The inflated measures of governmental instability

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Abstract

Most analyzes of government instability in parliamentary democracies rests on a standard definition of what counts as a new government. Three criteria are used. A new government exists whenever there is a new Prime Minister, after the occurrence of a general election, and whenever the partisan composition of the government changes. Obviously fruitful in many respects, the definition is problematic if we are interested in the political phenomenon of government stability and instability; governmental durability based on the standard definition of governments is not a valid and useful measure of stability in many parliamentary systems. We argue that this measure from one perspective is too inclusive (not any change in government's partisan composition signifies instability), and from another angle too narrow (focusing almost exclusively on a government as a whole). We investigate how changes in conceptualization of what constitute new governments, affects the degree of instability in parliamentary democracies. Clearly, definitions make a difference and we demonstrate that countries might be characterized as unstable from one perspective, yet stable from another. Clearly, the commonly used definition of government used to measure government duration inflates instability, at least for some countries. We demonstrate that using more precise definitions of government longevity—ones that do not equate any changes in government's partisan composition as a sign of instability—yield important ramifications for the rank-order of countries’ governments instability.

Keywords: government stability, partisan composition, parliamentary democracies.
Introduction

Government instability have attracted the attention of political scientists for a long time (e.g. Laver 1974; Dodd 1974; Sanders and Herman 1977; Warwick 1979; Browne et. al 1986). After all the longevity and stability of governments may bare consequences, especially in parliamentary systems, for the degree to which governments command control over parliament, is able to pass its desires policies (Saalfeld, 2008), and even prevent political paralysis and regime failure (Huber and Martinez-Gallardo, 2004). Scholars debated the terms one should use, theoretically and empirically, to discuss government instability (Browne et.al. 1986; King et.al 1990; Budge and Keman 1990; Woldendorp et al. 2000, 2011; Müller and Strøm 2000; Warwick 2007; Somer-Topcu and Williams 2008, Barbieri and Vercesi, 2013, Huber and Martinez-Gallardo, 2004), examine the causes of instability (Laver, 2003; Robertson, 1983), and its effects on regime support and institutional trust (Warwick, 1994), governance and government quality (Lijphart, 1994), policy instability (Brewer, 1983) and more.

Throughout most of the literature, the consensual approach to define government instability was through measurements of government duration (Bergman et. al 2013). To this end a government was defined according to the three criteria: if a new prime minister is confirmed; if elections occur (even if the same prime minister/government emerges); if a change is identified in the composition and/or parliamentary support of the government (e.g. Woldendorp et al. 2000, 2011; Müller and Strøm 2000; Müller-Rommel et.al. 2004; Somer-Topcu and Williams 2008).

We challenge this standard approach from several perspectives: to begin with, we argue that solely equating government instability with the duration of governments forces scholars to adopt a narrow perspective about government instability, as they only look at the government as a whole. Rather, we argue that in addition to government duration, one should operationalize instability by looking at changes in government's personnel, and more specifically, prime ministerial and ministerial duration, as well as by the time that lapsed from on election to the other. While some countries' degree of instability is not affected by our broadened definition, for other countries a more complex perspective is crucial. For example, we find countries which are characterized by short lived governments concurrent with prime ministers who reside for a long continuous periods of times.

Thus, we contend that the three criteria above do not necessarily measure governmental instability. Specifically, not any change in the composition of a government should be regarded as an empirical manifestation of government instability.

In what follows we develop a more precise and inclusive definition and measurements of government instability. After presenting the literature on the causes and consequences of government instability, and discussing at length the pitfall with the current literature we reconstruct the concept of government instability to be more inclusive on the one hand - comprising measures of personnel longevity and lapsed time between election cycles - and
more precise on the other hands - i.e., they do not equate any partisan change as an instance of instability. We demonstrate that classifying countries as characterized by government instability is affected by our modifications.

I. Determinants and consequences of government instability

A prolific strand of literature on the causes of government instability has emerged over the years. Scholars who study the causes of government instability refer to various types of factors that impact survivability. The first set of factors relates to the structure of government. Chief among these factors is the configuration of the government i.e., whether it is a single party government (Chiru, 2015), a minimum winning coalition, a majority cabinet or other forms of cabinet, which have been found to correlate significantly with government durability (Warwick, 1979, 1994). Dodd (1976) claims that minimum winning governments are more stable than non-minimum winning governments, yet Saalfeld (2008) finds minimum winning governments to be less stable than majority governments in general. Similarly, Walther (2017) also find minority government to be less stable and likewise Bergman et. al. (2013) find that majority cabinets are more stable in both Western Europe as well as Central Eastern Europe. Van-Roozendaal (1997) finds that the presence of a dominant party in the cabinet increase government's stability.

In addition to governments' configuration, the effective number of parliamentary parties was also found to correlate positively with government instability such that the higher the effective number of parliamentary parties the greater the likelihood for governmental instability (Saalfeld, 2008, Taylor and Herman, 1971, Walther, 2017). Cabinet seat share, the number of cabinet parties, and the maximum possible government duration have all been regarded as potential determinants of government instability, as well (Bergman et. al. 2013, Saalfeld, 2008).

Variables that relate to the governments’ preference composition also have been regarded as key determinants for government instability. Generally speaking, the more ideologically homogenous and condense the cabinet is, the greater the likelihood it will survive for a longer period of time (Warwick, 1979; 1994). Scholars have used various variables to tab into the effect of ideological preference on instability. They measure the cabinet preference range (Savage, 2013), the extreme party seat share (Saalfeld, 2008), and whether the median party (on the first dimension) is in the government or not (Saalfeld, 2008).

Savage (2013) also finds that a party system's preference structure has an effect on government instability. Savage argues that a polarized pattern of party competition is associated with greater stability since parties have no incentive to defect to the other bloc. Consequently, governments characterized by narrow preference range, within a narrow bloc, were more likely to survive in Central and Eastern Europe, than ideologically diverse cabinets, which were formed in a non-polarized system. Walther (2017) finds ideological variables to be less crucial for government stability in Central and Eastern Europe.
Relatedly, Druckman (1996) found that intra-party disagreements also correlate with coalition instability. Specifically, he discovered that coalitions composed of factionalized parties are more unstable, compared to coalitions with homogenous parties.

Various institutions have also been regarded as influential for governments' instability. For example, positive parliamentarism—i.e., the existence of an investiture vote, has been associated with government duration (Saalfeld, 2008, Van Roozendaal, 1997, Warwick, 1994). Indeed, Ström (1985) argued that governments in countries with investiture vote are likely to stay in power for longer periods due to selection: weaker coalitions will not be able to pass the investiture vote, making them a rare phenomenon. Rules concerning government termination have also been linked to governments' survival rates (Schleiter and Morgan-Jones, 2009).

Other institutional structures, for example bi-cameralism or semi-presidentialism (Chiru, 2015) also affect government stability. Druckman and Thies (2002) suggest bicameralism may affect government instability as they find that governments which enjoy upper chamber majorities are more durable. Similarly, Chiru (2015) finds government in bi-cameral countries to enjoy greater stability.

Another set of variables which relate to government instability revolves around the bargaining period that was needed to form the government. Thus, the existence of coalition agreement, the time it took for the government to form, or the number of formation attempts (Warwick, 1994) have all been linked to government duration (Saalfeld, 2008, Van Roozendaal, 1997). Chiru (2015) finds a relationship between the pre-electoral coalitions and government durability, such that governments in Western and post-communist countries, that were formed by pre-electoral coalitions, were less likely to discretionally terminate early.

Lastly, scholars also address the impact of critical events on government duration. Thus, scholars find inflation rates and changes in unemployment rates to affect government duration (Robertson, 1983; Warwick, 1994, Saalfeld, 2008). Indeed, the stochastic models for government instability, argued that government duration is mainly a stochastic process, and the likelihood that a government falls depends, by chance, on the occurrence of critical events such as economic hardship or war (e.g. Browne, Frendreis and Gleiber, 1986). Laver and Shepsle (1998) distinguished among four types of critical events, that may lead to government termination: agenda shocks (a polarizing policy is put on the coalitions' agenda for example: stem-cell research), policy shocks (e.g., environmental or immigration crisis), decision rule shocks and public opinion shocks. Recently, Hellström and Walther (2017) found that economic condition affect government termination only for coalition governments, arguing for a conditional effect of economic circumstances and government structure on government instability.

A less comprehensive, and yet equally important, is the literature which study the effects of government instability on the political system. Scholars address the question about the connection between government duration and its quality and agree that the duration of a
government is not equal to its overall quality, but duration is one of the pre-conditions of
effective government (Sartori 1994). Indeed, short-lived cabinets are regarded as ineffective
policy-makers “because they lack time to develop and implement coherent political programs”
(Lijphart 1994, 165). Likewise, government instability is associated with ministerial
inefficiencies (especially vis-à-vis the bureaucracy (Huber and Lupia, 2000).

Government instability may introduce uncertainty and can consequently lead to economic
inefficiencies and difficulties (Alesina et. al. 1996), as forming, adopting and implementing
economic agendas become more difficult. In addition, frequent government turnovers may
reduce citizens' support in the institutions and erode legitimacy (Harmel and Robertson,
1986).

II. Conceptualizing and Operationalizing Governments

The literature contains lively debates concerning the definitions and measurements of
government instability. Even the term that is being used is debated: while some scholars refer
to government duration or survivability (Somer-Topcu and Williams, 2008; Diermeier and
Stevenson, 1999; Warwick, 1994; Bright et. al. 2015; Saalfeld, 2008; Maravall, 2009), others
talk about government's stability or lack thereof (Taylor and Herman, 1971; Huber and
Martinez-Gallardo, 2004; Harmel and Robertson, 1986; Timmermans and Moury, 2006;
use the terms "duration" "stability", and "survivability" interchangeably (Saalfeld, 2008;
Conrad and Golder, 2010). While this debate seems inconsequential or negligible, we argue
it is not. If scholars focus on studying government duration, then conceptualizing it using
government longevity seems appropriate. But when one focuses on government stability or
lack thereof, two issues arise: first, it may be inappropriate to conceptualize it solely as
government longevity and second, the naïve operationalization of government (using three
criteria prevalent in the literature, as we discuss below) may give rise to issues of measurement
validity.

With regards to the first concern, we argue that the concept of government (in)stability is
wider than a mere emphasis on government longevity and should include multiple aspects, for
example ministerial turnovers, prime ministerial turnovers, and lapsed time between elections,
to mention a few.

Indeed, the literature have started to pay attention to the multifaceted nature of government
instability, and for example conceptualized, defined, operationalized and studied ministerial
turnovers, as a distinct, yet relevant, concept. Huber and Martinez-Gallardo (2004) challenge
the conventional operationalization of government instability, which focuses on government
longevity, and examine the portfolio experience and political experience of ministers in the
Fourth and Fifth French Republic. They conclude, among other things, that the stability of the
Fifth Republic—measured solely by government duration—is over-rated. Furthermore, the

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1 Although the authors point to the possibility of spuriousness whereby economic performance affect both
government instability and regime legitimacy.
authors find that by operationalizing government instability using ministerial turnovers and expertise, the apparent governmental stability of majoritarian systems disappears. In Huber and Martinez-Gallardo (2008), the authors base the analysis on individual ministers' stability in parliamentary systems and conclude, again, that the relationship between cabinet instability and ministerial instability is relatively weak.

Other scholars also shed a light on ministerial turnover as a characteristic of government instability. Fischer et. al. (2012) argue that institutional factors such as regime type and party systems affect ministers' durability as well as individual level characteristics such as gender and age. Bright et. al (2015) examine whether the prestige of the portfolio affect ministerial survivability. Examining 7 West European Countries from 1945-2011 they find that ministers in more important portfolios are more stable and durable, compared to ministers in less stable portfolios. Institutional factors, such as the size of the party the minister belongs to, as well as personal characteristics such as age, also affect ministerial survivability. Hansen et. al. (2013), suggest that the saliency of certain portfolios affect the durability of ministers and ministerial turnover: they argue that higher ranked portfolios are likely to witness less turnover since for these highly ranked positions, the candidates for the ministership have been thoroughly screened ahead of time. Moreover, they find a conditional effect: when government approval rate is in decline prime ministers are less likely to reshuffle or fire important ministers, than when approval rates are improving. They find support for the assertion in a dataset for Scandinavian countries from post-war period. The findings by Hansen et. al. imply that ministerial turnover might be a sign of government stability and strength, rather than an indicator of weakness and instability. Indeed, many of the scholars that study ministerial instability challenge the naïve perspective of equating ministerial instability with governmental weakness (Huber and Martinez-Gallardo, 2008, Dewan and Dowding, 2005).

We, therefore, argue that when one wishes to study governmental instability one should broaden the scope of measurements used beyond government longevity to include ministerial and prime ministerial turnovers, as well as lapsed days between elections. One should also bear in mind that (in)stability in one of these indicators does not necessarily imply (in)stability in all the other indicators. A country may exhibit high levels of ministerial turnovers while experiencing a relative stability with regards to government longevity or prime ministerial turnover. Future research will have to examine whether and to what extent the same determinants affect each aspect of government instability, and likewise whether they foster divergent consequences.

The second concern that arise when one studies government instability involves measurement validity. Most of the empirical literature focus on government's longevity, when conceptualizing government instability or cabinet survival. Specifically, most scholars use the number of days/months a government was in office oftentimes standardizing it by the maximum possible number of days the government can be in office. For example, Sanders and Herman (1977) propose to standardize government stability and conclude that the best way to do this would be a measure what they call 'government survival' which is a percentage
"based on the maximum period of time in which a government can remain in office" (Herman and Sanders 1977, 356).

The standard manner by which scholars count government duration rests upon the decision concerning what constitutes a government. In other words, in order to count the number of days a government was in office, one needs to determine the starting and ending point of a government, or put it differently to decide what constitutes a government? In the last two decades the standard definition of a new government in the comparative literature/empirical data-sets contains three options: a change of government takes place if there is a new prime minister, a new election (even if the same prime minister/government continues) or a change in party composition and/or parliamentary support of the government (e.g. Woldendorp et al. 2000, 2011; Müller and Strøm 2000; Müller-Rommel et.al. 2004; Somer-Topcu and Williams 2008; Browne et. al. 1984). 2

While the three criteria mentioned above facilitate comparison across countries, we argue that they do not, necessarily, measure governmental instability. The main issue rests with the third criterion, namely, that any change in the composition of a government constitutes a new government, and consequently is regarded as an empirical manifestation or indicator of government instability. The assumption of this measure is that as the number of government rises so does the instability. Yet, not all instances of changes in coalitions' partisan composition signifies instability.

To begin with, an entrance of a new coalition partner, and an increase in the number of parties in the coalition (which constitutes a new government according to this definition) rarely indicates governmental instability. Second, even in cases where the number of coalition parties is reduced, stability may remain intact. If a withdrawal of a coalition partner leaves the coalition majority status unchanged, stability remains largely unaffected. Thus, if a surplus coalition witnesses a withdrawal of a partner, which leaves its majority status as a surplus coalition, instability is unbothered. On the other hand, if the departure of a partner alters the coalitions' majority status from a surplus to either a minimum winning coalition or a minority coalition, then stability is hampered. By the same token, if the exit of a coalition partner changes the coalition's majority status form a minimum winning coalition to a minority government, stability is altered.

Let us bring a few examples to illustrate the anomaly of equating any change of the composition of a government as an indication of a new government for the sake of studying governments' instability. We begin by providing examples of instances in which the total number of coalition parties was reduced without altering the majority status of the government, and continue with examples of increasing the coalition's legislative support base. Following the 2000 elections in Croatia Račan became the prime minister and he formed a 6-party center-left surplus coalition (SDP, HSLS, HSS, LS, HNS, IDS). On June 2001, the Istrian Democratic Assembly (IDS) left the government reducing its majority to 117 MPs (out

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2 Conrad and Golder (2010) critiqued this definition arguing that caretaker periods following government resignation and delays in the government formation process that are largely ignored in most studies of parliamentary governments should be taken into account.
of a total of 151). Needless to say the majority status of the coalition stayed intact as the post June 2001 coalition remained a surplus coalition. We doubt whether such in instance signifies an incident of instability, as the traditional coding of government instability assumes. Likewise, after the 1995 Latvian elections, PM Šķēle formed a 7-party coalition, that enjoyed the support of 73 MPs (out of a 100). On February 13th, 1997 parliament approved "a new" government headed by Šķēle, and supported by 70 members. "The new cabinet differs little from the one he [Šķēle (y.s.)] headed for a year" (Jeffries, 2004 p. 191). One has to wonder whether such a minute change to the coalition requires scholars to equate it with instability. While scholars may debate whether a decrease in the number of coalition partners that does not alter the coalition's majority status is a sign of instability or not, there is little reason to believe that an increase in the number of coalition partners indicates instability. For example, In Israel, during the weeks preceding to the Six Day War (1967), it became apparent that a war is imminent. Israel started to quietly prepare for the possibility of a war: enlisting reserve units, adding military and civil shielding, and vigorously seeking approval and support from allies around the world, mainly the United States (Zalmanovich, 2017). By June 1st, 1967 - a mere 4 days prior to the onset of the war - a national unity coalition was formed, whereby prime minister and security minister, Levi Eshkol, enabled (amid public pressure), Gahal and Rafi parties to join the coalition, increasing the coalition's legislative support base from 75 Knesset Members to 111 (out of a total of 120 MKs). This clear change in the composition of the coalition can hardly be regarded as a sign of instability. Yet, by adopting the prevalent definition in the literature, this national unity government is counted as a separate government than the one that preceded it, and consequently is counted as an evidence for instability.

Adding additional coalition partners does not have to occur because of a war or economic crisis. Prime ministers wishing to strengthen their governments, stabilizing the coalitions, and diminishing veto power of coalition partners may strive to add more parties to the coalition throughout its reign. Tindemans, the 43rd prime minister of Belgium, formed a minority government following the 1974 elections. His government, announced on April 24th, 1974, enjoyed the support of 102 MPs (out of 212). In June 11th, 1974 the regionalist Walloon Rally party (RW) joined the government, altering its majority status, whereby 115 out of 212 MPs now supported the government. While the prevalent definition regards the addition of the RW as an indication for a formation of a new government, and consequently as a sign of instability, we contend that increasing the number of coalition partners does not imply instability.

Likewise, following the 2015 elections in Israel, Netanyahu was appointed, by the president on March 25th as the formature, and the negotiation process began. On April 20th, he was awarded a 14 days’ extension, during which coalition agreements were signed between Likud and 4 parties (Kulanu, The Jewish Home, Shas and Yahadut Hatorah). on May 6th—the last day of the extension period—Bibi announced he was able to form a minimum winning center-right coalition and an investiture vote was supported by 61 MKs. Interestingly, Yisrael Beiteinu—headed by Lieberman—which is regarded as a natural partner in a center-right coalition remained in the opposition. After a year, Netanyahu and Lieberman signed a coalition agreement, officially increasing the support base of the coalition from 61 to 67,

3 Ipu data: <http://archive.ipu.org/parline-e/reports/arc/BELGIUM_1974_E.PDF>
alleviating the veto player status of two coalition partners (Shas and Yahadut Hatorah)\(^4\). During the press conference held while signing the coalition agreement Bibi said: "since forming the government, a year ago I emphasized time and again that I intend to broaden it. Israel needs government stability to deal with the challenges ahead…”(Lis, 2016). While the traditional coding assigns a new coalition number for this newly formed government, we argue that one cannot associate Yisrael Beyteinu's entering the coalition with instability.

Thus, we argue that the traditional measure of government instability, which equates any change in the partisan composition of the government as an instance of a new government and therefore as an indicator of instability inflates instability at least for some countries. In what follows we examine in which countries government instability was inflated.

### III. Re-constructing government instability

In light of the above-mentioned pitfalls, we propose to re-construct the concept of government instability. To begin with, and in light of the examples of empirical anomalies we presented above, we argue that the definition of a government scholars uses to measure government instability is flawed. Specifically, we do not believe that any change in a government's partisan composition or a government's legislative support base should constitute an indication of a new government (for the sake of operationalizing government instability). Rather we propose that only changes in cabinet composition that alter the government's majority status should be counted as indication of a new government, and hence as symptoms of instability. Specifically, we created two alternative counting rules. While we adopt the first and second criteria—i.e., new PM and new elections as indicating the beginning of a new government, we modify the third condition. We argue that only changes in coalitions' partisan composition, which alter its majority status, should be counted as new governments, and consequently regarded as indications of instability.

Formally, rule 1 counts a new government when either 1. a government is formed after elections or 2. a new PM is sworn in or 3: the coalitions' partisan composition changes, such that it alters its majority status from a MWC to a minority government or from a surplus government to either a MWC or a minority government. Under Rule 1, addition of parties to the government do not entails the creation of a new government for the sake of studying government instability. Rule 2 counts a new government when either 1. a government is formed after elections or 2. a new PM is sworn in or 3: partisan composition changes alter the majority status of a coalition as follows: a. from a MWC to a minority government; b. from a surplus government to either a MWC or a minority government; c. from a minority government to a MWC or surplus coalition; d. from a MWC to a surplus government. Rule 2, thus, enables one to infer instability also in instances in which the number of coalition parties’ increases, but only in cases where such a change alters the majority status of the government.

In the following results section, we present preliminary analysis of the distribution of instability under the two newly proposed rules, and juxtapose them against the traditional

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\(^4\) Kulanu and the Jewish Home remain veto players.
operationalization. As will become evident, for some countries, there are rather large differences across the three definitions. In the future we intend to study whether our understanding concerning the determinants of instability changes based on our modified operationalization.

We further argue, similar to Huber and Martinez-Gallardo (2004), that other indicators, beside government duration, should also be considered when studying government' instability. For example, we think scholars should pay greater attention to the instability of personnel who hold key cabinet positions. We, therefore, look at additional indicators such as the continuous tenure of a prime minister or ministerial durability. We farther look at lapsed time between elections as an additional indicator for government instability. As we claimed before, we anticipate that some countries might be regarded as extremely unstable on one indicator, yet exhibit relative stability on another. In the future we will study how this nuanced understanding of instability shape our knowledge concerning the determinants and consequences of government instability.

IV. Preliminary Results

4.1 Government longevity

Given our critique on the operationalization of government longevity, we established new ways to measure government duration—ones that more accurately depict certain changes in cabinet composition as government instability while leave other alternations be. As mentioned, both new counting rules leave the first two conditions for the establishment of a new government intact. Thus, under both, rule 1 and rule 2, a new government is formed when either elections occur, or a new PM is sworn in. The departure from the traditional operationalization (among which ParlGov's) is evident in the third condition. While ParlGov considers any change in partisan composition to constitute a new government, our modified rule 1 considers a new government only when composition changes alter the government's majority status from a MWC to a minority government or from a surplus government to either a MWC or a minority government. Rule 2 is more inclusive, as it considers partisan composition changes as a new government when it changes the government's majority status from a MWC to a minority government; from a surplus government to either a MWC or a minority government; from a minority government to a MWC or surplus coalition; and lastly from a MWC to a surplus government.

Figures 1-3 present the number of governments in the ParlGov dataset under the three counting rules. Thus, using the three figures we can compare the prevalent ParlGov definition with our modified rule 1 and rule 2. It is worth noting that the earliest date to enter our calculation is 1945 (post WW2). Yet, time exposure differs across the countries. For example, Israel first appears in 1949, Greece in 1974, Portugal in 1976 and Romania in 1990.
Figure 1: Ordered Number of Governments, ParlGov Definition

Figure 2: Ordered Number of Governments, Definition 1
While we cannot compare the order of the countries according to the number of governments they experience within a single figure (since the time exposure of each country differ), we can look at whether and to what degree using alternative measurements for government longevity changes the number of government a certain country witnessed, and compare whether using these alternative measure changes the rank order of the countries from one figure to the other.

To begin with, one can see that measurements matter. Using different operationalization of government longevity, and counting more accurately changes to governments' composition which signifies instability, significantly reduces the number of governments some countries witnessed, and alter the order of the countries according to the number of governments they had. Thus, when using ParlGov traditional counting, Israel exhibits the largest number of governments (70) to be followed by Italy (65) and France (62). However, when one uses rule 1 which considers composition changes as a new cabinet only when they alter the majority status of the government (from MWC to a minority government or from a surplus government to either a MWC or a minority government), Israel "looses" its superiority with regards to government instability, as it is ranked 6th (from the top) with 36 governments, which constitutes a reduction of nearly 50% in the number of governments. It is also worth noting, that the number of Israel governments under rule 1 (36) is closer to the count of governments by Israel itself: the current government in Israel is regarded as the 34th government. While the change for Israel is massive, other countries also experience a significant reduction in the number of governments they experience, and consequently their levels of instability. Under rule 1 France exhibit the greatest instability with 53 governments (a reduction of 14.5% in the number of governments), and Finland and Italy follow suit with 48 and 46 governments, respectively (a reduction of 13% and 29%, respectively). Under Rule 2 the 4 most unstable countries are France with 53 governments, Italy and Finland, each with 49 governments, and Israel with 42 governments.

Figures 1-3 demonstrate that using what we believe are more valid measures to count governments for the sake of measuring governments' instability changes the total number of governments certain countries experienced, and consequently their perceived level of government instability. It sometimes even changes the rank order of the countries according to their instability levels. Nonetheless, it is worth mentioning that while the changes in absolute value in instability are significant (and can reach up to 50%), the rank-order correlation between the three measurements are high. Tau-b correlation between Rule 1 and ParlGov definition stands on 0.9, and Tau-b correlation between Rule 2 and ParlGov is 0.92.
We now turn to examine government duration and the rank order of countries according to this measure. Table 1 presents, for each of the 32 countries in the ParlGov dataset, the average government duration (measured by the number of days), according to ParlGov, Rule 1 and Rule 2. It farther presents the percent difference in average duration between ParlGov definition, and each of our modified measures (Rule 1 and Rule 2). It is evident that some countries witness a major change in their government longevity when we use our new measures. For instance, the Czech Republic witness an increase of government duration of about 25% from an average of 645 days, under ParlGov count, to an average of 808.25 days under Rule 1. Likewise, Romania more than doubled its government longevity, as the average number of days a government survived increased from 412 days to about 870 days.
Figure 4 presents the average government duration (measured in days) according to ParlGov, Rule 1 and Rule 2, whereby the order by which the countries appear in the figure is determined by the rank order according to ParlGov's definition. It is evident that while for some countries utilizing the modified measurements yields little to no change in government longevity, for other countries the change is profound. Thus, whereas on average a government lasted in Israel less than 1 year, according to ParlGov's definition, it lasted more than 2 years under Rule 1. Likewise, an average duration of a Croatian government stood at about a year and a half when one uses ParlGov's measurement, but rose to over two and a half years if one uses Rule 1.
What is more important is that the increase in government longevity, depending on whether one uses ParlGov, Rule 1 or Rule 2, is not distributed randomly or equally across the countries. It seems the less stable countries according to ParlGov’s definition are the ones that witness the most significant increase in government's longevity measured by Rule 1 and Rule 2. Thus only 4 countries out of the 16 most stable countries exhibit a longevity change larger than 20%, whereas 11 out of the 16 least stable countries witness such an increased longevity. Likewise, the increase in average government duration (between ParlGov and Rule 1) for the 16 most stable countries is 12.87%, whereas this increase in government duration for the 16 least stable countries is 41.18%, a clearly significant difference. This non-random effect may indicate a systemic bias in our current understanding of the determinants of government instability, which is based on the traditional definition used by ParlGov. We intend to study whether the impact of prevalent predictors found in the literature to affect government instability remains intact, given the alternations of the measurement we advocate for.
4.2 Additional indicators for government instability

As we indicated earlier in the paper, not only do we believe the measurement for government instability, which is based on government longevity, is inflicted with measurement validity issues, but we also contend that the concept of government instability is broader than a mere focus on government longevity. While section A of the results dealt with our first concern, we now turn to looking at additional conceptualizations and measures for government instability. We compare government instability measured by ParlGov’s government longevity with PM durability, taken form the ParlGov dataset as well\footnote{ParlGov measures the continuous length of a PM tenure. Thus in the instance in which elections did not replace the PM, the counting clock is not set to zero. On the other hand, if PM A served in office, was replaced by PM B, and then returned to office, we set to zero the counting clock (for the second term).}.

Figure 5 compares government duration and PM duration, while the countries are rank ordered of the governments' durations. It is evident, that for most countries, governmental stability operationalized by PM longevity is much higher than the stability of governments measured by governments' longevity (only in Bulgaria does government longevity equal PM longevity). Moreover, while for some countries the decision whether to operationalize government instability using government longevity or using PM longevity is almost inconsequential with regards to their rank-ordering on instability, for other countries such a decision is significant. Thus, whereas Latvia is ranked as the second least stable with regards to government longevity, it is also ranked as the third least stable with regards to PM tenure duration. Similarly, Italy is deemed extremely unstable on both the government as well as the PM longevity measures (3rd and 5th, respectively). On the other hand, for other countries the decision to conceptualize government stability with government longevity or PM longevity is crucial. Thus, whereas Sweden is ranked as the most stable country with regards to PM tenure, it is ranked only 7, when one uses government longevity.
Astonishingly, while Israel is ranked as the most unstable country with regards to government longevity, it is at the top 1/3 stable countries, measured with PM continuous tenure duration. Indeed, Tau-b correlation between government duration (defined by ParlGov) and PM duration is 0.55, indicating that some countries might be characterized as unstable on one measure, but as stable on the other. Future research will examine whether the determinants that affect government longevity also affect PM longevity, and whether the consequences of each type of instability are similar or not.

An additional aspect of government's instability relates to ministerial duration in office (Fischer et. al. 2012, Bright et. al. 2015). We compare government longevity as defined by ParlGov with the continuous length of ministers in office. To that end we use Seki and Laron (2014) data-set, which defines ministers' duration in office as follows: the starting date of a minister in a given portfolio is either: 1) the date of the government's tenure, or b) the date at which the minister, as a replacement, took office. The end date of a minister tenure is defined as either 1) the end of the government's tenure, 2) the date at which the minister was replaced.

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6 When ministers are replaced in the middle of a government's tenure, the previous minister's end date is the replacing minister's start date (minus one day).
Figure 6 juxtaposes governments' duration and ministers' duration, where countries are ordered by the governments' longevity measures. It is evident that while for some countries operationalizing government instability as either government longevity or ministerial duration yield substantively similar conclusions (e.g., Norway or the Netherlands), for other countries ministerial instability is much larger than governmental instability. Indeed, tau-b ranked order correlation between governments’ and minister's duration in office stands on 0.67, indicating that while correlated, these two measures may tap into divergent aspects of government instability.

The last aspect of government instability we examine relates to the lapsed time between elections. Minister Steiniz from Israel's Likud party said in an interview, days after PM Netanyahu called for the 2015 early elections that the upcoming elections are about governability. There is a real chance, continued Steiniz, that Israel will reach Italy's status, with elections every year and unstable governments. We contend, similar to our discussion about the other indicators for government's instability, that there isn't, and should not be, a direct link between lapsed time between elections and government longevity. Thus, a country might be characterized by short lived governments concurrently with elections that tend to be held on time.

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Seki and Laron (2014) do not define 'a government' in the exact why ParlGov does. These differences enable the anomaly that average ministers' duration, estimated from Seki's and Laron's data, would be larger than the average government's duration, estimated via ParlGov. In fact, out of 30 countries for which data was available, 11 countries experienced longer ministerial duration than governmental duration. We intend to remedy this pitfall by re-calculating, in the future, ministers' duration in office according to ParlGov, Rule 1 and Rule 2. Interpretation of Figure 6 should, therefore, bare this caveat in mind.
Figures 7 and 8 present countries' lapsed time between elections alongside their average governments' duration. While Figure 7 presents the row number of days between elections (and countries are ranked according to this later variable), Figure 8 present the lapsed time between elections as a percentage of the maximum possible time between mandatory elections as is prescribed by each country's laws (and countries are ranked according to this variable). Figures 7 and 8 reveal that the relationships between government longevity and lapsed times between elections, or government longevity and lapsed times between elections as a percentage of the maximum legal time, are weak (tab-b= 0.15 and 0.04, respectively).

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8 We in fact use a crude measure to calculate to maximum legal number of days between elections: we multiple the maximum number of years between elections by 365 days. This is a simplistic measure since in some countries the rules for when elections are to be held are more detailed than a mere count of the number of years/days between one election cycle to the other.
Moreover, comparing Figure 7 to Figure 8 reveals significant changes: thus, while when using the row number of days between elections Australia is classified as the most unstable country, when we use the more accurate standardized measure, we discover that it is ranked at the top half of the distribution. Indeed, Australia's position as the least stable with regards to its row number of days between elections stem from the fact that its parliament is elected every 3 years. Italy, experience the opposite effect: while it is ranked 7th from the top when one measures the average number of days between election, it drops to the bottom half of the distribution when we calibrate the measure using the maximum legal days between elections.
The fact that the decision, to standardize the number of days between elections by the maximum time allotted by law, alters our inference regarding stability is not surprising or novel. Yet comparing Figure 8 to Figure 9—the order of countries' stability based upon their governments' average longevity (ParlGov) to the order of countries' stability based upon their standardized times between elections—is. For example, while Israel is ranked as the least stable according to ParlGov measure, it is ranked 12th from the top when measuring stability with the average lapsed times between elections as a percentage of the maximum possible time. It seems despite Steiniz' comment, Israel does not exhibit frequent elections in comparative perspective. Similarly, while Romania is located as the fourth least stable when we look at government longevity, it is ranked as the 7th most stable when we measure the standardized times between elections. On the other hand, Denmark, which is located at the top half of the distribution of government longevity, is the second least stable with regards to the average number of days between elections as a percentage of the maximum time possible. Once again the analysis reveals a country may be characterized as unstable according to one definition, but as stable in another (and vice versa).
Last, we compare countries’ average time laps between elections as percentage of the total legal maximum to countries’ government duration as percentage of the total legal maximum possible. Figure 10 indicates that instability measured by percent government duration is larger than instability measures as percent lapsed time between elections. Moreover, and once again, the data disclose that there is a weak relationship between the two measured of instability (tau-b=0.1). Indeed, while Spain seems to be the most stable when we rank order countries according to the standardized government duration, it is located in the middle of the distribution when we operationalize instability in terms of times between elections as percentage of the total maximum possible. Finland, on the other hand shows an opposite trend: while it is classified as the 4th most stable country when we look at percent times between elections, it is the 8th least stable country when we look at government longevity as a percentage of the maximum possible longevity. Italy and Israel, which are classified as the least and 3rd least stable countries measured by the standardized government longevity measure, seems more stable when one measures the average time between elections as a share of the maximum time allowed (Italy is ranked 11 and Israel is ranked 21 out of 32 countries).
Figure 10: Average Percent Government Duration and Percent Time between Elections, ordered by ParlGov

Figure 11 presents the Kaplan-Meier non-parametric survival curve of four of the measures we presented in the analysis above: we compare the survivor function of the traditional ParlGov definition for government instability, our modified measurements of Rule 1 and Rule 2, and a measure of prime ministerial instability. It is evident that while Rules 1 and 2 yield very similar survival functions, the decision to operationalize and measure government instability as either ParlGov's measurement, our modified Rule 1 or via prime ministerial continuous tenure is consequential. Indeed, the survival function of the prime ministerial tenure measure is much flatter than the one for the government duration. Moreover, the survival function of Rules 1 and 2 indicate that in comparison to the ParlGov's definition, governments survive longer.
Thus, the probability that a government last longer than the median ParlGov's duration (=438 days) is 0.56 under the ParlGov definition and 0.65 under Rule 1. The probability that a prime minister resides longer than ParlGov's median is 0.64. Likewise, the probability that a ParlGov government lasts longer than the median of government duration under Rule 1 (=669 days) is 0.39, while this probability for Rule 1's government is 0.5. As we mentioned earlier, future research will study parametric Cox Proportional Hazard Models, to examine whether and to what extent predictors that have been identified in past research as crucial for explaining government instability are still vital in explaining instability measured by Rules 1 and 2, or prime ministers' duration.
Conclusions

Government instability is an important phenomenon that has been studied extensively from both theoretical as well as empirical perspectives. Many times scholars, as well as politicians, equate government instability with general instability of the political system. In this paper, we argue that the prevalent conceptualization and definitions used in the literature are too narrow and flawed. Specifically, we argue that the exclusive focus on government longevity when conceptualizing and empirically studying government instability is limiting our understanding of the determinants and consequences of instability, and especially the pressing issue of the relationship between governmental instability and political instability. We add additional three conceptualizations for government instability, namely prime minister turnover, ministerial turnover, and lapsed times between elections, and demonstrate that the additional aspects of government instability are distinct from government longevity. Thus, countries that are classified as unstable with regards to government longevity, may be classified as stable with regards to the other conceptualizations.

Future research will first address what are the commonalities across countries that exhibit similar patterns of instability throughout the various conceptualizations. We further intend to examine the determinants and consequences of each type of government instability (prime minister turnover, ministerial turnover, and lapsed days between elections), and especially their combination. We want to study what the combination of stability and instability across the various operationalizations tells us about the political system. For example, do prime ministers that deal with governments that witness significant ministerial turnover behave differently than prime ministers who preside over a relatively stable government from this perspective? Additionally, are policy changes more frequent in countries that witness instability on both government longevity as well as prime ministerial turnover, than in countries characterized by short lived governments, concurrent with stable prime ministerial duration? We further want to study which of the attributes of government instability contributes more to citizens' perceived levels of instability and why?

Not only do we advocate broadening up the spectrum of government instability above and beyond the prevalent focus on government duration, we also critique the prevalent operationalization of government duration itself, arguing and demonstrating it inflates levels of instability (at least for some countries). The literature, which equates government instability with government longevity, counts the number of governments and their durations. To this end, scholars have to define what constitutes a new government. The common definition and operationalization relies on a combination of three criteria. One counts it as a new government if (1) elections occurred; (2) the prime minister changed; and (3) any change to the partisan composition of the cabinet occurred. We argue that the third criterion artificially inflates government instability. Not every change in a coalitions' partisan composition signifies instability. A surplus coalition, which loses one of its partners, while maintaining its surplus status, most likely does not intensify government instability. Moreover, adding coalition partners, especially in times of crisis (like war or economic hardship) can hardly be regarded as a sign of instability. We therefore advocate using more realistic counting rules, ones which only considers changes to the government partisan composition as an indicator of government
instability, if these changes alter the majority status of the coalition. Using these narrower, but
to our understanding more precise, counting rules reveals that at least for some countries this
change has profound consequences. Moreover, the increase in government longevity evident
while using our modified counting rules, is not distributed randomly or equally across
countries. The least stable countries according to the established definition are the ones that
witness the most noteworthy increase in government stability measured by our modified rules.
This non-random effect may indicate a systemic bias in our current understanding of the
determinants of government instability. We indeed aim to study whether the causes of
government instability remain intact once we use the more accurate measure of government
longevity.

Our new measurement can affect previous and future research on government instability and
political instability more generally. Since we question the commonly used definition of
government instability and offered new measurements, previous findings should be
reexamined in order to see whether their conclusions are still the same or the literature can
gain new insights that may affect daily life in democracies. For example, studies that analyzed
how politics (measured by cabinet changes) affects economic performance (Alesina et.al.
1996; Aisen and Veiga 2013; Hellström and Walther 2017), or studies about government
formation, portfolio allocation and formateurs’ bonuses which had opposing conclusions
(Warwick and Druckman 2006; Carroll and Cox 2007; Hansen et. al. 2013; Falcó-Gimeno
and Indridason 2013; Bright et. al 2015) should be re-examined in light of our critique. As
Heraclitus insistence on ever-present change as being the fundamental essence of the universe,
we suggest to embrace the theoretical and empirical change we offer regarding government
instability and reexamine previous finding in order to have a better understanding for the
future.
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