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Postprint / Postprint
Zeitschriftenartikel / journal article

This is an accepted manuscript of an article published by Berghahn Journals in German Politics and Society, Vol. 34, Issue 1, 2016, pp. 54-76 available online at:
https://doi.org/10.3167/gps.2016.340103

Voluntary Withdrawals, Forced Resignations, Collective Retirements or Just Bad Fortune? A Competing Risks Analysis of Ministerial Turnover in the German Länder (1990-2010)

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Abstract

This paper explores the determinants of ministerial duration within the German Länder between 1990 and 2010. In arguing that different terminal events ceasing ministerial tenures should be analyzed separately, it distinguishes four exit types: voluntary, forced, collective (ministers leaving office because their whole party does so) and exits that are neither volitional acts of the minister nor politically induced. Depending on the exit type, competing-risks Cox-models show different effects for one and the same variable on the hazard for ministerial turnover. Seniority in high-level politics for example helps not to be forced out of office while it has no effect on voluntary or collective exits. Heading an important ministry on the other hand increases the chances to rise to other positions in high politics or private business, but does not impact the other two hazards. The analysis furthermore shows that the principal-agent-logic known from Westminster systems with the prime minister being largely sovereign in hiring and firing cabinet members must be adapted to the German context of frequent coalition governments. In coalition governments, only ministers from the same party as the prime minister exhibit higher hazards for forced exits, while ministers from other coalition partners are much safer in that regard.

Keywords

German Länder; ministers; tenure; Cox model; competing risks

Introduction: Different Types of Terminal Events for Ministerial Turnover

The tenure of ministers may end because of very different terminal events. Some ministers may step down voluntarily because they find other career options more intriguing; others will have to leave office because their party was voted out of government; and, others still may be forced by the prime minister to leave their ministry because their enmeshment in a scandal would otherwise seriously affect the government's popularity. These three examples show that ministers face different risks any of which could eventually lead to losing their cabinet post. Yet, until now, most scholars of ministerial careers have not distinguished between these diverse hazards, but have rather treated all terminal events in the same way.

In this article, I follow a different path, distinguishing between twelve specific terminal events and showing how often they account empirically for a minister's demise in cabinets of the German Länder. These twelve exit types are enumerated and then aggregated to form four broader groups of terminal events: 1) voluntary exits; 2) forced exits; 3) collective exits; and, 4) exits that are neither volitional acts of the ministers nor politically induced but can be seen as terminations due to bad fortune. While the fourth category of technical exits is not of much interest from a political science perspective, the three others categories definitely are.[1] I assume that there are distinctive factors at work for each of the groups influencing the hazards of ministerial exit. Using a competing risks approach, these first three exit types are regarded as mutually exclusive, yet for every minister at least potentially possible terminal events. In the main analysis, I model the different determinants of ministerial turnover according to the type of terminal event.

I proceed as follows. The next section reviews existing works on executive elites with a particular focus on ministerial tenure and puts them in the context of this study. Section three explains the distinct hypotheses for the three types of terminal events. I then lay down the original dataset used in the statistical models and describe very briefly the specifics of the

applied competing events hazard model. The results of these Cox models are presented in section six. The paper concludes with a short overview of the results and offers some thoughts on potential ways to proceed with the topic of ministerial tenure.

This Study in the Context of Existing Works

The majority of scholarship on executive elites can be broadly divided into two groups:

1. Works that look at the paths into office and thus the probabilities of politicians to gain a ministerial seat. In systems with coalition governments, this often means investigating the question of how to divide the spoils of offices among the coalition partners.[2]

2. Studies examining the reasons why ministers have to leave office and how long they stay in the cabinet.

This article fits into the second set of studies. In general, there is probably a multitude of factors at work whenever a minister's time in government comes to an end. I assume these factors to be largely contingent on the minister him- or herself (e.g., ill health, or length of party membership) or on the political sphere in which he or she operates (e.g., parliamentary strength of the government party/parties). Both these individual and aggregate factors will be tested in the following analysis. This approach stands at least partly in contrast to present studies that maintain a strong focus on the prime minister's capacities to hire and fire. Yet, with their record of coalition governments, the minister-president's autonomy to reshuffle cabinets or to demote individual ministers is much weaker in the German Länder than it is, for example, in Great Britain or Australia—two countries often discussed in the ministerial turnover literature.[3] Thus, the context of coalition governments is one of the aspects that must be taken into account when analyzing ministerial turnover in the German Länder. At the same time, the principal-agent relationship between the prime minister and his or her ministers, which is decisive for Westminster systems, should play a smaller role in the German context. Thus, its focus on individual ministers also separates this study from other works that

approach ministerial turnover from a prime minister's perspective and ask under which conditions and for what reasons heads of government reshuffle their cabinets, demote or promote ministers, and induce individual ministers' resignations.[4]

More generally, this study also adds to the existing literature on political elites in Germany. Apart from sociological works following the seminal book by Dietrich Herzog, who gave questionnaires to a more or less representative sample of top politicians concerning their paths to power,[5] the majority of studies on selection and de-selection processes for German political elites has focused predominantly on parliamentarians[6] and federal ministers[7] or career patterns connecting both.[8] The subnational level is often only analyzed as a recruiting pool for positions at the federal level.[9] Notable exceptions include a book by Lars Vogel[10] describing the recruitment of federal as well as Länder ministers and a study by Jens Borchert and Klaus Stolz. They argue that the Länder level—at least for members of the state legislatures—is a desirable goal in its own right in terms of job security, a professionalized working environment, and even status. Movement "up the ladder" towards a higher level (federal, EU), on the other hand, is often supported weakly by the own party. Also, many state legislators consider it risky and not worthwhile in the light of a cost-benefit-analysis.[11]

Focusing again on the concrete topic of this article—ministerial turnover and the respective duration in office—there is undoubtedly a much more comprehensive literature on ministerial selection, its institutional background, theoretical arguments, and the empirical mechanisms having an impact on it.[12] Although there are at least some studies looking into ministerial tenure at the national level[13]—also in non Western democracies[14]—the subnational level has just recently started to attract more scholarly attention in this regard.

The existing studies nevertheless show that shifting the focus from the national to subnational levels should not only be regarded as a means to increase the number of cases and thus to find more robust results when it comes to the general patterns of ministerial turnover. They also show that analyses of political elites on the subnational level are an important

building block for the understanding of more complex multilevel career patterns.[15] For the Länder level in Germany, scholars have shown that characteristics of the political and institutional setting determine an individual minister's hazard for leaving the cabinet to a great deal while biographical characteristics in general only play a minor role for a minister's duration in office or their portfolio duration.[16] These results, however, must be interpreted with caution as they are based on pooled survival models and do not distinguish between the different types of competing terminal events. Because of this fact, the effects of certain variables may well be underestimated.

The separate analysis of different types of terminal events using a competing risks approach, as it is well known from the literature on government survival,[17] has until now only been applied once to the question of ministerial tenure. Matthew Kerby distinguishes between voluntary and involuntary exits for his sample of Canadian provincial ministers.[18] Since this procedure has proven its worth in the Canadian context I follow it here, adding one further type of terminal event that is particularly relevant in coalition governments: collective exits. The methods section below explains in more detail the concrete statistical realization of the competing risks approach within the Cox model, which basically censors inapplicable terminal events.

Hypotheses

In this section, I first distinguish between twelve specific instances of terminal events that can end a ministerial tenure—and do—as they can be found empirically in the German Länder governments—and categorize them according to four broad types of terminal events. For the first three types, which are of conceptual interest for scholars of ministerial turnover, I present specific hypotheses concerning the factors that could explain their occurrence. The last part of

this section gives an overview of the control variables that will be used in the subsequent statistical analysis.

Twelve Ways to Drop Out of a Cabinet

I presume ministers leave their position in cabinet either voluntarily, because they were forced out of office, because their whole party left the government and the minister had to leave as well—cling together, swing together—or, finally, because of bad fortune. Table 1 lists the specific terminal events that can be grouped into these four broad types. The categories for the classification of the terminal events are used in a mutually exclusive manner, although in the reality of research it goes without saying that such a classification scheme is never unambiguous. For example, it is extremely difficult to determine whether ministers leave office because of ill health and are thus forced to drop out of their cabinet position by bad fortune—as the following classification scheme supposes—or if they only put their health forward as a pretext while in reality political pressure forced them out of office. Additionally, we often face an accumulation of different reasons resulting in the exit of a minister.[19] In each case I used a number of different sources (newspaper articles, CVs) to determine the most likely/most relevant reason for the ministerial termination.[20]

Table 1: Types of Terminal Events

Voluntary exits	**Forced exits**	**Collective exits**	**Bad fortune and technical exits**
• Change into private business • Change into other state / political position	• Scandal • Partial ministerial reshuffle after elections • Conflicts within the own party • Other terminal event (politically induced)	• Voting out of government • Lost vote of no confidence against prime minister • Conflicts between the coalition parties	• Ill health / old age • Death • End of observation period

I assume that in general all ministers try to maximize their time in office and do not leave the cabinet without having either a good reason or a real necessity for doing so. This basic idea is echoed in my definition of voluntary exits, including only those ministers who leave for a lucrative job in the private sector, or a higher-ranking political position. Such a position may be in another Länder cabinet or—in accordance with the classic springboard argument—at the federal level.[21] Other exits that are sometimes termed "voluntary" by the media do not actually fall in the category of voluntary exits. Good examples are retirements. I assume that no minister retires voluntarily but that these exits are actually either politically induced or due to health reasons (see below).

The second category consists of forced exits (column 2 in Table 1). I regard forced exits as terminal events that are politically induced, which means that the force that pushes a minister out of office has to originate in the political sphere. Three main forms can be distinguished. First, scandals are all types of exits in whose case the media, the political opponent, the own coalition members and/or the public put so much pressure on the minister that he or she has to leave the cabinet. Second, especially after elections, minister presidents have the chance to shuffle around the cabinet members according to their will. These periods are windows of opportunity to get rid of unpopular or inept ministers. Inner party as well as coalition pressures, however, may restrict the prime minister's capacity to hire and fire. Third, ministers can get into serious political trouble if they lose the confidence of their party, e.g., if they position themselves in opposition to the majority view in their party. The fourth form of exits in this category are those terminal events for which it is not possible to determine the exact reason, but for which a political (noncollective exit) reason is highly likely.

The third category consists of collective exits (column 3 in Table 1). Ministers that leave the cabinet due to a collective exit leave government because their party is voted out of office, they exit together with a prime minister after a lost vote of no confidence or they leave their

office because their whole parliamentary group withdraws from government after conflicts with the other coalition member(s).

The fourth category of terminal events includes exit types that are neither politically induced (as forced or collective exits) nor volitional acts of the ministers themselves (column 4 in Table 1). On the one hand, these are instances in which the observation period comes to an end before the minister has left the cabinet. I call this type technical exit. On the other hand, there are those cases in which bad fortune terminates a minister's career. It is just as Machiavelli observed: as the torrential river that *fortuna* turns into from time to time, she sweeps away everything without the affected individuals being able to resist. Exits due to ill health, old age, or death are examples for this kind of terminal event. Bad fortune and technical exits are always censored in the statistical analysis (see section 5). For the other three types, the following section presents hypotheses about factors influencing their occurrence.

Voluntary Exits

In which cases do ministers voluntarily step down? The first hypothesis is connected to seniority in high-level politics:

> H1: Ministers with much seniority in high-level politics should be more likely to leave the cabinet voluntarily.[22]

Other things being equal, ministers who have been in high-level politics for a long period of time can be regarded as having more experience and/or a better network within the political sphere than their younger colleagues. While the first point may be more of an argument for a change into a higher position within politics, the second point is probably relevant for private businesses wishing to exploit the contacts of former ministers.

The second hypothesis regarding voluntary exits is connected to the salience of a ministry:

H2: Ministers heading important portfolios should have a greater hazard to step down voluntarily.

In important portfolios, ministers should have better options to present themselves and thereby to advance their own careers. Hence, these politicians should get more interesting job offers from businesses outside the political sphere, as well as for other state or political positions. Although the importance of a ministry is also a function of the parties' ideology—Greens will most likely assign more weight to the environmental portfolio, whereas Social Democrats might deem the ministries of labor and social welfare more important—we can, with respect to the specific Länder competencies, nevertheless identify a certain core of ministries that are of specific significance for all governments. These are the ministries of finance, education and cultural affairs, economic affairs, and the interior. For ministers heading these portfolios, we therefore expect higher hazards for voluntary exits.[23]

The third and final hypothesis on voluntary exits focuses on the parliamentary safety net:[24]

H3: Ministers who simultaneously with their cabinet positions are also members of the Länder parliament should have a lower hazard to leave the cabinet voluntarily.

Membership in the parliament may be seen as a fallback option for ministers. Politicians who are aware of this option may be less ambitious in pursuing other career paths towards higher political positions or positions outside politics.

Forced Exits

With regard to the forced exits, the principal-agent logic becomes relevant. In theory, the minister-presidents in the German Länder are able to decide about the composition of their cabinet on their own. Yet, in reality, coalition agreements often hinder prime ministers from implementing their preferred staffing choices. Therefore, the type of government is crucial for the minister-president's latitude to hire and especially to fire ministers. Distinguishing

between single-party majority and coalition governments is a first step in order to check this assumption. Regarding the latter kind of government, however, it makes sense to further discriminate between ministers from the same party as the minister-president, on the one hand, and those from the other coalition parties, on the other.

> H4: Ministers serving in single-party majority governments (SPG) or in coalition governments with the minister president from the same party as the minister should have a higher hazard to be forced out of cabinet than their colleagues in coalition governments who are not a member in the minister president's party.

Additionally, seniority as a proxy for political experience should help ministers to survive from forced exits in cabinet:

> H5: Ministers with much seniority should be less likely to be forced out of office.

Collective Exits

The category of collective exits contains first and foremost those ministers whose party was voted out of office. There are only a few instances in which a whole party left the cabinet during an interelection period instead of after elections. The first hypothesis is therefore also connected to the type of government. Parties forming SPGs should have higher chances of being successful at future elections and this should reduce the hazard for collective exits. It is unlikely that a party that holds the majority and rules alone drops out of government all at once. Taken these arguments together we can formulate the following hypothesis:

> H6: In SPGs, the hazard for collective exits should be lower than in non SPGs.

A similar argument can be made for coalition governments: the party supplying the minister president in a coalition should in general have better chances to also be part of the next government than the smaller coalition partner(s). Besides that, it would not make much sense for a party leading a coalition to exit its own government.

> H7: In a coalition government, we expect a lower hazard for collective exits for ministers who are members of the minister president's party.

A study on ministerial tenure in Great Britain, shows that majority size does not influence ministerial turnover. This is plausible for Westminster systems where SPGs are the rule.[25] In coalition governments, the usual occurrence in the German Länder, it seems nevertheless reasonable to expect majority size to have an effect—at least on collective exits. Yet, both directions of influence are imaginable: on the one hand, parties within coalitions relying on large majorities may not consider themselves as dependent on their respective coalition partners. This could reduce cabinet duration. On the other hand, being part of a coalition relying on a strong majority makes it less likely that one of the coalition partners will be voted out of government at the next elections. I assume the latter effect to be stronger:

> H8: Ministers from governments relying on a large majority are expected to show lower hazards for collective exits.

Controls

Earlier studies on ministerial turnover have shown that there are a number of other variables that should be controlled for.[26] When taking these control variables into consideration together with the above mentioned explanatory factors, all independent variables can be divided into two groups. First are individual factors describing biographical characteristics of the respective minister; and, second are factors on the aggregate level, i.e. attributes of the institutional and political setting that determine the political arena in which the ministers act. Table 2 lists all independent variables.

Table 2: Independent Variables

	Individual level	**Aggregate level**
Hypotheses	• Seniority (H1, H5) • Important ministry (H2) • Parliamentary safety net (H3)	• Type of government—SPG & coalition government with minister from the party as prime minister (H4, H6, H7) • Majority—percentage of parliamentary seats of the governing parties (H8)
Controls	• Gender • Regional rootedness—birthplace in the same Bundesland as the ministerial job • Expert minister • Education (tertiary education, PhD, *Habilitation*) • Length of party membership • Number of different cabinet positions (portfolios) during the ministerial spell • Number of spells the minister has served before the observed spell • Prime minister	• Minority cabinet • Length of constitutional inter-election period (CIEP) • Possibility to launch a vote of no confidence against individual ministers

Data

The original dataset compiled for this analysis consists of 768 ministerial spells in total. Table 3 gives an overview and classifies them by Bundesland and type of terminal event. All ministers who held a position within one of the sixteen German Länder cabinets between 1 January 1991 and 31 December 2010 were included with their complete duration in government. As a result, none of the data are left-censored; instead, all ministers' durations were coded from the very first day in office onwards, even if this date was before 1 January 1991. For example, former Bavarian Minister-President Max Streibl started his cabinet career in 1970 as Minister of Agriculture and Ecology. In 1977, he transferred to the Office of the Minister of Finance and in 1988 he took the office of the prime minister after the early death of Franz Josef Strauß. The ministerial spell recorded for Max Streibl therefore lasts from 1970 to 1992, when Edmund Stoiber succeeded him as Bavarian minister-president. Minister-

presidents are included in the dataset although they are obviously in a lot of respects more than just a *primus inter pares* within government.[27] To account for their prominent position, I control for minister-president status. Ministerial spells interrupted by a period of time in which the minister was not part of the government are counted as separate durations. Nevertheless, the analysis controls for the amount of experience a minister has gained during earlier positions within government.

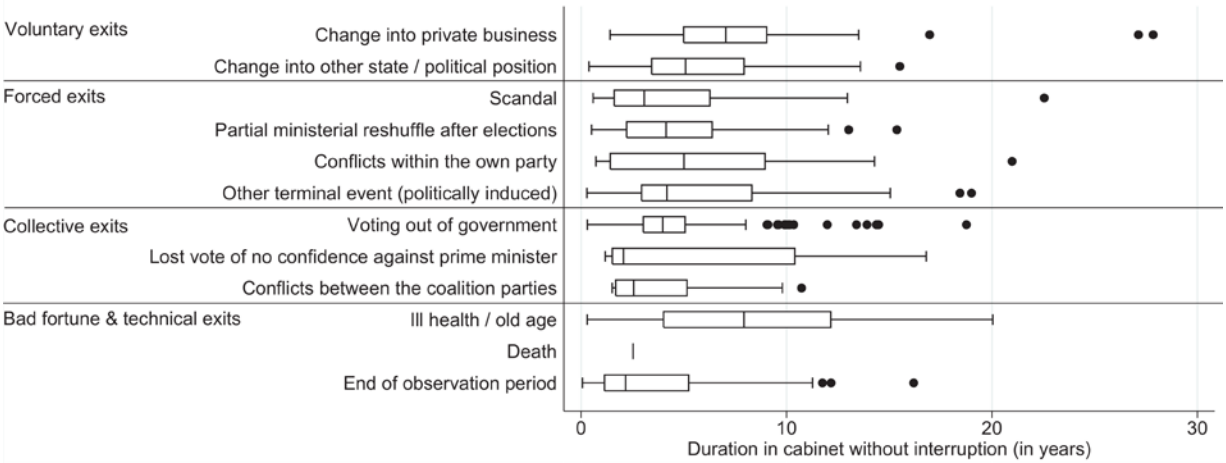
The boxplots in Figure 1 present the durations in cabinet according to the different terminal events. Looking at the median durations we find that especially those ministers who drop out of cabinet voluntarily are the ones with the longest overall cabinet durations, while ministers that were forced out of office or had to leave office due to a collective exit show considerably shorter tenures.

Table 3: Terminal events by Bundesland

	Terminal event	BE	BR	BW	BY	HB	HE	HH	MV	NI	NRW	RP	SH	SL	SN	ST	TH	Sum
Voluntary Exits	Change into private business	7	9	5	1	3	4	3	2	7	6	5	3	5	5	3	5	73
	Change into other state / political position	8	2	7	4	5	5	5		1	3	2	8			1	3	54
Forced Exits	Scandal	3	7	5	7	3	6	8	2	3	5	1	2	1	6	8	4	71
	Partial ministerial reshuffle after elections	8	1	7	1	8	1	9	5		5	2	3	7	2	2	4	65
	Conflicts within the own party	1	1	2	6	1		1	5				4	2	1	1	1	26
	Other terminal event (politically induced)	9	8	4	9	4	8	6	3	8	2	3	6	4	19	6	13	112
Collective Exits	Voting out of government	4	6	4		6	20	20	10	24	23	10	2	8	2	22	8	169
	Lost vote of no confidence against pm	5											1					6
	Conflicts between the coalition parties	3				1		3					4					11
Bad fortune & technical exits	Ill health / old age		2	2	1	3	1		4	3	3	3	3	1		2	1	29
	Death					1												1
	End of observation period	9	9	12	12	7	11	6	9	9	12	8	8	9	10	10	10	151
	Sum	57	45	48	41	42	56	61	40	55	59	34	44	37	45	55	49	768

BE=Berlin; BR-Brandenburg; BW=Baden-Württemberg; BY=Bavaria; HB=Bremen; HE=Hesse; HH=Hamburg; MV=Mecklenburg-West Pomerania; NI=Lower Saxony; NRW=North Rhine-Westphalia; RP=Rhineland Palatinate; SH=Schleswig-Holstein; SL=Saarland; SN=Saxony; ST=Saxony-Anhalt; TH-Thuringia

Figure 1: Overall Duration in Cabinet by Type of Exit



Competing Risks Cox Model

I use the semiparametric Cox model as it allows estimating coefficients and hazard ratios without the necessity to assume a certain baseline function as fully parametrized models do.[28] Regardless of whether we assume that there is a real and direct dependency between elapsed time and the baseline hazard or whether we expect the time dependency to be just an artifact of unobserved heterogeneity in the data—which by definition always comes along with a negative time dependency[29]—for estimating a completely parametrized model, the functional form of the baseline hazard has to be specified correctly. After all, a theoretically grounded derivation of the baseline hazard is impossible if time dependency is due to unobserved heterogeneity and it is still extremely difficult in cases of real time dependency. Nevertheless, resorting to the observation of empirical survival or hazard functions cannot be seen as a real solution either as it only approximates the baseline hazard function while the effects of all explanatory variables are still included in this pooled hazard function—whether this function comes close to the baseline hazard depends on the question to what extent the covariates correlate with time at risk.[30]

The Cox model is a convenient way to circumvent the problems of fully parametric approaches. It assumes that there is a certain time dependency, but we do not have to specify any particular functional form of this baseline hazard. Therefore, we need fewer basic assumptions when estimating the model—assumptions that could always be wrong and result in biased estimates. The hazard rate gives the instantaneous risk that a minister drops out of office at time *t*—given he or she has not dropped out before. In a Cox model, there is no explicit constant β_0 that would describe the baseline hazard in a parametrized model. But, even without knowing the concrete form of the baseline hazard we can estimate the β-coefficients as long as we assume the hazard ratios to be proportional. We therefore test whether every covariate has a "proportional and constant effect that is invariant to when in the process the value of the covariate changes."[31] David Cox developed the so called partial likelihood (PL) method, which is not based on the exact survival times, but rather on their rank order. In a similar way as in MLE (maximum likelihood estimation) the logarithm of the PL is maximized for obtaining the β-coefficients.

A dummy variable distinguishes between events of interest and censored durations. In general, we censor cases if we cannot observe their full event history, either because the starting point is before the beginning of the observation period (left censoring) or because our subject is still in the risk set, i.e., he or she has not experienced the event of interest until the end of the observation period (right censoring). For all censored cases we assume that they would have lasted longer if their event history were not artificially shortened. For this reason, we also right censor cases in which the terminal event was clearly no event of interest. In addition to the end of the observation period, exits due to ill health, old age, or death are also treated as right censored, because we expect that ministers experiencing these types of terminal events would have stayed in office longer if they had not been swept away by the raging river of bad fortune. In event history, censoring does not mean to drop a case completely from the dataset, but to use the available information from uncensored cases that

have finished an unmitigated event history to estimate how long a censored case would have lasted if it had not been terminated early. As we do not have a fixed starting point of our observation period but observe all ministers that had been in office from 1 January 1991 onwards with their real starting point of their ministerial duration, we do not have any left censored cases.

Censoring is also the key concept for the estimation of competing risks models. For every one of the three types of terminal events, I estimate a separate proportional hazard model with all cases terminating due to a terminal event other than the specific one of interest being censored. For example, the hazard rate of the forced exits is estimated treating collective exits as well as voluntary exits in the exact same way as cases terminating as technical or bad fortune exits—they are all censored. Three basic requirements have to be met for the estimation:[32]

(1) The competing events must be mutually exclusive, i.e., every case can only experience one of the three types of terminal events.

(2) Every subject in the population must have a non zero probability to terminate because of each of the three types of events.

(3) The occurrence of one of the competing events must not affect the hazard rate of experiencing another event.

All three preconditions are fulfilled in our study as every minister could, at least theoretically, drop out of cabinet because of each of the three types of terminal events. Additionally, each of the events is definitely terminal which means that no minister can experience more than one of these events at a time.[33]

Table 4: Cox-models

VARIABLES	(1) Voluntary (full)	(2) Voluntary (stepwise)	(3) Forced (full)	(4) Forced (stepwise)	(5) Collective (full)	(6) Collective (stepwise)
SPG	1.114		2.356***	2.504***	0.471*	0.494*
	(0.354)		(0.497)	(0.520)	(0.183)	(0.187)
SPG * time					0.999***	0.999***
					(0.000183)	(0.000175)
Coalition & same party as PM	1.987**	1.720***	1.881***	1.918***	0.496***	0.479***
	(0.567)	(0.312)	(0.370)	(0.369)	(0.0929)	(0.0853)
Minority cabinet	1.214		0.873		1.107	
	(0.625)		(0.281)		(0.362)	
Parliamentary strength of gov. parties (in %)	1.002		1.010	1.012	0.972***	0.970***
	(0.0115)		(0.00815)	(0.00753)	(0.00969)	(0.00874)
Parliamentary safety net	0.879		1.010		1.150	
	(0.178)		(0.144)		(0.195)	
Seniority (in years)	0.999		0.987	0.984*	0.990	
	(0.0155)		(0.0107)	(0.00875)	(0.0129)	
Important ministry	1.365	1.503**	0.838		1.312	1.282
	(0.285)	(0.277)	(0.111)		(0.221)	(0.204)
CIEP (in years)	0.986		0.682**	0.678***	0.483***	0.450***
	(0.253)		(0.104)	(0.0973)	(0.0852)	(0.0742)
Individual vote of no confidence possible (0/1)	1.165		0.944		0.815	
	(0.238)		(0.138)		(0.158)	
Gender (0 = female, 1 = male)	1.106		1.127		1.012	
	(0.250)		(0.171)		(0.182)	
Tertiary education	1.547		1.007		1.344	
	(0.564)		(0.216)		(0.398)	
PhD	0.954		1.128		0.904	
	(0.205)		(0.161)		(0.166)	
Habilitation	0.759		0.758		0.601	0.582*
	(0.283)		(0.194)		(0.202)	(0.176)
Regional rootedness	0.758	0.716*	0.864		1.147	
	(0.148)	(0.131)	(0.115)		(0.181)	
Party membership (in years)	0.995		1.000		0.995	
	(0.00946)		(0.00624)		(0.00790)	
Expert ministers	1.161		1.133		0.821	
	(0.373)		(0.240)		(0.268)	
Number of cabinet spells before	0.667		0.957		0.615	0.552
	(0.326)		(0.300)		(0.289)	(0.253)
Number of portfolios during spell	0.107***	0.0995***	0.117***	0.117***	0.146***	0.190***
	(0.0386)	(0.0348)	(0.0252)	(0.0249)	(0.0406)	(0.0283)
Number of portfolios * time	1.000**	1.000***	1.000***	1.000***	1.000	
	(0.000112)	(0.000107)	(6.92e-05)	(6.80e-05)	(0.000107)	
Prime minister	0.823		0.532**	0.595*	1.810*	1.915**
	(0.326)		(0.165)	(0.177)	(0.561)	(0.563)
N_total / N_fail	768 / 127	768 / 127	768 / 274	768 / 274	768 / 186	768 /186
Log Likelihood / χ^2	-580.2 / 171.3	-583.1 / 165.5	-1324 / 352.1	-1326 / 346.5	-804.9 / 373.0	-808.1/ 363.3

Hazard ratios with standard errors in parentheses. *** p < 0.01, ** p < 0.05, * p < 0.1. Stepwise backward selection models: removing p >= 0.20. Prime ministers included. Interactions with survival time included when the Grambsch-Therneau test indicates significant non-proportionality.

Findings from the Statistical Analysis

The results of the Cox models are presented in form of hazard ratios in Table 4. A hazard ratio of one indicates no influence of the independent variable on the hazard. Values greater than

one show an increase in the hazard, those lower than one indicate a decrease. For example, a hazard ratio of 1.5 means that an increase of the independent variable of one point raises the hazard for turnover under *ceteris paribus* conditions by 50 percent. For each competing events category there are two models. The first one is a full model with all variables included simultaneously; the second one applies a stepwise backward selection mechanism to obtain a more parsimonious model. All in all, the results are stable when comparing the full and the stepwise-reduced models.

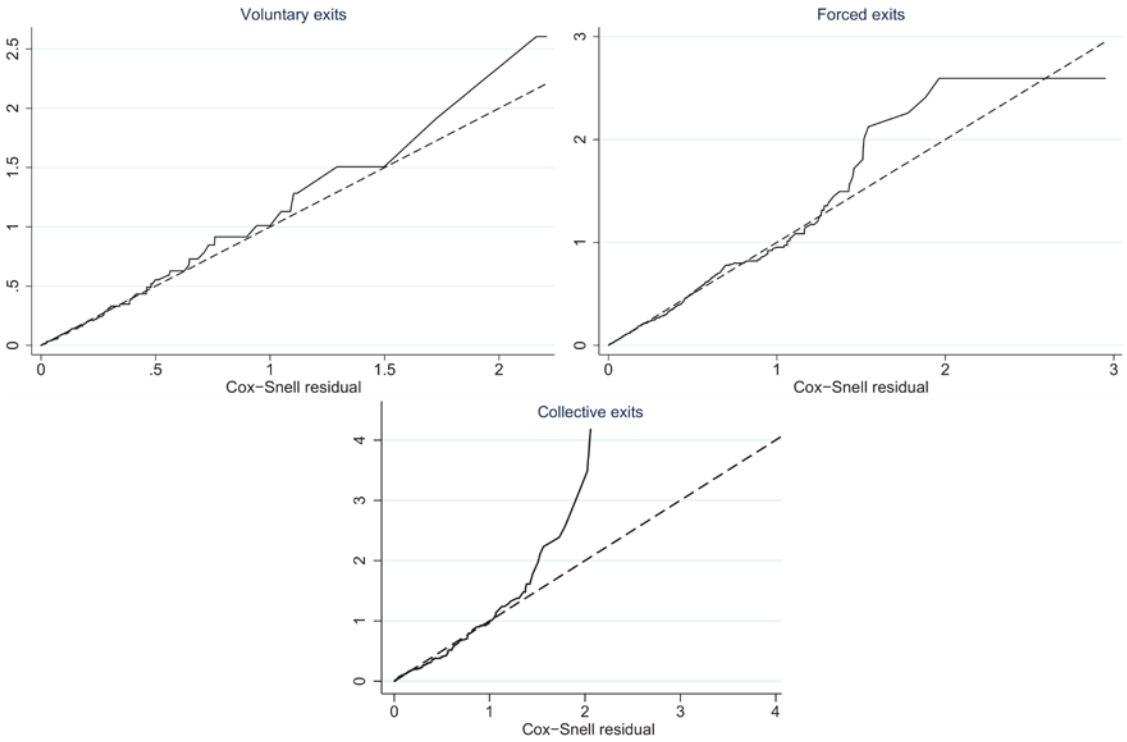
With respect to the main argument—that one and the same variable can have very different effects on cabinet duration according to the type of terminal event—I find all but two of my hypotheses supported. Ministers heading important portfolios are more likely to drop out of cabinet voluntarily (H2). If the minister is a member of a coalition government and at the same time a fellow member of the minister-president's party, this increases his or her hazard to be forced out of office significantly, but not as strong as in cases where the minister is part of a SPG (H4). As expected, for the collective exits this pattern is reversed: ministers serving in SPG and in coalitions with the minister belonging to the minister-president's party show significantly lower hazard ratios (H6 and H7). Hypothesis H8 is also affirmed: the models show that parliamentary strength of the government parties is only relevant for collective exits. Ministers working in governments that can rely on a large majority in parliament have lower hazards for exiting the cabinet collectively with their party colleagues. There is, however, no impact on the hazards for voluntary or forced exits. Seniority in high-level politics, i.e., being at least a member of a Länder parliament, is another factor that impacts ministerial duration. Yet, a greater seniority only reduces the hazard of being forced out of government as expected in H5, but there is no influence on voluntary exits as it was expected in H1. The other hypothesis with little support is H3: having a parliamentary safety net has no impact on the occurrence of voluntary exits—in fact, it does not significantly influence ministerial duration in any of the models.

In addition to the tested hypotheses, some of the control variables show significant effects. For example, the number of different portfolios a minister has already held during his/her cabinet spell is negatively related to the hazard for all three types of terminal events. As expected, the dummy for minister-president shows a considerable effect as well. On the one hand, prime ministers are less prone to forced exits—which makes perfect sense from a principal-agent perspective. On the other hand, minister-president status increases the hazard for collectively exiting the cabinet. This is plausible, too, as in most cases minister-presidents are in such an unchallenged position that they only have to be afraid of being voted out of office. Another significant control is the length of the constitutional interelection period (CIEP).[34] A longer CIEP decreases the hazard for collective and forced exits. For collective exits, this comes as no surprise as this type of terminal event consists mostly of ministers who had to leave office because their party was voted out of government. A higher frequency of elections in Länder with shorter CIEPs, therefore, automatically increases the hazard for collective exits. Yet, a long CIEP also seems to stabilize governments with regard to forced exits. This is the case because minister-presidents reshuffle their cabinet more often in the direct follow up to a re-election than in the middle of a legislative period. Most of the other control variables do not affect the hazard rate in any way. This result was not completely unexpected, as a number of studies have shown that especially biographical characteristics of the ministers do not very much influence the probability to drop out of office. Taken as a whole we could say, that for those politicians who make it into the cabinet—and for this journey they clearly need specific biographic characteristics—these individual factors do not play a big role in determining their tenure in office any longer. At this stage, it is rather the aggregate parameters describing the political and institutional landscape that discernibly influence the individual hazards.

In order to assess the model fit of the Cox regressions, I inspect the extent to which the survival times estimated from the Cox model correlate with the real ones. For this purpose, I

plot Cox-Snell residuals against the empirical cumulative hazard rate derived from a Kaplan-Meier estimation.[35] For a well fitting model, the Cox-Snell plot should only deviate slightly from a straight line with slope one—departures from this pattern in the right part of the plot can be tolerated seeing that they can be attributed to the effective sample size, which becomes smaller and smaller over time, leading to a more variable baseline hazard.[36] Figure 2 shows the model fit for all three backward selection models. All three models show a good fit—especially in the most relevant lower left side of the plots. The Cox models thus accurately accommodate the empirical data.

Figure 2: Model Fit of Cox-Snell Residuals versus Cumulative Kaplan-Meier Hazard



Conclusion: Different Paths Leading to a Long Time in Office

In this article, I have shown that when it comes to ministerial turnover it does not only make sense to distinguish analytically between different types of terminal events from a theoretical

point of view, but that such a distinction is a necessary precondition to analyze the factors influencing ministerial turnover and the durations in cabinet in a meaningful way. Differentiating among voluntary, forced, and collective exits (a minister has to leave the government because his or her whole party dropped out of government), as well as those exits that are neither volitional acts of the minister nor politically induced (e.g., end of observation period or death of the minister), I demonstrate that one and the same variable can have very different effects on the hazard depending on the type of terminal event. For example, ministers with much seniority are less likely to be forced out of office, while their time within the high political sphere does not impact on the hazards for voluntary or collective exits. Furthermore, ministers in SPGs and in those coalition governments in which the respective minister is a member of the minister-president's party are much more likely to be forced out of cabinet. Here, the principal-agent logic becomes apparent. In these cases, minister presidents probably do not have many restrictions to push an improper or unpopular cabinet member out of office, whereas it is much tougher to get rid of a coalition partner's minister. For collective exits, it is exactly the other way round: ministers who are from the same party as the prime minister—which is of course the rule in SPGs—exhibit a smaller hazard for collective exits than ministers who are not members of the minister-president's party.

Generally speaking, empirical evidence gives support to the idea that variables can show very different effects depending on the type of terminal event. Factors that "help" a minister not having to leave the government due to a collective exit can, on the other hand, increase the hazard of being forced out of office. From a methodological point of view, this article has shown that in order to gain a better understanding of the complex processes that govern turnover mechanism within cabinets, competing events approaches must become an inevitable component of our studies. In contrast, pooled models, which do not distinguish between the different types of competing terminal events, will never be able to identify the relevant independent variables and their effects, especially if these effects cancel each other out, such

as in the case of an SPG. As seen before, ministers in SPGs exhibit a much higher hazard to be forced out of office while, at the same time, collective exits are much more uncommon within this group of cabinet members. A pooled model would hardly find any effect for SPGs.

Regarding biographical factors such as gender, education, or regional background, the Cox models confirm earlier studies that have also not found much effect for this group of variables. We can therefore conclude that for those politicians who make it into the cabinet, individual factors do not play a big role in determining their tenure in office. At the Länder cabinet stage of their careers, it rather seems that the factors describing the political and institutional landscape have a much stronger influence on the individual hazards. Yet, if asked what a minister should do in order to remain in cabinet for a long period of time, the foregoing analysis can at least give some hints. First, to prevent being forced out of government, ministers should start to accumulate experience at high-level politics early in their political career, e.g., as a member of a Landtag or the Bundestag. Interestingly, it is only this seniority in high-level politics that helps an individual to remain in office—but not necessarily length of party membership. Second, ministers should strive for important portfolios, i.e., portfolios in which the Land level has substantive powers, such as finance or education. These "important" ministers are not only less likely to be forced out of office, but they also leave their cabinet position voluntarily more often in order to either start new lucrative and prestigious jobs in private business or to get promoted to even higher political positions, e.g., as a minister in the federal government.

This article should be seen as one step towards a more holistic understanding of the complex dynamics determining the careers of German Länder ministers. Building on its findings, there are several possible avenues for future research. At this point, I would like to briefly sketch out two of them. One obvious question would be to ask whether the results found in this study also hold in other parliamentary contexts, or whether the characteristics of the German case—particularly the federal structure providing distinct career options that are

not available in a more centralized state—largely make it a very special case. Another related follow-up question concerns a minister's career steps after leaving office. This question is particularly interesting with regard to the concept of multilevel careers, which is being discussed intensively in the political elites literature at the moment.[37] Again, as in the present article, it probably makes sense to distinguish between different types of exits when analyzing such post ministerial careers, asking questions like: where do ministers end up who were forced out of government due to scandals? Do they get a second chance? What are the next career steps of those who leave voluntarily or who had to leave because their party was voted out of government? And, is being a Länder minister just a staging post on the road to a more prestigious political position and, thus, a stepping-stone that helps to achieve ambitious political plans? Or is it more of a dead end for any career in German politics? For all these questions that focus on understanding complete careers of politicians, the present study already holds valuable insights because it explains why some ministers succeed in staying in cabinet for decades while others have to leave office after only a few months in the cabinet. Most certainly, further research in that regard is crucially needed. To this end, it is also necessary to overcome the political elite studies' tradition of focusing on single transitions only—such as the transition from being a minister to not being a minister any longer that was analyzed in this study. Instead, painting a holistic picture of complete careers, for example, by applying sequence analysis techniques, may be a beneficial way to go.

Note

[1] As the methods section shows, however, it is crucial to have this fourth category and to treat it in a distinct way within the statistical analysis.

[2] From the perspective of the entire coalition-building process the portfolio allocation model can be seen as one way to approach these questions. See Michael Laver and Kenneth A. Shepsle, *Making and Breaking Governments. Cabinets and Legislatures in Parliamentary Democracies* (Cambridge, 1996). Other works are more individual and thus career-oriented, trying to figure out the relevant factors that serve as a stepping-stone for a political career or they focus on the specifics of a certain political system. See Richard Rose, "The Making of Cabinet Ministers," *British Journal of Political Science* 1, no. 4 (1971): 393-414; Eoin O'Malley, "Ministerial Selection in Ireland: Limited Choice in a Political Village," *Irish Political Studies* 21, no. 3 (2006): 319-336; Alejandro Quiroz Flores and Alastair Smith, "Leader Survival and Cabinet Change," *Economics & Politics* 23, no. 3 (2011): 345-366.

[3] See Samuel Berlinski, Torun Dewan, and Keith Dowding, "The Impact of Individual and Collective Performance on Ministerial Tenure," *The Journal of Politics* 72, no. 2 (2010): 559-571; Patrick Weller, "Distangling Concepts of Ministerial Responsibility," *Australian Journal of Public Administration* 58, no. 1 (1999): 62-64; Diana Woodhouse, "Ministerial responsibility in the 1990s: when do ministers resign?," *Parliamentary Affairs* 46, no .3 (1993): 277-292.

[4] See Torun Dewan and Keith Dowding, "The Corrective Effect of Ministerial Resignations on Government Popularity," *American Journal of Political Science* 49, no. 1 (2005): 46-56; Indridi Indridason and Christopher Kam, "Cabinet Reshuffles and Ministerial Drift," *British Journal of Political Science* 38, no. 4 (2008): 621-656.

[5] Dietrich Herzog, *Politische Karrieren—Selektion und Professionalisierung politischer Führungsgruppen* (Opladen, 1975); Andreas K. Gruber, *Der Weg nach ganz oben—Karriereverläufe deutscher Spitzenpolitiker* (Wiesbaden, 2008).

[6] Heinrich Best, Stefan Jahr, and Lars Vogel, "Karrieremuster und Karrierekalküle deutscher Parlamentarier," in *Politik als Beruf (Politische Vierteljahresschrift Special Issue 44)*, ed. Michael Edinger and Werner J. Patzelt (Wiesbaden, 2011): 168-191; Moritz Küpper and

Georg Wenzelburger, "Seiteneinsteiger in den Bundestag. Eine Analyse von Cross-Over-Karrieren 1949-2009," *Zeitschrift für Parlamentsfragen* 44, no. 3 (2013): 526-545; Werner J. Patzelt, "German MPs and their roles," *Journal of Legislative Studies* 3, no. 1 (1997): 55-78.

[7] Anwar Syed Ali, *Karrierewege und Rekrutierungsmuster bei Regierungsmitgliedern auf Bundesebene 1949-2002*, Martin-Luther-Universität (Halle-Wittenberg, 2003); Jörn Fischer and André Kaiser, "Hiring and firing ministers under informal constraints: Germany," in *The selection of ministers in Europe. Hiring and firing*, ed. Keith Dowding and Patrick Dumont (London, 2009), 21-40; Jörn Fischer, André Kaiser, and Ingo Rohlfing, "The Push and Pull of Ministerial Resignations in Germany, 1969-2005," *West European Politics* 29, no. 4 (2006): 709-735.

[8] Jörn Fischer and André Kaiser, "Linkages between parliamantary and ministerial careers in Germany, 1949-2008. The Bundestag as recruitment pool," *German Politics* 18, no. 2 (2009): 140-154; Jörn Fischer and André Kaiser, "Der Bundestag: Sprungbrett oder Auffangbecken? Ministerkarrieren zwischen Parlament und Exekutive," *Zeitschrift für Parlamentsfragen* 41, no. 1 (2010): 36-41.

[9] Jörn Fischer and André Kaiser, "Wie gewonnen, so zerronnen? Selektions- und Deselektionsmechanismen in den Karrieren deutscher Bundesminister," in *Politik als Beruf (Politische Vierteljahresschrift Special Issue 44)*, ed. Michael Edinger and Werner J. Patzelt (Wiesbaden, 2011), 192-212.

[10] Lars Vogel, *Der Weg ins Kabinett—Karrieren von Ministern in Deutschland* (Frankfurt, 2009).

[11] See Jens Borchert and Klaus Stolz, "German Political Careers: The State Level as an Arena in its Own Right?," *Regional & Federal Studies* 21, no. 2 (2011), 219.

[12] To name but a few: R.K. Alderman, "The Prime Minister and the Appointment of Ministers: an Exercise in Political Bargaining," *Parliamentary Affairs* 29, no. 2 (1976): 101-134; Hanna Bäck, Patrick Dumont, Henk Erik Meier, Thomas Persson, and Kare Vernby,

"Does European Integration Lead to a `Presidentialization' of Executive Politics?: Ministerial Selection in Swedish Postwar Cabinets," *European Union Politics* 10, no. 2 (2009): 226-252; Torun Dewan and David P. Myatt, "The Declining Talent Pool of Government," *American Journal of Political Science* 52, no. 2 (2010): 267-286; Julia Fleischer and Markus Seyfried, "Drawing from the bargaining pool: Determinants of ministerial selection in Germany," *Party Politics* (2013); Matthew Kerby, "Worth the Wait: The Determinants of Ministerial Appointment in Canada, 1935-2008," *Canadian Journal of Political Science* 42, no. 3 (2009): 593-612.

[13] Samuel Berlinski, Torun Dewan, and Keith Dowding, "The Length of Ministerial Tenure in the United Kingdom, 1945-97," *British Journal of Political Science* 37, no. 2 (2007): 245-262; Keith Dowding and Patrick Dumont, ed., *The Selection of Ministers in Europe. Hiring and Firing* (London, 2009); Matthew Kerby, "Combining the Hazards of Ministerial Appointment and Ministerial Exit in the Canadian Federal Cabinet," *Canadian Journal of Political Science* 44, no. 3 (2011): 595-612.

[14] Katja Fettelschoss and Csaba Nikolenyi, "Learning to Rule: Ministerial Careers in Post-Communist Democracies" in *The Selection of Ministers in Europe: Hiring and Firing*, ed. Keith M. Dowding and Patrick Dumont (London, 2009), 204-227; Stefan Laurentiu, *Pathways to Cabinet: Selecting Ministers in Post-communist Romania* (Jena, 2009).

[15] Jérémy Dodeigne, "Assessing Career Patterns in Multi-Level Systems: Insights from Wallonia in Belgium," *Regional & Federal Studies* 24, no. 2 (2014): 151-171; Juan Rodriguez-Teruel, "Ministerial and Parliamentary Elites in Multilevel Spain 1977-2009," *Comparative Sociology* 10, no. 6 (2011): 887-907; Klaus Stolz, "Moving up, moving down: political careers across territoral levels," *European Journal of Political Resarch* 42, no. 2 (2003): 223-248.

[16] Sebastian Jäckle, "A New Measure of Political Stability—Portfolio Duration in the German Länder and its Determinants (1990-2010)," *Zeitschrift für Staats- und Europawissenschaften*

10, no. 3 (2012): 338-360; Sebastian Jäckle, "Ministerial turnover in the German Länder (1991-2010)," *Zeitschrift für Vergleichende Politikwissenschaft* 7, no. 1 (2013): 27-48.

[17] Daniel Diermeier and Randy Stevenson, "Cabinet Survival and Competing Risks," *American Journal of Political Science* 43, no. 4 (1999): 1051-1068; Sebastian Jäckle, *Determinanten der Regierungsbeständigkeit in parlamentarischen Systemen* (Berlin, 2011); Thomas Saalfeld, "Institutions, Chance, and Choices. The Dynamics of Cabinet Survival," in *Cabinets and Coalition Bargaining. The Democratic Life Cycle in Western Europe*, ed. Kaare Strøm, Wolfgang C. Müller, and Torbjörn Bergmann (Oxford, 2008), 327-268.

[18] Matthew Kerby, "Canadian Provincial Ministerial Turnover: 1945-1996," SEDEPE Workshop on Subnational Elites, Montreal, Canada, 17-19 October 2012.

[19] See Jörn Fischer, André Kaiser, and Ingo Rohlfing, "The Push and Pull of Ministerial Resignations in Germany, 1969-2005," *West European Politics* 29 (2006): 709-735; and Keith Dowding and Won-Taek Kang "Ministerial Resignations 1945-97," *Public Administration*, 76 (1998): 411-429.

[20] A list with the classifications for all cases can be obtained from the author.

[21] Stolz (see note 15).

[22] Seniority is measured as the timespan in years between entering high-level politics (becoming member of a Landtag, the Bundestag, the European Parliament, or a Land cabinet) and the start of the considered ministerial duration.

[23] This classification follows Franz U. Pappi, Ralf Schmitt, and Eric Linhart, "Die Ministeriumsverteilung in den deutschen Landesregierungen seit dem Zweiten Weltkrieg," *Zeitschrift für Parlamentsfragen* 39, no. 2 (2008): 323-342.

[24] At the federal level, Fischer and Kaiser (see note 8) have shown that being a member of the Bundestag is an important factor during the selection process for becoming a minister. It is only a small step to extend this thought to the idea that a parliamentary safety net may also influence ministerial duration, particularly for those cabinet members exiting voluntary.

[25] Berlinski et al. (see note 13).

[26] Berlinski et al. (see note 13); Dowding and Dumont (see note 13); Keith Dowding, Chris Lewis, and Adam Packer, "The Pattern of Forced Exits from the Ministry," in *Ministerial Careers and Accountability in the Australian Commonwealth Government*, ed. Keith Downing and Chris Lewis (Canberra, 2012); Jäckle (see note 16); Kerby (see note 13); Kerby (see note 18).

[27] For them, the principal-agent-logic is still relevant in spite of all coalition effects. On the one hand, being the principal, they at least have the constitutional power to dismiss their agents, the ministers, if there are conflicts between them, and on the other hand they cannot be dismissed so easily. The only possibility for a (forced) turnover of a prime minister (apart from voluntary resignations) is to lose a vote of no confidence or a motion of confidence. In addition, the change of a prime minister is always more severe than the turnover of any other minister as it is synonymous to a government termination.

[28] David R. Cox, "Regression Models and Life-Tables," *Journal of the Royal Statistical Society. Series B (Methodological)* 34, no. 2 (1972).

[29] Jeroen K. Vermunt, *Log-Linear Models for Event Histories* (Thousand Oaks, 1997), 189; Christopher J. W. Zorn, "Modeling Duration Dependence," *Political Analysis* 8, no. 4 (2000), 368.

[30] Jäckle (see note 17), 71-75.

[31] See Janet M. Box-Steffensmeier and Bradford S. Jones, *Event History Modeling* (Cambridge, 2004), 131-132. For a more detailed description of the proportional hazard assumption see Terry M. Therneau and Patricia Grambsch, *Modeling Survival Data. Extending the Cox Model* (New York, 2000), 127-145.

[32] See Regina Elandt-Johnson and Norman L. Johnson, *Survival Models and Data Analysis* (New York, 1980), 270 and Janet M. Box-Steffensmeier and Bradford S. Jones, "Time Is of the Essence. Event History Models in Political Science," *American Journal of Political*

Science 41, no. 4 (1997), 1437-1438. For a more elaborated statistical discussion of the competing risks approach, see John D. Kalbfleisch and Ross L. Prentice, *The Statistical Analysis of Failure in Time Data* (Hoboken, 2002), 163-187; and Hans-Peter Blossfeld, Katrin Golsch, and Götz Rohwer, *Event History Analysis with Stata* (Mahwah, 2007), 169.

[33] As described earlier, durations of ministers resuming a position within cabinet after some time outside the government are treated as new and separate event histories, but I control for the number of cabinet spells the minister has served before the current spell. A repeated events approach is not possible, as it undermines the estimation of competing risks.

[34] The CIEP in the German Länder is either four or five years.

[35] See John Klein and Melvin Moeschberger, *Survival Analysis. Techniques for Censored and Truncated Data* (New York, 2003); David R. Cox and Joyce E. Snell, A General Definition of Residuals," *Journal of the Royal Statistical Society. Series B (Methodological)* 30, no. 2 (1968): 248-275; Box-Steffensmeier and Jones (see note 31), 120-125.

[36] Stata, *Stata Release 10—Survival Analysis and Epidemological Tables* (College Station, 2007), 170-171.

[37] See note 15.