

# **Datasets for the Analysis of Government Termination – a Comparison between Warwick and Woldendorp/Keman/Budge**

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The numbers we use, the world we see: Evaluating cross-national datasets in comparative politics

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# 1. Introduction

In comparative politics there are two main subfields dealing with governments. The first one is government formation with plenty of research mostly from some game theoretical perspective, which is normally been tested by empirical means. Examples for this kind of research are among others Laver and Shepsle (1996), De Swaan (1973) and Crombez (1996). The second one consists of studies on government termination. The research conducted in this subfield has by far not been as extensive as on government formation, in part certainly due to higher data requirements for the conduction of quantitative empirical studies.<sup>1</sup> The best evidence for this lack of research, is the fact that with Paul Warwick's "Government Survival in Parliamentary Democracies" (1994) there is until today only one monograph solely dealing with the subject of government termination. Two other contributions deal with it either in a wider theoretical context of the whole government, from its formation to its end (Laver and Shepsle, 1996), or not exactly with the duration of governments, but with the terms of office of political leaders (Bienen and van de Walle, 1991). Besides these books a fair amount of studies exploring the determinants of premature government endings were carried out and published in several journals (Taylor and Herman, 1971, Warwick, 1979, Browne et al., 1986, King et al., 1990, Diermeier and Stevenson, 2000, Laver, 2003).

All these works – regardless which specific kind of method they used – take government duration as the dependent variable. Taken alone this duration only exhibits a relatively small explanatory power, but most authors regard it as an indicator of government stability and sometimes even as an indicator of stability for the whole political system. This view has been criticized by Lijphart for its generalization and over simplification (Lijphart, 1984b). In fact the durability may have influence on the stability of a political system, but counter-examples like the French Third or Fourth Republic show that a political system does not have to lose its fundamental stability just because of frequent government endings. As long as there is a stable nucleus of decision makers, caring for the implementation of a consistent policy, the stability of the political system is more or less assured (Siegfried, 1956, Dogan, 1989). Also von Beyme regards the durability of individuals inside the government as more important than the durability of the cabinet as a whole (von Beyme, 1971). Albeit these critics, showing that it is problematic to completely equate government durability with political stability, like the majority of researchers did so (Blondel, 1968, Taylor and Herman, 1971, Browne et al., 1984a), the duration of governments still can be regarded as one of the master variables for

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<sup>1</sup> There are of course also qualitative studies centering on specific government terminations and more historical ones describing the processes of government endings. Cp. (Boston et al., 2004).

explaining the stability in a political system. Hence it is undoubtedly of relevance to do research and model government durations. Apart from this justification there is even an undeniable practical importance for real politics, as government duration analysis possibly permits some forecasting capability for the life of newly established governments.

Therefore it is a basic necessity to have a dataset containing at least the starting and ending times of governments. At first sight this seems to be a rather easy task, but taking a closer look, one realizes the need of defining the events that can be regarded as starting and ending points of governments. This is not an empirical but a theoretical question, depending on the hypotheses the researcher wants to test. The arising problem is, that all available comparative datasets on governments are essentially based on some specific theory, obstructing the testing of hypotheses that do not match with this underlying theory. In spite of this problem, most researchers basically used the same datasets for their analyses, sometimes only partially adapted to their theoretical and methodological background (Laver, 2003, p.27).

In this paper I shall present two of these datasets being commonly used for government duration analyses especially in the light of the requirements for event history analysis, which is the most up to date method for this kind of research. The first one was created by Paul Warwick (Warwick, 1994) for his own research, and the second one is an extensive compilation of government data pursued under the direction of Jaap Woldendorp, Hans Keman and Ian Budge (Woldendorp et al., 2000). Both datasets will be presented successively. The following identical scheme will be pursued: In each case the first section provides a descriptive overview of the dataset, with special attention to its content, its authors, its spatial as well as temporal coverage and its accessibility. In the second part the grounding conceptualisation will be analysed. The last section of the paper summarizes the benefits and shortcomings of both datasets and presents possible advancements for forthcoming research.

## **2. Warwick**

### **2.1. General Overview**

Warwick's survival dataset contains a total of 1546 variables potentially relevant for the analysis of government terminations and thus survival in 16 West European parliamentary democracies, but this high number shall not be overestimated, as most variables contain basically the same information for a number of different definitions of government membership and termination. Nevertheless it is until today the most comprehensive data,

available for government duration analysis. Warwick constructed the survival dataset solely for the purpose of his own research in that specific section of comparative politics. He received a research grant from the Social Sciences and Humanities Research Council of Canada, enabling him to build it up (Warwick, 1994, preface p.xii). Therefore an identification of real sponsors with a given ideological or institutional background is not possible, leading to the conclusion, that a sponsorship bias in Warwick's dataset can virtually be disregarded.

The Author is of course in the first place Paul Warwick himself, but he also included a dataset on government durations into his data, which was originally made by Kaare Strom (1985, 1990). The Strom data has been the basis for a number of other studies (cp. King et al., 1990) and Warwick also uses it for cross-checking his own dataset and later the results of his analyses.

The Warwick survival dataset contains 16 Western European democracies from the first postwar election until the end of 1989. These countries are: Austria, Belgium, Denmark, Finland, France, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, United Kingdom and West Germany. Although Warwick presents no answer on the question why he includes only these 16 countries, there are some obvious reasons for his choice:

(1) He is only interested in the duration of parliamentary governments, as indicated by the title of his book. Therefore he excludes presidential systems as the United States, because on the one hand parliaments in these systems do not have the power to dismiss the cabinet or government and on the other hand a look at the empirical durations of US-Governments reveals actually only very little variance<sup>2</sup>, making a duration analysis of governments in such presidential systems relatively senseless. Other systems which are not entirely parliamentary, but show some degree of presidentialism (existence of a popular elected president with some real political powers) are included however, because the parliament in these systems also has the power of government dismissal. These are the French Fifth Republic, Finland and Portugal, which can all be regarded as Semi-Presidential systems according to Duverger's classification (1980) or as "premier-presidential" in the words of Shugart and Carey (1992, p.23-24). Besides pure presidential and "president-parliamentary" (Shugart and Carey, 1992, p.24) systems, where the chief executive (the president) cannot be dismissed by the

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<sup>2</sup> Since the second term of Franklin D. Roosevelt's presidency in 1937 the inauguration day is January 20, resulting in a government duration of exactly four years for all US governments. The only exceptions are governments brought to an end through the death (Franklin D. Roosevelt; John F. Kennedy) or the resignation of the president (Richard Nixon).

parliament, the special case of Switzerland is excluded from the dataset as well. Its collective executive, the *Bundesrat*, has indeed to be accepted by parliament, but after this approval the government, as well as every single minister in it, is no longer dependent on the confidence of the assembly. The duration of every Swiss cabinet is therefore fixed, either to four years when you take the cabinet as a whole as the object under consideration, or to one year, when you take the yearly change of the president of the confederation into account. Nevertheless there are no good reasons not to include other well established parliamentary systems outside Europe, such as Japan, Australia or Canada.

(2) Warwick's reduction to western countries can be explained by the time span of his study which does not reach into the democratic age in Eastern Europe starting after the fall of the Soviet Union. Regarding the time period under observation, the dataset starts with the first democratic elections after World War II and ends on December 31. 1989, but according to diverse historical circumstances the observation periods for the different countries are varying. Warwick does not view constituent assemblies as real parliaments and therefore excludes the times of constituent assemblies like in France, Portugal or Spain from his dataset. Needless to say that in Spain and Portugal the observation time starts not until the end of the fascist movements headed by Franco and Salazar. Every Government starting during the observation period is listed in the dataset meaning that governments that were still in office at the endpoint of the observation are included as well.<sup>3</sup>

(3) Warwick's choice for the 16 countries and the observation period can of course also be explained by the data availability. As it is often the case with empirical research, only in developed countries all the data necessary are well available.

Resulting from the fact that the dataset was constructed for the one and only purpose of his own research, and Warwick has not published anything on that matter after his 1994 book, there is no updated version of the dataset available. Although after more than nearly 20 years an update for the 16 originally analysed countries as well as for other democratic systems, like the new Eastern European democracies would be a useful contribution.

Contrary to the topicality the availability of his dataset is however excellent. The whole survival dataset is available online from his website as a SPSS-file with a comprehensive codebook describing all variables in it.<sup>4</sup> There are no restrictions for downloading.

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<sup>3</sup> Warwick uses the method of Event History Analysis for his research which has the big advantage to enable the researcher to take account of all observed durations, even those that end in such an artificial way through the end of the observation period.

<sup>4</sup> Warwick's survival dataset and the corresponding codebook are available at:  
<http://www.sfu.ca/~warwick/datasets/>

## **2.2. Description of the dataset**

All variables contained in the survival dataset can roughly be divided into four main categories: identification variables, the time variables (mostly dependent variables), the attributes or independent variables and the Strom data for comparative purposes. The following sections will present them.

### **2.2.1. Identification variables**

The first variables listed in the dataset are case identification variables, which the researcher needs to single out the data subset, necessary for his specific research purpose. These subsets are defined by two considerations, one regarding the party composition and the other one regarding the termination of governments. Different options for the definition of governments and hence for government durations arise from both considerations.

Most other studies only count parties, holding cabinet positions as members of the government. This view makes sense insofar as normally only real ministers are entitled to vote inside the cabinet, so that only the ruling parties, holding positions in the cabinet, have some active political scope of design. The second dataset investigated in this paper, the one by Woldendorp et al., uses exactly this definition of government composition. Warwick broadens this view. According to him it “may make better theoretical sense to count parties that commit themselves to support the government in the parliament (without entering the cabinet) as well” (Warwick, 1994, p.26). He was nevertheless not the first one to use this definition. Before Warwick others included explicitly all parties supporting a government into the government parties (Taylor and Herman, 1971, p.29). In particular De Swaan promotes this view, defining all parties supporting the government in critical times, when the government’s existence is at stake, as members of the government (De Swaan, 1973, p.143-144). Taking account of these differences Warwick defines four main versions of government membership, which accordingly constitute four subsets of the data. The first one is the common definition including only those parties that are official members of the government, holding posts in the cabinet. The second one furthermore includes parties that formally support the government, though they hold no office. The third definition includes all cabinet parties plus declared support parties, i.e. parties that openly declare to support the government, but which are no cabinet members or formal allies. In addition to the previous ones, the fourth and broadest

definition includes also parties that have not declared to support the government, but are known to be supporters (Warwick, 1994, p.31).

Compared to government composition, the termination of governments is generally less controversially discussed in the literature. Although it is one of the most important decisions, how to define the causes for terminations when it comes to government survival analysis. It is apparent that the larger the catalogue of terminating events, the shorter the average government durations are (Gallagher et al., 2001, p.411). Warwick follows in general one of the most common approaches, first introduced by Blondel and later more exactly specified by Browne et al., that regards elections, changes of the prime minister and the party composition of the government as well as government resignations as terminal events (cp. Blondel, 1968, p.190, Browne et al., 1984b, p.6-7). Warwick expands this definition in one aspect. He distinguishes between resignations that are officially accepted by the head of state and thus executed, and resignations that are only declared by the government, but not accepted by the head of state. Warwick argues that the latter, although not executed in the end, still can be regarded as government terminations. Therefore he has built two more subsets of the data, one containing all governments using the stricter resignation definition adopted by Browne et al. and the other one using his favoured definition which includes all declared resignations (Warwick, 1994, p.26-28).

Every single data subset can exactly be identified by these two considerations and the researcher just has to select the dummy variables that stand for the different kinds of government composition and termination definitions, corresponding to his personal interest. To make this point as clear as possible: the survival dataset cannot be analysed in total! Warwick himself warns that “the critical point to remember is that all analyses must be performed on some data subset as defined by the above variables” (Warwick, 1998). This assumption, at first sight impractical, as it extremely blows up the dataset and thereby makes it unclear, is in fact a very efficient instrument. Warwick provides the researcher not just with one dataset, but essentially with eight datasets, using all possible combinations of the different government composition and termination definitions he has developed.<sup>5</sup>

There are of course further possibilities to select special cases or subsets of the whole data. This is possible either by its case number, the type of government (regular, caretaker<sup>6</sup> or not

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<sup>5</sup> One of the composition identification variables (the declared support parties only) is however missing. Though the data itself is available for this variable, it is not possible to select it in the same way, like the others via a dummy variable.

<sup>6</sup> In contrast to other studies like the one by Browne, Frendreis and Gleiber (1984a, p. 640-641) who assumed caretaker governments to possess no relevant political powers at all, and therefore excluded them from their model, Warwick counts caretaker cabinets as distinct governments, but of course controlling on their potentially

invested), by country, by time (date of formation of the government, date of resignation, date of collapse, date of most recent election) by the governments sequence number (within the constitutional interelection period CIEP, or within the country) or finally by the type of termination (e.g. voluntary resignation, elections, addition of coalition members, end of observation period).<sup>7</sup>

### 2.2.2. Time variables

The second category of variables is actually the one indispensable for every Event History or Survival Analysis. It includes the dependent variable which is basically the duration of governments or put in a slightly more precise way, “a straightforward empirical record of the elapsed time between the formation of a government and its ending” (Laver, 2003, p.24). The underlying assumption for the application of Event History Analysis is, that there is a baseline trend, also called baseline hazard rate, of government survival only dependent on the elapsed time. Other researchers built models containing only this hazard rate and disregarding all other attributes (Browne et al., 1984a). But this exclusively stochastic approach did not perform as well as they originally thought, leading these pure event theorists to the conclusion that it is “the immediate theoretical task [...] to construct a working model of governmental life-cycle which incorporates the findings of both the structural attributes and random events models” (Frendreis et al., 1986, p.626). What followed were several attempts to bring these two approaches, standing hitherto so irreconcilably vis-à-vis, together for the first time.<sup>8</sup> King and his colleagues used a constant baseline hazard rate in their “Unified Statistical Model” (King et al., 1990), later studies like the one by Warwick used a so called semi-parametric model which only assumed the existence of a baseline hazard, but made no further assumptions about its functional form.<sup>9</sup>

Nevertheless all Event History approaches use durations as the dependent variable, because as in medical studies, where Survival or Event History Analysis was first used, it is not only of

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much shorter duration via a caretaker dummy variable. Warwick’s procedural method seems insofar the better choice, as not even the theoretical justification by Browne et al. to disregard caretaker governments is universally accepted. It was shown that the political capacities of caretaker governments differ fundamentally across countries. For a comparative overview about the competences of caretaker governments in Europe cp. (Laver and Shepsle, 1994, p.291-292).

<sup>7</sup> For a full list of all 15 types of government terminations, distinguished by Warwick cp. (Warwick, 1994, p.29)

<sup>8</sup> For an overview about the diverging opinions see the debate between Strom as an attributes advocate and the event theorists Browne et al. (Strom et al., 1988).

<sup>9</sup> Since assuming the wrong functional form may undermine the whole model, it makes much more sense to use a method that does not have such strong requirements. Warwick uses the Cox partial likelihood method, giving him exactly this advantage that he does not need to start with the assumption of a certain form of the underlying baseline hazard like King et al. had to (Warwick, 1994, p.23-24).

interest whether a patient dies, but also how long he may survive after a given medication. The same is true for government survival. We are not only interested in whether a government terminates during the constitutional interelection period (in the following CIEP), but also for how long it is able to hold office. Speaking more generally, especially in the social sciences a number of questions can only be addressed appropriately when time itself, i.e. the history of the examined subjects, is taken into account as a relevant factor (Kertzer, 1994, p.1289).

According to the different possibilities for defining government termination, Warwick included three versions of elapsed time variables, all measured in days. The first counting all resignations as terminations and the second one counting only accepted resignations. The third version takes the exact date, when the government leaves office as ending point. The problem with this last definition is, as Warwick himself has to admit, that many of these dates are not available (Warwick, 1998). When it comes to empirical analyses this definition will therefore not lead to our goal as the database becomes too small for well grounded research.

In addition to these durations, which as dependent variables build the core of the dataset, Warwick includes some other time variables. They are not taken as dependent variables, but as independent ones. (1) These are the duration of the preceding government, which can be used for the test of some path dependency. (2) There is the so called crisis duration variable which spans the time between the termination of the previous government and the formation of a new one. Two distinct effects can be spotted here. Strom argues that a long formation period indicates a longer and more stable government, as the parties in the system have a “vivid image of the costs of another round of difficult negotiations (and) [...] because the previous round presumably cleared away the most immediate obstacles to government unity” (Strom, 1985, p.749). An opposite interpretation comes from King and his colleagues who regard the length of the crisis period as an indicator for a complicated bargaining environment resulting in easier government collapses and thereby *ceteris paribus* shorter durations (King et al., 1990, p.858-859). (3) There is the time left from the termination of a government until the end of the CIEP. This duration may be important, as one moves towards the end of the CIEP, the more considerations about an induced government termination and early elections may arise, resulting in a higher probability to fail for the actual government. Therefore this amount of time can be taken as one of many indicators for government durability, although Warwick himself did not use this variable in his study. Following a somehow similar argumentation Diermeier and Stevenson came to the conclusion that it is not the elapsed time from the government’s start until its end that should be taken as the dependent variable, but the remaining time until the end of the CIEP. This approach nevertheless makes it necessary to

depart from standard Event History Analysis models which are only suitable for elapsed time (Diermeier and Stevenson, 2000, p.627-628).

### **2.2.3. The attributes or independent variables**

The third and biggest part of the survival dataset is made of the independent variables which are also known as attributes. Earlier studies, starting with Axelrod who regarded Minimal Connected Winning Coalitions as the most stable form of government (Axelrod, 1970, p.177-183), concentrated solely on these attributes as an explanation of government termination. The first step for this kind of research is normally the estimation of correlations to single out those attributes that have some significant influence on government duration. In a second step these studies try to confirm their hypothesis that government durability is a linear function of these attributes. In particular Taylor and Herman's study about the influence of the party system on government durability can be seen as exemplary (Taylor and Herman, 1971) but until the 1980s other authors followed this approach as well (Blondel, 1968, Dodd, 1976, Strom, 1985, Warwick, 1979). The theoretical basis for this kind of research is the assumption that every government starts with some fixed specific distribution of attributes which cannot be changed during the term in office.

Warwick included virtually all attributes that have ever been regarded as potentially relevant for government survival. They can be subdivided into four main blocks. The first one consists of attributes of single parliamentary parties (a), the second one are government attributes (b), the third one parliamentary and party system characteristics (c) and the fourth block is composed of economic data (d).

#### **a) Party attributes**

Most governmental and parliamentary attributes taken into account for government survival analyses to some extent stem from more basic variables concerning all the single parties in a given system, such as the number of seats held in the assembly, the status as government or opposition party (always according to the given government composition definition), and its ideological position. For the ideological variables Warwick uses a variety of secondary literature. For example the Left-Right scales by Castles and Mair (1984), the socio-economic scales by Browne et al. (1984b), the extensive scales by Laver and Hunt (1992) and the scales developed by Dodd (1976) highlighting amongst others the clerical-secular dimension and the

regime support dimension. Data from the Eurobarometer and the Comparative Manifestos Project (CMP) complete the block of single party attributes.

## **b) Government attributes**

Most government attributes refer to one of the four government composition definitions. Additionally Warwick introduces two more variants referring to abstaining parties<sup>10</sup> which become relevant when it comes to variables concerning the majority or minimal winning status. The parties identified as abstaining according to one of these two definitions are then subtracted from the total size of the parliament (Warwick, 1998). Therefore every following government attribute is listed correspondingly to a total of six different composition definitions.

The ideological diversity of governments is displayed in two different versions. One uses simply the range between the two parties inside the government that have the lowest and the highest score respectively on the ideological party position scales described in the last section. The other one is the standard deviation which takes not only the distance between two government parties, but also their political weight, in terms of seats in the parliament, into account. For the calculation of the standard deviation you need interval data (Wagschal, 1999, p.113-114), but all the party attributes measured on some ideological scale are normally only ordinal data. Therefore in statistical terms it is strictly speaking not valid to employ the standard deviation measure here. Nevertheless most ideological scales used at least a ten point or even twenty or more point scale, so that the variables can at least be regarded as quasi-interval data, allowing the construction of interval measures such as the standard deviation. In addition to the ideological diversity Warwick included the means of the ideological positions of governments weighted by the party sizes and other government attributes, such as the minimal winning status or the minimal connected winning status according to Axelrod (1970), the majority status and the surplus status of a government. The numerical amount of government parties is listed as well as a version of Laakso and Taagepera's measure of effective parties, adapted to government parties only (Laakso and Taagepera, 1979). Further government variables include the caretaker and post-election status, the number of formation attempts, the contiguousness of coalition members (De Swaan, 1973) and characteristics of party leaders.

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<sup>10</sup> The first one for parties openly committing themselves to abstain, the second one for the former plus those parties considered by other sources as committed to abstain.

### **c) Parliamentary and party system characteristics**

The first variable explaining the status of the whole party system is the polarization. In accordance with the definition of extremism by Powell (1994) these variable includes the seat shares of extremist parties. The other party system variables are virtually the same as the ideological standard deviation ones used for government attributes, with the difference that they are now build on the basis of all parliamentary parties and not only on the government parties.<sup>11</sup> Other parliamentary attributes listed give answers to the following questions: Is there an official investiture requirement? How long did preceding governments last on average? How many ideological dimension – according to Lijphart (1984a) – does the party system exhibit? How big are the responsiveness<sup>12</sup> and the volatility<sup>13</sup> of the party system? How concentrated is the opposition and how big is the returnability, meaning the mean proportion of government parties entering the next government after a collapse or early termination.

### **d) Economic variables**

The last block of attributes consists of economic variables. The underlying assumption here is that the economic environment has some influence on the durability of governments. Unlike all the other political attributes before, the economic variables can change over time and are thus not fixed for a government's lifetime. It is another merit of the method of Event History Analysis to provide a good possibility to handle such time varying attributes. Warwick included annual values of all economic variables for the year before the government took office until the sixth year after the government formation. Additionally he embedded the December values for the same time span. Through linear interpolations of these December values estimations of the daily values can be gained which can then be included in the partial likelihood model. The underlying assumption for this method is that the December values correlate quite highly with the annual average and therefore are representative for the whole year. The seasonal fluctuations best known in economic data are thereby eliminated. This smoothing process only makes sense if these fluctuations are not influencing the early terminations of governments. Warwick tested this by comparing the results of his partial likelihood model for the real monthly inflation rates with those of the "pseudomonthly rate constructed from the interpolated daily values" (Warwick, 1994, p.77). The latter showed the

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<sup>11</sup> The explanatory notes, given before, regarding the scale level and its consequences for the calculation of standard deviation measures apply here as well.

<sup>12</sup> The responsiveness is defined as the "proportion of parties increasing their share of parliamentary seats which also entered a cabinet during the subsequent parliament, aggregated by decade." (Warwick, 1998)

<sup>13</sup> Volatility is defined, according to Pedersen, as the net change in vote respectively seat shares of all parties between two consecutive parliamentary elections (Pedersen, 1979, p.3).

better results, leading to the conclusion that politics do not react instantly on the actual monthly economic data, but more on a general trend as it can be displayed much better through a smoothed curve. Thus the linear interpolation of the December values is a good way to include the time variance of economic data into the model. The dataset lists several versions of the following economic variables: inflation, unemployment rate, GDP, GDP change, and GDP per capita (Warwick, 1998). One problem with the economic variables is that the data is sometimes just not available, as in the cases of the unemployment rate for the French Fourth Republic or Iceland<sup>14</sup>, or that the values are not comparable because of measurement changes over time.

#### **2.2.4. The Strom data**

The last block of variables contained in the survival dataset is the data originally gathered by Kaare Strom for his own research (Strom, 1990). Through the matching process some characteristics of the original Strom dataset vanished, so that it shall only be used for the crosschecking of the findings derived from the actual Warwick data and not for an analysis of its own. It nonetheless includes as well all the data necessary for the conduction of a survival analysis, as there are the durations of governments as the dependent variable (only measured in months and not in days) and a number of attributes serving as independent variables, mainly consisting of characteristics of the government or of the political system.

### **2.3. The sources of the dataset**

Warwick describes for almost all variables included into his dataset where he got the data from. His most relevant source is undoubtedly *Keesing's Contemporary Archives* (1944-1990) that provided him with insights regarding the legislatures and governments. This heavy relying on that single source, without crosschecking for example with official national data may be some cause for errors. Especially in the case of the support parties, it is questionable whether *Keesing's Archive* really holds enough information to decide whether a party shall be regarded as a formal government supporter, a declared or an undeclared but known support party.

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<sup>14</sup> See the table on p.79-80 for a summarization of the availability for the economic data (Warwick, 1994).

The further independent political variables mainly stem from secondary sources, which have in general been appropriately quoted by Warwick.<sup>15</sup> The economic variables listed are equally well traceable. They come from several publications of the four well known international suppliers of statistics, the UN, the ILO, the IMF and the OECD (Warwick, 1998). Nevertheless in very few cases it is not always clear which of these sources was actually used and therefore the values in the survival dataset cannot always be traced back to the original primary source.<sup>16</sup> But these are the exceptions that prove the general rule that Warwick is very diligent in revealing his sources.

## 2.4. The concepts behind the dataset

It was Warwick's intention to construct a dataset perfectly suitable for the analysis of government terminations. His dataset therefore takes account of a series of problems arising from the theoretical questions and methodological components of government survival analysis. Here the already mentioned assumption that despite other factors, like especially the change rate of individuals at relevant political positions<sup>17</sup> or the overall duration of political parties at power<sup>18</sup>, the duration of whole governments also plays a crucial role for political stability, has to be remembered.

The basic problem of the dependent variable is its definition, i.e. which factors can be regarded as sufficient conditions for a government termination and when are the exact starting and ending points of governments. We already saw that Warwick tried to solve this problem by not only relying on a single definition, but by arranging the variables according to a number of different definitions. Or in his own words:

“wherever feasible, alternative definitions have been incorporated into the design. The purpose behind this decision is to permit tests of whether key results that emerge from the empirical analysis are artifacts of the way concepts have been defined.” (Warwick, 1994, p.26)

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<sup>15</sup> See Chapter 2.2.3 for an overview of the variables and their sources.

<sup>16</sup> For example when Warwick writes “The primary source for the unemployment data is the UN *Monthly Bulletin of Statistics* (1947-90). For early years, this source was supplemented, where appropriate by data from the ILO's *International Labor Review*.” it is not entirely clear at what point he uses which source.

<sup>17</sup> The only model taking this position serious is the portfolio allocation model of the making and breaking of governments by Laver and Shepsle. It regards every reallocation of key cabinet portfolios between parties as in fact a new government (Laver and Shepsle, 1996).

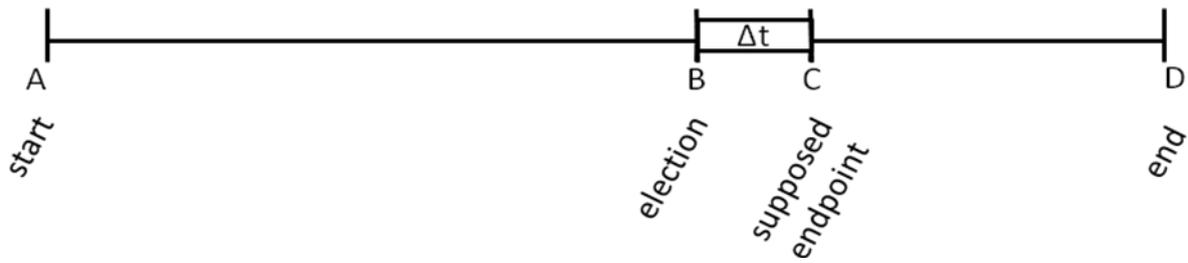
<sup>18</sup> Mershon shows very clearly that despite Italy had much shorter government durations than the rest of Europe, it also had the very lowest rate of partisan turnovers in governments. This was because of the Democrazia Christiana dominating the whole party system for decades and hence being the senior partner in almost all Italian governments until the mid-1990s with its *mani pulite* campaign, leading to the collapse of the whole party system. Thus when you focus on the leading parties, Italy was much more stable than it was generally classified (Mershon, 1996, 2001) .

This means that it is neither appropriate to use the apparently obvious official national definitions for governments (and respectively for their starting and ending points) because nearly every country has a different position on that matter<sup>19</sup>, making transnational comparisons impossible, nor does it make sense to become set on just one of the other definitions. Such a limitation in the basic definitions always results in a likewise limitation in the findings. For the test of diverse theories it is therefore indispensable to have the data arranged in a variety of ways, enabling the researcher to choose exactly the definitions properly matching into his theory.

It can for example be questioned whether every election really constitutes a termination of the government. Although Browne et al. argue that every election, even if the ruling government is entirely reelected, marks a change in the “issue environment” (Browne et al., 1984b, p.6), this view is challenged for instance by Warwick. According to him problems arise when a single-party majority government gets reelected. There you cannot speak of a real change as the prime minister stays the same, the parliamentary support is (more or less) unaltered and no other government parties are onstage. Another argument against the criterion of a change in the bargaining environment is, that you must for example also regard the merger of two opposition parties as such a change and therefore as a government termination. None of the studies adopt this definition, although it would be consequent according to the theory (Laver, 2003, p.26). Warwick further argues that such an election, although being no real termination, nevertheless can be regarded as a disruption. He takes those disruptions as the basis for censoring which allows him thereby to distinguish between real terminations (change in prime minister, resignations etc.) and artificial ones like elections that are not followed by a substantial change in government (Warwick, 1994, p.27). For his dataset this implies that he still takes such disruptions, not necessarily composing a real termination, as censored ending points. It could nevertheless also make sense to take for example a reelection of a single-party government not at all as a disruption, but to see this government just as continuing. The two governments divided by the artificial barrier of elections that did not even change the issue environment should therefore be counted as just one government. The censoring of these cases is no real alternative as on the one hand it indeed does not take all ending points as real terminations, but an election that resulted in no real changes still leads to the counting of two distinct governments.

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<sup>19</sup> For example in some countries like Belgium, Italy or Germany governments have to win a formal investiture in parliament, before they are officially regarded as governments, in other countries like the United Kingdom or the Netherlands this is not the case.



**Figure 1** Impact of censoring on the duration of governments

Figure 1 shows the impact of right-censoring. Following Warwick a government ending at an election (B) could have continued in office if there had not been this artificial break. Right-censoring in Event History Analysis means that it is not duration  $\overline{AB}$  that flows into the model, but  $\overline{AB}$  plus a certain time span  $\Delta t$ , estimating the time a government would have continued without the elections happening.<sup>20</sup> This results in an estimated lifetime of the first government of  $\overline{AC}$ . The second government starts at B – under the assumption of no long formation process – and ends with a real termination at point D. The two durations flowing into Warwick’s model hence are  $\overline{AC}$  and  $\overline{BD}$ . However when you take the second view, regarding an election that leads to no change in government as no disruption, there would only be one government with the lifetime  $\overline{AD}$ .

Similar problems arise from the definition, identifying every change in the prime minister as a government termination. When the premier for example dies or has to resign because of ill health, this is regarded as a disruption by Warwick and therefore censored. Though there definitely had not been any political reasons for the change of the head of government – the only difference between the old and the new cabinet is a different premier – and there was also no change in the bargaining environment, two distinct governments are counted. The only justification for Warwick’s approach may be the belief that the prime minister is generally more than a *primus inter pares* inside the cabinet and therefore co-decides to a greater extent about the government’s policies.<sup>21</sup>

<sup>20</sup> For a comprehensive description of the different censoring possibilities in Event History Analysis and the extremely relevant distinction between truncation and censoring cp. (Yamaguchi, 1991, p. 3-9, Box-Steffensmeier and Jones, 2004, p.16-19).

<sup>21</sup> Laver and Shepsle support that view with the little limitation of the appointment of cabinet ministers in coalition governments, where the premier’s hands, in their view, are tied to some extent (Laver and Shepsle, 1994, p.304-305).

## 3. Woldendorp, Keman and Budge

### 3.1. General Overview

The following sections deal with the second dataset commonly used for government survival analysis. It is a compilation of government data pursued under the direction of Jaap Woldendorp, Hans Keman and Ian Budge in 2000. The title “Party Government in 48 Democracies (1945-1998)”, under which it was published in book-form, already indicates its comprehensive and ambitious scope of design. The foundation for this book was laid ten years earlier, with a study about coalition formation and functioning in twenty states (Budge and Keman, 1990). This originally dataset has been intensely broadened in three ways: it records now more government characteristics, covers a longer time-span (1945-1998) and especially includes more than twice as much countries than the original one.

Although Woldendorp, Keman and Budge are the sole authors of the book, the collection of the data would, as they openly admit, not have been possible without the support of a large number of political scientists, country specialists and several civil servants, giving input and checking the data (Woldendorp et al., 2000, preface p.ix-x). Another indispensable requirement was the stimulus and support of the *European Consortium for Political Research* (ECPR) which arranged meetings, workshops and research groups and thereby always accompanied the research process. The ECPR also provided the possibility to publish the preliminary data in their journal (Woldendorp et al., 1993, 1998). As it is the case with Warwick’s survival dataset no secondary sponsor (except possibly the ECPR) can be identified. Woldendorp and his colleagues conducted their research as regular university studies.

It was the aim of them that the dataset, or more precisely the data book, shall

“provide a compact and comprehensive data collection, which *simultaneously* provides *comparative* and *complete* information on the composition of governments in terms of parties, ministries, portfolios and parliamentary support, as well as on their duration and reason for termination” (Woldendorp et al., 2000, p.1).

It is designed to provide every researcher with the basic data relevant for his or her studies. Therefore it must be easily transformable according to the special research interests and applicable at different levels of analysis (ministers, governments, parties or countries) as well cross-nationally as across time. In comparison to Warwick’s survival dataset it is suitable for a number of diverse theoretical questions, and thus not specialized on government survival analysis.

In general the spatial coverage of the dataset is not only larger than Warwick's because of the new Eastern European democracies, but also because of a number of non-European countries that are often forgotten when it comes to comparative analyses. Woldendorp et al. include all systems fulfilling the three requirements for democracy – popular representation via elections, fully guaranteed civil rights for every citizen and supremacy of the rule of law – into their dataset. The choice of the sample according to the countries' 'democraticness' is done by two measures: First Jagers & Gurr's index operationalizing Dahls Polyarchy concept and second the Freedom House index on political and civil rights. Systems that perform badly on both scales<sup>22</sup> are excluded from the dataset. Hence old European democracies like France or Great Britain are equally listed as Sri Lanka, Jamaica or Lithuania. The temporal coverage starts after the Second World War and ends in 1998. It is evident that countries like Spain, Portugal or the East European democracies, with their late democratization, or other countries like Turkey and Greece, suffering in some periods of their history from interruptions of democracy, only exhibit shorter observation periods (Woldendorp et al., 2000, p.5-6).

Presidential systems are excluded from the dataset, with basically the same rationale behind it like it is the case with Warwick's survival dataset. The lack of individual as well as collective responsibility of either single ministers or the whole government to the parliament, characterizing presidential government, does not fit into the research context of party government (Woldendorp et al., 2000, p.4). Nevertheless semipresidential systems are included, as they exhibit at least some degree of governmental responsibility towards the parliament. Switzerland is seen as a clearly deviant case of parliamentary system, but nonetheless still as more parliamentary than presidential, and is therefore included.

The total of 51 cases being distinguished, arises from 48 countries.<sup>23</sup> Two points are somewhat astonishing: First, why are the Russian Federation and the USA, two presidential systems, included? And second, why is there a difference between the number of countries and the number of cases? The answer to the first question is acutely pragmatic: "They have been included for the simple reason that they are too important to be omitted and are usually included in cross-national analyses of democratic performance" (Woldendorp et al., 2000, p.7). However the presentation of data is different for them, because governments are here not

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<sup>22</sup> Countries that are rated lower than 5 on the Polyarchy-scale and higher than 5 on the Freedom House scale are excluded (Woldendorp et al., 2000, p.7-8).

<sup>23</sup> These countries include: Australia, Austria, Bangladesh, Belgium, Botswana, Bulgaria, Canada, Czech and Slovak Federative Republic, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Guyana, Hungary, Iceland, India, Ireland, Israel, Italy, Jamaica, Japan, Latvia, Lithuania, Luxembourg, Macedonia, Malta, Namibia, the Netherlands, New Zealand, Norway, Pakistan, Portugal, Romania, Slovakia, Slovenia, South Africa, Spain, Sri Lanka, Sweden, Switzerland, Turkey, United Kingdom, Russian Federation, United States of America.

dependent on the parliament and therefore it makes no sense to link both together in one table, like it is done with the other countries. The explanation for the different numbers of cases and countries is that South Africa is subdivided into three periods,<sup>24</sup> and France into two: The French Fourth and Fifth Republic which are different in respect to their parliamentary respectively semipresidential system.

Although the data book contains data for nearly ten years more than the one by Warwick, it is nevertheless far from being up to date. There has also never been an official update by its authors since 1998. The only update available is for a subset of 11 Central and Eastern European countries, for the time period 1990-2003, which was conducted according to the same organisational aspects as the original Woldendorp et al. data (Harfst, 2001).

The availability of the dataset is on the one hand good, as it is published completely as a book, on the other hand just the book form makes it unnecessarily complicated to use. In times where every larger scale quantitative comparative analysis is conducted with the help of statistical or at least spreadsheet programs, the usage of a print medium for the presentation of data seems somewhat antiquated.

### **3.2. Description of the dataset**

The data by Woldendorp and his colleagues (2000) is not available as one large dataset, like the one before, but only as a number of country tables, or more precisely as political system tables. These tables are all constructed according to the same logic and contain basically the same variables that will be presented in this section.

Every government presents one row in the tables and the variables characterizing the government are arranged in the columns. The first column includes consecutive numbers corresponding to the chronological ordering of the cabinets. This is necessary for the identification of a certain government in the other tables of the same political system.<sup>25</sup> The second column gives the exact date of the beginning of each government. Woldendorp and his colleagues follow here von Beyme, when they use his operational rule to take the date of investiture as the beginning of a new government (Woldendorp et al., 2000, p.11). This leads to another specific of the dataset. The duration is always counted as the time between one

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<sup>24</sup> The first one from 1948 until 1984, with a parliamentary system, the second one from 1984 onwards with a more semi-presidential system and the abolition of the Apartheid system also constitutes a distinct case in the dataset.

<sup>25</sup> The book form, limiting the space available for the tables to one page, requires the tables to continue over a number of pages, making a clear identification variable absolutely necessary.

investiture and the one of the succeeding government.<sup>26</sup> This duration is listed in the third column. The following two variables describe the reason for termination as well as the type of government. The reasons for termination are coded according to von Beyme (1985). These include all elections, resignations (both voluntary as well as due to health reasons), dissension within the government, lack of parliamentary support, intervention of the head of state and the broadening of the government coalition. The type of government variable is based on the numerical party status, resulting in the following six different types: single party governments (holding a parliamentary majority), minimal winning coalitions, surplus coalitions, single party minority governments, multi party minority governments and caretaker governments. The following columns contain the particular government parties and the seats they hold in the parliament (or the lower house if there is bicameralism). The overall number of seats in the parliament is given too, so that the absolute numbers can be transferred into percentages. There is one more variable describing the whole government, introducing a “more qualitative aspect to government composition” (Woldendorp et al., 2000, p.19). It contains information on the relative strengths of parties in the government according to their ideological position on a left-right scale. The score built by Woldendorp et al. ranges from 1 (right wing dominance) to 5 (left wing dominance).

The overall number of cabinet ministers is listed in the next column. Only those ministers are included that have a voting right inside the government or/and those that have a specific ministry with a distinct competency. This rules so called ‘front-bench’ members of the British government as well as for instance in Germany the *Staatssekretäre* out of the list of ministers (Woldendorp et al., 2000, p.16). The following columns contain information on every single ministry. Starting with the prime minister and his or her deputies the name of every minister and their party affiliation is presented. Especially these variables are an interesting source for survival analysis, as the ideological position of a cabinet may be much better explained through the positions of its ministers than through the parliamentary seat share of the government parties. The latter version was used by almost all studies that included an ideological component into the government survival analysis (cp. Warwick, 1994, Taylor and Herman, 1971).<sup>27</sup> The last variable depicts the number of significant ministerial reshuffles. Such a reshuffle is defined by a “simultaneous movement or replacement of two or more

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<sup>26</sup> In this context the term *investiture* shall only be understood as the installation of a new government and of course not as the formal parliamentary voting procedure necessary in some countries to confirm the prime minister or the whole cabinet.

<sup>27</sup> For an example how to include the ideological positions of governments according to the ministers’ ideology cp. (Jäckle, 2008).

Cabinet Ministers” (Woldendorp et al., 2000, p.22). This measure could also be regarded as an indicator for instability of a government.

### **3.3. The sources of the dataset**

Like Warwick before, Woldendorp and his colleagues base their data to a large extent on *Keesing’s Contemporary Archives/ Record of World Events*. So the variables about the parties in government and the portfolio variables derive mostly from this source, but they are crosschecked with further information provided by other secondary sources.<sup>28</sup> In the case of non-concordant information, Woldendorp et al. stick to *Keesing’s Archives*. This procedure is employed in all ambiguous situations which is at least to some extent problematic, as it makes a cross checking essentially unnecessary, when in the end it is always only *Keesing’s Archive* that is trusted. One possibility – although an admittedly extremely elaborate one – to show, where there may be some problems with the data, would have been to mark divergent numbers. In some cases, especially with the number of ministers and their party affiliation, they resorted in doubts not only to *Keesing’s*, but also to country specialists (Woldendorp et al., 2000, p.16). It is nevertheless not at all possible to figure out which cases these are and therefore in general the replicability of the data is suboptimal.

To enhance the reliability of the dataset, Woldendorp and his colleagues sent the country tables after their completion separately to country specialists for a last check. This procedure “safeguarded from errors and spelling mistakes” (Woldendorp et al., 2000, p.20), but again it is not clear from the dataset, where the original data was substituted and which numbers stayed untouched.

### **3.4. The concepts behind the dataset**

Woldendorp, Keman and Budge were aiming at a comprehensive data collection providing simultaneously answers to all questions on government composition in terms of parties, ministers, portfolios and parliamentary support, as well as cabinet durations and the reasons leading to the end of the government. Therefore their data is arranged in a way, enabling researchers to utilize it according to their specific research questions. Though the data can

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<sup>28</sup> Woldendorp et al. name von Beyme (1985), Paloheimo (1984), Mackie & Rose (1991) and Lane et al. (1997) as additional sources.

thus be applied to a variety of topics, it unavoidably leads to problems with more specified theories which need specific information, the Woldendorp et al. data cannot provide.

The collection of the data followed a quite pragmatic paradigm. Woldendorp and his colleagues took their variable definitions from theories well established and well known in the political science community. This can be seen with respect to the government termination definition which is basically the same as the one by von Beyme (1985, p.375-405), with respect to the *type of government* variable which is constructed according to Lijphart's classification (1984a, p.60-61) and with respect to the ideological complexion of the government which is derived from Huber and Inglehart (1995). The pragmatic nature becomes clear when the *type of government* variable used by Woldendorp et al. is compared with other theoretical possible and potentially more reasonable versions. Only those parties are counted as being part of the government that hold a cabinet office. The whole problem of support parties, intensely debated by Warwick, is thus swept under the carpet.

#### **4. Summary and outlook**

The validity of a dataset can only be analysed in the light of a given theory. The question is whether a dataset is appropriate for testing a specific theory. For survival analysis in general we only need the durations which are both presented by Woldendorp et al. as well as by Warwick. The problem is that there are manifold possibilities how to define the starting and ending points of governments and the government composition which again has an effect on the observable durations. We saw on the one hand that Warwick gave a lot of thoughts to these problems, with the consequence that he arranged his dataset according to different definitions. On the other hand Woldendorp and his colleagues had not only government survival analysis in mind, when they constructed their dataset. Therefore it simply cannot be as well suited for this specific kind of research as the Warwick dataset which was solely constructed for that purpose.

Nevertheless there are some drawbacks with the Warwick dataset. One of the minor problems is that Warwick treats every election as an ending point, although no real change in government has happened. The counting of two distinct governments resulting from this definition may be misleading and researchers might prefer to count it as just one government. This is, although these longer durations are not explicitly included in the survival dataset, not a complex matter at all, as the starting and ending points stay the same and one just has to

decide which ending points should not be regarded as disruptions. Once this choice is made, the two adjacent government durations can be summed up.

Another major shortcoming, especially because it negatively affects the present possibilities for government survival analysis, is that Warwick's dataset is obviously out of date. An update with a simultaneous expansion of the country sample, especially by the new Eastern democracies, but also by other non-European well established systems, is indispensable for appropriate contemporary research.

The preceding descriptions of the two datasets clearly showed the desperate situation contemporary researchers in the field of government durability are facing. The two discussed datasets offer them a Hobson's choice:

On the one hand there the survival dataset by Paul Warwick which is for sure the most elaborated dataset available for the analysis of government survival. Its big advantage, in stark contrast to Woldendorp et al., is that Warwick was aware of the problem of the basic theoretical definitions affecting the outcome of any duration analysis. His answer to that problem – arranging all the data according to a variety of definitions for government composition and government termination – seems to be the only appropriate solution. Although resulting in a bloated dataset, not easy to handle, it is the only possibility to really test different theories without the drawbacks of unfitted datasets having no chance to single out measurement artifacts. In general it can be concluded that researchers in the field of government durability shall prefer a dataset covering as many different definitions and measuring the units of analysis as accurately as possible to a dataset having its data arranged according to only one definition and measuring the duration of governments in longer time units, such as years.<sup>29</sup> The question is, whether the eight definitions used by Warwick<sup>30</sup> display the whole complexity of the problem and are thus sufficient, or if some theories are still not testable with his dataset. And unfortunately this dataset is heavily out of date.

On the other hand there is the relatively topical data book by Woldendorp, Keman and Budge. Although it is also not perfectly up to date, it offers at least a much broader data basis, especially with the inclusion of other non Western European countries. When used for government survival analysis it however leads to substantial theoretical and methodological problems. Therefore all studies based on it will have some bias in favor of particular theories.

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<sup>29</sup> A precise duration measurement is also a precondition for the use of a slightly different dependent variable introduced by Sanders and Herman. They standardize the duration on the CIEP and therefore take the "time that a government served as a percentage of the maximum possible (remaining) time that it can serve" (Sanders and Herman, 1977, p.356) as dependent variable.

<sup>30</sup> The two different resignation definitions combined with the four government composition definitions add up to the eight definitions selectable as subsets in the survival dataset.

On the contrary other theories can hardly ever be tested with it, as for example there is no variable for the duration of the formation process (crisis duration). There is nevertheless one aspect in which the Warwick dataset could be improved with the help of Woldendorp et al. The latter list all ministers together with their party affiliation which enables researchers to test theories that deviate from the hitherto existing studies which are mainly concerned with the “pure” duration. In the end, a more complex concept of stability, as it was advocated by von Beyme (1971) or Siegfried (1956), centering more heavily on the personal component could thereby be tested exhaustively for the first time.

Especially when it comes to the more basic and also complex question of political stability (in contrast to mere durability) further definitions of what makes a government a government are needed. These could, for example, be build on the theoretical work by Laver and Shepsle (1996) or Lupia and Strom (1995). More generally speaking, a stronger incorporation of a priori models of government termination would improve research a lot. It is nonetheless extremely difficult to build datasets really fitting to these a priori models. The only studies trying this at least partially are Diermeier and Stevensons’s tests of the Lupia and Strom model, deriving at important conclusions about the functional form of the baseline hazard rate (Diermeier and Stevenson, 1999, 2000). These works nevertheless clearly show that a proper operationalization which is at the moment, due to the available datasets, not possible, would require “a return to primary sources [...] to construct the dataset that is tailored to testing this approach exhaustively” (Laver, 2003, p.38). This could only be accomplished by a larger-scale research project which would have two main obstacles to deal with. First the research design and the operationalization of the a priori theory would have to be made well fitting. And second, the actual creation of the new dataset would require a lot of man-power, because going back into the primary sources is both painstaking and extremely unglamorous work, as Michael Laver already clearly recognized (Laver, 2003, p.27, 33).

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