends on changes in vote shares in the past), a potential worry is that the inclusion of state level fixed effects may lead to an endogeneity issue, similar to one that occurs dynamic panels with fixed effects. Here I do not address this econometrically but I generally report results across various specifications in terms of the inclusion of fixed effects.

There is no striking change in these estimates across the fixed effect specifications. It is also visible that the CDU gains both after CDU-led and SPD-led governments on average, but by more after SPD-led governments, although none of the estimates are statistically significant. Voter turnout does not seem to affect CDU/CSU results in a meaningful way.

Table 4: REGRESSION RESULTS

	<i>Panel (a): CDU/CSU Results</i>				<i>Panel (b): SPD Results</i>			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
GroKo (CDU senior)	1.00 [1.700]	1.26 [1.851]	1.58 [1.836]	1.80 [2.063]	-3.20** [1.445]	-1.37 [1.605]	-3.16** [1.552]	-1.42 [1.703]
GroKo (SPD senior)	-2.86 [1.959]	-3.30* [1.932]	-2.72 [2.142]	-3.19 [2.176]	3.11* [1.665]	6.65*** [1.675]	3.06* [1.810]	7.51*** [1.796]
Any CDU-led govt	1.26 [3.875]	0.00 [4.072]	1.17 [4.071]	0.39 [4.378]	4.80 [3.294]	0.14 [3.530]	4.83 [3.440]	0.33 [3.614]
Any SPD-led govt	2.93 [3.867]	0.78 [4.070]	3.61 [4.115]	1.46 [4.399]	2.03 [3.287]	-1.55 [3.528]	0.93 [3.477]	-3.69 [3.631]
Voter Turnout	0.11*** [0.044]	0.01 [0.078]	0.13** [0.056]	-0.01 [0.117]	0.10*** [0.037]	-0.04 [0.067]	0.13*** [0.047]	0.02 [0.097]
Year FE	no	yes	no	yes	no	yes	no	yes
State FE	no	no	yes	yes	no	no	yes	yes
Observations	227	227	227	227	227	227	227	227
R-squared	0.055	0.518	0.077	0.533	0.089	0.517	0.121	0.576

Standard errors in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Turning to the SPD results shown in Panel (b), it is evident that the different sign of the GroKo coefficient depending being junior or senior is present for the SPD as well. In the SPD case, the magnitudes are larger, in particular in the directions of gains after being the senior partner, for which the year and state fixed effects specification gives an estimate of over 7 percentage points. Interestingly, SPD results feature stronger statistical significance, with some estimates significant even at the 1% level.¹⁰ The results for the other controls give a similar message to the corresponding CDU/CSU estimates.

The regression results complete the preliminary picture from the descriptive analysis in the previous section. Taken together, the findings suggests that across a number of different

¹⁰The standard errors in Table 4 are not clustered. The overall pattern of significance does not change meaningfully when clustering at either the state or year level. I would be grateful for suggestions on what would be the most sensible standard errors to report in each case.

specifications, the junior (senior) partner in GroKo loses (gains) vote shares in the subsequent election. For the CDU/CSU the point estimates reach from -3.30 percentage point losses after being the junior partner to +1.80 percentage point gains after being the senior, although the null hypothesis that these effects are in fact zero cannot be rejected. For the SPD, the corresponding numbers are -3.20 and +7.51 percentage points. The SPD estimates are statistically significant at conventional levels.

5 Conclusion

This paper is an attempt to understand the effects of coalition formation between Germany's two major parties on their subsequent performance in elections, using a systematic and data-driven approach. Relying on the assumption that the party landscape and electoral system of Germany is relatively stable over time and across different states, I find that the junior (senior) GroKo partner loses (gains) in elections following GroKo governments. This effect comes out relatively consistently across different regression specifications and controlling for important confounders. It broadly confirms a common narrative present in the public debate. In terms of magnitudes, the gains and losses are typically in the area of 2 to 3 percentage points. It is interesting that the results for the SPD feature stronger statistical significance than for the CDU.

The results could potentially help informing the debate around coalition formations for the CDU/CSU and SPD, where the recent debate around the Grand Coalition under Angela Merkel is a key example. It is a promising avenue for future research to generalize the analysis in this paper to include other coalition types, such as CDU-FDP or SPD-Green coalitions. This extension, in combination with the more data, for example on voter surveys, could help address the limitation of the analysis with regards to the actual mechanism underlying the results. The GroKo setting was an obvious starting point for a first analysis, not only because it is currently in place, but also from a statistical point of view, as the variation in who is the junior/senior partner in this coalition is relatively balanced.