

Measuring Presidential Powers: Some Pitfalls of Aggregate Measurement

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Abstract

The purpose of this paper is to address the issue of validity and reliability in existing additive indices measuring the strength of executives. Many data efforts such as Frye, Hellman and Tucker (2000) as well as Armingeon and Careja (2007) propose indices of presidential power based on a simple accumulation of a set of individual constitutional prerogative allotted to the head of state according to the design proposed by Matthew Shugart and John Carey (1992). These indices usually gather and count the powers of presidents on package and partial vetoes, decrees, budgetary powers, referenda provisions, initiation of legislation, cabinet formation, cabinet dismissal, censure, and dissolution of assembly. Despite the general acceptance of such measures of presidential powers and their widespread use, empirical investigations to ascertain the degree to which existing indices measure a single latent construct, and are valid and reliable, were never conducted. In this paper I refute the assumptions of unimodality and unidimensionality underlying these indices, and challenge their usefulness in allowing researchers to differentiate between presidential, semi-presidential and parliamentary institutional arrangements.

I. INTRODUCTION

Like measurements of other macro phenomena, such as levels of democracy, the classifications of parliamentary versus presidential regimes, as well as measures of executive strength available are varied in the literature (Baylis, 1996; Cheibub, 2007; Derbyshire & Derbyshire, 1996; Duverger, 1980; Easter, 1997; Elgie, 1998; Frye, 1997; Frye, Hellman, & Tucker, 2000; Golder, 2005; Hellman, 1996; Krouwel, 2003; Lucky, 1993-1994; McGregor, 1994; Metcalf, 2000; Sartori, 1997; Matthew.S Shugart & Carey, 1992; Stepan & Skach, 1993). Scholars who choose simple categorical classification of institutions (parliamentary, hybrid, or presidential) as proxies to evaluate levels of executive power have been criticized for employing denominations that do not capture the extent of concentration of power and overlook the differences among the many possible hybrid arrangements (e.g. Mainwaring, 1993; Stepan & Skach, 1993). As a response, there has been a rising consensus over the appropriateness of using continuous indices, based on the power that executives derive from prerogatives vested constitutionally in the presidential office. With this, most quantification efforts of this feature of political institutions put forward composite indices that are additive functions of n observed variables x_1, \dots, x_n with or without an item-related weighting design.

While much theoretical work was invested in the making of these tools for measurement, most contributions emphasize the theoretical validity of individual indicators of indices (Krouwel, 2003; Metcalf, 2000), or stress the importance of specific items like decree power, veto powers, or the power to make amendatory “observations” after a veto override, just to name a few (Carey & Shugart, 1998; Protsyk, 2004; Matthew Soberg Shugart & Haggard; Tsebelis & Rizova). Conversely, practically no systematic empirical investigations were conducted on the more methodological aspects of composite indices, for instance, the significant issues of validity and reliability. In the present paper I intend to cover this empirical gap by examining three available indices of presidential power. The paper will address questions such as: what are the rules for the establishment of a measurement of presidential prerogatives? Do all powers vested presidents in constitutions map a single latent construct? Or more simply, should we even make a composite index? Given how widespread the use of these indices as independent variables in various research projects is, it is crucial to examine their quality by addressing these questions.

The demonstration will be conducted in two main sections, focusing on two main families of measurement. First, I will examine Matthew Shugart and John Carey’s measurement from *Presidents and Assemblies* (1992), together with Frye, Hellman and Tucker’s *Data Base on*

Political Institutions in the Post-Communist World (FHT) (2000). Second I will examine *Comparative Data Set for 28 Post-Communist Countries, 1989-2007* (CPD) by Armingeon and Careja (2007). For each measurement family, I will perform correlation/association analyses between the items; this first set of analyses make it possible to evaluate the level of validity of the chosen indicators as reflections of the larger concept of presidential power. If all indicators retained measure a single latent construct, they should display high inter-item correlation coefficients, and high correlation with the composite index. To complement these analyses and to evaluate the potential validity and reliability of an index of presidential powers, I will employ two additional methods: a calculation of the coefficient Cronbach's α of scale reliability and factor analysis to reduce the number of indicators to a set of unobserved factor(s) that have a common causation influence. As a last step, building on the exploration of the datasets, I will propose alternative measurements focusing on a selection of core presidential power.

The findings of the paper are twofold: 1) most existing measurement frames are low in validity and reliability, where single indicators hypothesized to capture the concept of presidential power do not seem to matter equally in accounting for composite scores. 2) None of the measurement schemes under examination—in their original form—are unidimensional, meaning that all items pertain to a single latent construct. Consequently, researchers should exercise caution when using these measurements assuming this much. Since the population of potential cases is limited, robust empirical testing of indices containing many item is practically impossible; given these difficulties, it is perhaps more efficient to rely on a limited set of items we know are valid and reliable, rather than to opt for exhaustive measures which may contain indicators that pertain to different latent constructs and reduce the overall quality.

II.METHODS TO MEASURE PRESIDENTIAL POWER AND DATA

Methods to measure presidential powers are generally more consensual than most other aspects of macro political science. In general, contributors focus on the formal prerogatives of presidents, such as those included in written documents like constitutions. Very few, if not no method, systematically considers informal aspects of presidential power. For cause, this aspect of authority is more difficult to quantify and offers little hope of comparability across different groups of countries. Therefore, most of the remaining debates in the literature concern which powers should be considered as defining features, rather than on the core approach to capture the concept of executive strength.

Surveying the literature on existing methods to measure presidential powers, I encountered two slightly different strategies to measurement. The first, and most authoritative method employed, was formulated by Matthew Shugart and John Carey (1992), later modified by Metcalf (2000), and also used in *Data Base on Political Institutions in the Post-Communist World* (FHT) by Frye, Hellman and Tucker (2000) [see appendix for complete item list]. In this measurement frame, powers of popularly elected presidents are evaluated in 10 discrete categories, each of which is rated on a scale ranging from 0 to 4. This method of evaluating prerogatives makes it possible to make finer distinctions. The measurement scheme can be further disaggregated in two parts. The first part contains legislative powers, that is, constitutional prerogatives allotted to the president in the legislative process: if the president has package or partial veto powers, decree authority, exclusive introduction of legislation in reserved policy areas, how vast are the budgetary powers, and the possibility of proposing referenda. In turn, the non-legislative powers concern; cabinet formal and dismissal, the possibly of censure, and last, the prerogative to dissolve the national assembly. Researchers generally use two additive indices from these scores, an index of legislative powers and an index of non-legislative powers, weighing each dimensions an equally, and summing up across all ten variables to create an overall index of presidential powers (e.g. Hicken & Stoll, 2008, 2011).¹

The second approach to measurement consists of listing potential formal presidential powers, as originally proposed by Duverger (1978).² Since then, several contributors have proposed measurements schemes that are more or less comprehensive lists of presidential powers, scoring 1 or 0 depending if the president has the power in question, and then summing up these scores to offer composite indices. Recently, Alan Siaroff (2003) put forward a parsimonious additive index of 9 powers (coded 1 or 0) of popularly elected presidents that is gaining in popularity (Samuels, 2004; Tavits, 2007, 2009a) [see appendix for complete item list]. At the more expansive end of the continuum, Timothy Frye (1997) and Christian Lucky (1993-1994) proposed lists considering respectively 27 and 38 presidential powers to rank order presidents in former communist countries [see appendix for complete item list]. While Shugart and Carey (1992), and Siaroff (2003) concentrate on popularly elected presidents, some of the most used measurement schemes of presidential powers consider a broader distribution of regime types, but

¹ For instance, Frye, Hellman and Tucker's aggregate index of presidential powers was used in (Botcheva-Andonova, Mansfield, & Milner, 2004; Fortin, 2008; Frye, 2002; Pacek, Pop-Eleches, & Tucker, 2009; Slantchev, 2005).

² Duverger considered 14 powers.

weight items differently depending if the president is directly or indirectly elected. One prime example is *Comparative Data Set for 28 Post-Communist Countries, 1989-2007* (CPD) by Armingeon and Careja (2007). The end measurement they put forward is built from a comprehensive list of 27 presidential powers—some of which overlap with items considered by Shugart and Carey (1992)—and allot them equal weights in a final additive index comprising all powers where the scores of countries where the president is indirectly elected is divided by half [see appendix for complete item list].

Having presented the most commonly employed measurements schemes, we can draw some conclusions about their shared assumptions and areas of agreement. All in all, a majority of researchers believe that the most important prerogatives of presidents are numbered between 9 and 38. And since every measurement scheme proposes a form of additive index, it could also be argued that they consider that; a) all powers are equally relevant; b) all powers co-vary in the same direction; and last, c) all powers belong to a single latent construct. However as I will demonstrate in the following section, these aggregate measurements tend to offer murky measurement at best.

III. QUANTITATIVE ASSESSMENT OF COMPOSITE PRESIDENTIAL POWER INDICES

Despite the strong theoretical reasoning justifying the choice of individual indicators of presidential powers for the making of a composite measure, the impact of the methodological choices made during the development of each index was rarely evaluated empirically. This is a major shortcoming. Such an omission is startling given that all usages of presidential power measures have been of a composite index, not so much of individual features, or a combination of certain features in a series of dimensions composing the larger phenomenon of presidential powers. Contributors have used these indices in quantitative analyses without knowing if they were measuring this feature of political systems reliably. Substantively, this means that researchers have aggregated a set of indicators without knowing whether or not they were associated, if this association was in the same direction, and finally often giving each component an equal weight, or worst, scant empirical support in favor of the weighting scheme applied. These open questions make it crucial to assess the quality of available measurements.

A common situation that makes the building of a composite index necessary is when researchers are facing a set of items that measure a given phenomena, whose effects are so closely associated, they cannot be used separately in a multivariate analysis: when the items are

not related, composite indices are not only unnecessary, they are even counter-productive. Therefore, when building indices, the most important property of measurement is validity. Broadly stated, validity refers to whether a measuring instrument actually measures what it is set to measure in the context in which it is to be used. Or more precisely, “the extent to which difference in scores on a measure reflect *only* differences in the distribution of values on the variable we intended to measure” (Manheim, Rich, Willnat, & Brians, 2005, p.76). In addition to being valid, a measurement scheme must also be reliable, that is, the set of items selected should measure the target concept consistently (internal consistency) and proportionately measure mostly “true score.”

To evaluate the potential validity and reliability of the various indices included in this paper, I employ three methods where applicable: (1) correlational analyses, to confirm that the differences in country scores for the various indicators are mirrored in a similar way across items. This type of analyses enables us to evaluate the level of validity of the chosen indicators as reflections of the larger concept of presidential power. If the measures selected represent a single concept, all items should be closely linked with each other in a manner that is internally consistent (one of the necessary conditions of construct validity). Each of the items should also be correlated with the composite index since variations in items that are not explained by the larger concept are potential sources of systematic measurement error. On this topic, Booyesen (2002) even suggests that a weak correlation between an underlying indicator and an index should result in the exclusion of the respective indicator from the process. However as underlined by Saisana (2007), the reverse situation—large correlation coefficients—do not necessarily imply a strong influence of indicators in an overall index; a random variable could potentially be strongly correlated with the index, without being part of the latent construct under study. Given the small number of cases considered in this study, the probability of such spurious correlations should be taken seriously. Next, (2) I perform a calculation of the coefficient for Cronbach’s α of scale reliability to evaluate how much the items have in common. As a last step (3), I will perform exploratory factor analyses (EFA) to reduce the number of items to those who share a common causation pattern. Since no such analysis was performed to date on composite measures of presidential powers, EFA is particularly useful in the present situation where there is little theoretical basis for specifying either the number of factors or the relationship between the variables and latent factors (Hurley et al., 1997).

A) Shugart and Carey /Frye, Hellman, Tucker

Since the index of presidential powers proposed by Shugart and Carey (1992) reposes on the aggregation of items from two theoretically distinct dimensions of power, I propose to look at correlation patterns between items in each dimension separately, and also to look at the correlation of each item with the total index. If presidential powers are really distributed according to a two-dimensional map of ten variables, we should see all items clearly and strongly correlated in two separate clusters. Table 1.1 below presents a correlation matrix between the ten measures of legislative power chosen by the authors, as well as with the composite score.³ For this exercise, I have pooled Shugart and Carey's as well, as Frye et al. groups of countries together. I have kept a single case of countries overlapping between both populations, and ran analyses once containing all available valid cases (62), and also once removing authoritarian regimes (47 cases).⁴ Although interesting cases, the stable autocracies included in both datasets might provide a different kind of insight in evaluating the effects of formal institutional design such as presidential powers, and I judge it more prudent to examine their effects separately wherever relevant and possible.

[Table 1.1 About here]

As mentioned above, patterns of association such as those presented in Table 1.1 allow us to evaluate the validity of the chosen indicators as reflections of the larger concept of presidential power in both dimensions outlined by the authors: legislative and non-legislative powers. Looking at Table 1.1, the first striking result is the absence of any clear pattern of correlations among the institutional features in the first dimension termed legislative powers. In the words of Shugart and Carey; "one of the determinant aspect of presidentialism is that the president posses some legislative power" (Matthew.S Shugart & Carey, 1992, p. 131). According to the authors, this is done by evaluating how much legislative authority presidents are granted in constitutions in terms of; veto powers, decree powers, prerogatives related to the exclusive

³ The reader will notice that Pearson's correlation coefficients, and later factor analyses are employed/performed on what are fundamentally ordinal variables, measured in quasi-interval form, where figures can assume values from 0 to 4, with .5 gradation (7 categories). Note that categorical variables with similar gradation tend to correlate, regardless of their content. However according to Lubke and Muth'en, in factor analyses, "given a sufficiently large number of response categories (e.g., 7), and absence of skewness, and equal thresholds across items, it seems possible to obtain reasonable results" (Lubke & Muth'en, 2004, p.2).

⁴ The decision rule for what constitutes an authoritarian regime was liberal. I have simply classified countries with a Polity IV (Marshall & Jaggers, 2009) rating below 5 as authoritarian. I have also controlled for the effects of pooling two different groups of countries. In general, there are little to no differences between the two groups of countries a part for the powers related to decrees, with show a higher correlation within the group for former communist countries.

introduction of legislation, budgetary powers and the powers to call referenda. However, the authors have not tested whether it is advisable to simply consider these individual legislative powers as additive. Testing for this hypothesis, correlation patterns in presented in Table 1.1 hint to the negative; there are very few positive and significant correlation coefficients between the six items theorized to be part of the dimension of legislative powers, which in turn suggests that very few indicators seem to be valid representations of the larger concept.

In fact, only four out of fifteen bivariate correlations present significant and positive coefficients. In particular, package veto and partial veto prerogatives are positively associated, while, partial veto prerogatives is associated with both powers of exclusive introduction of legislation in certain policy domains, and budgetary powers (both of which are associated). The reader will also notice that decree powers are not associated with any other item in this dimension, while referenda initiation powers are even negatively associated with all the other items (although only a single coefficient is statistically significant): this runs counter the logic of additive index building.

Given that the veto (and its variations) are presidents' "most direct connection with the legislative process," the few significant correlation coefficients between these items and the remaining items of this dimensions seem surprising. Close inspection of the bottom part of the table reveals more frequent and stronger associations between veto items (package and partial), and items from the non-legislative powers dimension such as cabinet formation, dismissal as well as censure. With this, five out of the six items retained present positive and significant correlation coefficients with the total index of presidential powers: the item for proposal of referenda is not correlated with the composite index, and even presents statistically significant negative correlation coefficients with package veto powers and censure. Therefore the power of presidents to propose referenda, weather restricted by legislative assent or not, does not seem to be part of the same construct as the other items and does not belong to the composite index.

While the dimension of legislative powers offers little empirical evidence of internal consistency of items, the four-item dimension of non-legislative powers presents much stronger inter-item correlations. The right hand-side portion of Table 1.1 exhibits the correlation coefficients between four measures of non-legislative powers, and with the total aggregated index. Clearly in this table, the indicators measuring the powers related to cabinet formation, cabinet dissolution, as well as censure are all strongly, and positively, correlated. Presidents having one of these prerogatives are more likely to have the others as well; for instance,

presidents that appoint cabinets are also very likely have powers of cabinet dismissal. This part of Table 1.1 illuminates the necessity of building an index, since the linkages between individual items would make it difficult to use them separately in multivariate analyses, with one caveat.

Despite these clearer patterns for non-legislative powers, here as well, one item in this dimension offers no positive significant association with any of the other presidential powers, nor with the total aggregated index: powers of dissolution of legislative assembly. What is more, this item even presents negative correlation coefficients with powers of censure, as well as package and partial veto powers. Shugart and Carey (1992) attribute higher scores to presidents who are permitted to dissolve the assembly at any time, and attribute less points as the restrictions to this prerogatives get more numerous, the underlying rationale being that stronger presidents, are more likely to have unrestricted powers of dissolution over the legislative assembly (Matthew.S Shugart & Carey, 1992, p.154). While this logic is compelling in theory, it becomes clear looking at Table 1.1 that this item pertains to a different latent construct than the other aspects of non-legislative powers, and should be excluded from an additive index where unidimensionality is the goal.

Now turning to the issue of reliability, coefficients α of scale reliability allows to evaluate whether it would be advisable to build indices with using these 10 items. Cronbach's α assesses how consistently items are measuring a latent construct: the more the items are correlated, the higher the value of Cronbach's α . The coefficients can assume values anywhere from 0 to 1, and 0.7 is usually employed as the threshold for acceptable reliability coefficients (Nunnally, 1978). In the case of legislative powers, Cronbach's α of 0.50 indicates low reliability.⁵ By contrast, Cronbach's α of 0.81 for non-legislative powers indicates a much higher level of reliability in measurement.⁶ Interestingly, the combination of all ten items in a single scale would yield a Cronbach's α of 0.77, but only if the items depicting powers of dissolution of assembly, and referenda initiation are reversed and knowing that the inter-item correlations with the dimensions of legislative powers are very few. Already at this point, there are serious cautionary signs that aggregating these data in a single index would be at the cost of measurement validity and reliability.

To further assess if the elements selected measure the phenomena of executive consistently, I have also performed EFA. Ideally, the number of factors obtained should represent

⁵ If the item of referenda is reversed.

⁶ If the item of dissolution is reversed.

the two qualitatively distinct constructs that conform to the theory outlined by Shugart and Carey, that is, legislative and non-legislative powers. Using the Guttman-Kaiser criterion (Guttman, 1954; Henri F. Kaiser, 1960; H.F. Kaiser, 1961), I retained only the factors with *eigen* values greater than 1, which in the present case yielded a single factor.⁷ Factor loadings of the retained factor are exhibited in Table 1.2, below. From the results presented in Table 1.2, it is obvious that the data does not confirm to the two-dimensional operationalization of the concept of executive power proposed by Shugart and Carey in legislative and non-legislative prerogatives: 7 out of 10 indicators cluster in a single factor, with no evidence of separate latent constructs for legislative and non-legislative powers. Also of interest, these findings are not affected by the removal of the six countries where presidents are not directly elected, nor do they change significantly when authoritarian countries are included (factor analyses not shown).

[Table 1.2 About here]

What is also noticeable in Table 1.2, is that certain items measure the latent construct more clearly, while some others exhibit much more independence, making an equal weighting system between items questionable. Factors with loadings greater than 0.60 in absolute value were considered “dominant” and served as the defining feature of the retained factor. The items from non-legislative powers—cabinet formation, cabinet dismissal, and censure— exhibit the strongest association with the latent construct of presidential powers. Package and partial vetoes, exclusive introduction of legislation and budgeting powers retain more uniqueness, that is a higher proportion of the common variance of the items that is not associated with the factor. When retaining factors with *eigen* values greater than 0.8 rather than 1, the factor structure changes only for the items included in the legislative powers category (Rotated factor loadings in Table 1.3). This very slight relaxing of the Guttman-Kaiser criterion quickly causes the items to fall short of simple factor structure: exclusive introduction of legislation and budget powers to form a second factor in which the item of partial veto cross-loads moderately as well. These large shifts, caused by trivial modifications of the criterion to retain factors, yield little confidence in the robustness of the factor patterns for these items.

[Table 1.3 About here]

⁷ When a Cattell’s *Scree test* (Cattell, 1966) is performed, the factor structure indicates that retaining a single factor would be most advisable. In addition to a Scree test, results from Horn’s Parallel Analysis for principal components using 5000 iterations also confirms this structure (Hayton, Allen, & Scarpello, 2004; Horn, 1965).

The absence of empirical support for the two-dimensional map of presidential powers raises serious concerns in the decision of contributors to use the index as valid and reliable measurement in empirical analyses. The aggregation of items that are not, or only feebly, related to each other and or to the wider concept, serves to undermine both the validity and reliability of the final measure, despite having been theoretically very well-crafted. Each indicator is not necessarily robustly associated with high executive power, if we believe the factor solution uncovered represented this concept. Still, a strong case can be made that the powers related to partial and package vetoes, the exclusive introduction of legislation, cabinet formation, cabinet dismissal, and censure, all belong to a single latent construct that could be that of presidential power. Yet, the powers related to partial veto, budgeting and the exclusive introduction of legislation in certain policy areas could also belong to another, different latent construct, depending on model specification. The remaining three items; decree powers, referenda introduction, and dissolution of assembly exhibit too much independence to be linked to the two above factors and should be used as separate variables in empirical models where these features are thought to be relevant; at a minimum, the addition of these variables in multivariate estimations will not pose problems of multicollinearity.

B) Comparative Data Set for 28 Post-Communist Countries, 1989-2007

Comparative Data Set for 28 Post-Communist Countries, 1989-2007 (CPD) by Armingeon and Careja (2007) proposes an index of presidential powers based on 29 constitutional prerogatives that can potentially be allotted to presidents. Although, the study focuses on 28 countries, it comprises a total of 33 observations.⁸ Rather than a two-dimensional construct of presidential powers as in the previous section, Armingeon and Careja (2007) offer a single continuum which is constructed by adding the constitutional prerogatives allotted to the president of a country. The 29 powers taken under consideration are assigned equal weight in the construction of the index: in all countries considered in this dataset, each individual power is coded 1 if the president holds it exclusively, 0.5 if the president is sharing the power with another

⁸ Armingeon and Careja's database provides observations for all post-communist constitutions, resulting in a final amount of cases slightly higher than the 28 countries considered for a total of 33 valid cases. The duplicate cases are the countries in which there were large constitutional changes: Albania 1991 and 1998, Belarus 1994 and 1996, Croatia 1990 and 2001, Kazakhstan 1995 and 1999, Kyrgyzstan 1994 and 1993, Moldova 1994 and 2000, and Tajikistan 1994 and 1999. I have retained all duplicates as valid observations in the analyses. Unlike in the preceding section, I have not sought to remove authoritarian regimes from the estimations performed since their large number makes it impossible to run independent tests on such a small sample size.

body, and 0 where the president does not hold the prerogative in question. In the cases of indirectly elected presidents—Albania 1991 and 1998, the Czech Republic, Estonia, Hungary, Latvia, Moldova after 2000 and Slovakia—the authors multiply the final composite score by a value of 0.5. This weighting scheme leaves us with two sets of scores to examine: the original three-points ordinal notation, and a weighted version that can contain between three and five categorical values for each item. As in the previous measurements instruments we have examined, there is here as well an implicit assumption of equal distance between categories, as assumption that remains untested. Because CPD's presidential power index is not really measured at the interval level, and also because of the size of the population of countries/cases is close to equal to the number of items included in the index, empirical verification of association between each item will be slightly different than the approach employed in the previous section.

In order to perform a preliminary inspection as to how the un-weighted items are linked together, I have performed a series of bivariate cross-tabulations and report the measure of association τ_b between each pair of items in Table 1.4, below. Using a liberal cut-off point for χ^2 (0.1), the pairs of items that produce statistically significant associations are bold-lettered and framed by boxes. In this table, some 25% of pairs present positive and significant associations, while 5% present negative, significant associations. In other words, about 75% of pairs are either not associated, or are linked in a direction that runs counter to the logic of additive index construction, where holding a constitutional power should boost the overall presidential power score. Close inspection of Table 1.4 reveals that some powers have little in common with most other items—the power to dissolve parliament (1) as it was also the case in the previous section, to call elections (3), to appoint senior officers (12), whether the president is the commander in chief of the armed forces (14), chairs the national security council (15), whether he/she participates in parliamentary sessions (24), has the prerogative to convene cabinet sessions (26), and participate in the cabinet (27)—display few relationships with other presidential powers. Perhaps more importantly, two indicators exhibit a large amount of negative and significant coefficients with other items which in theory, at least, should depict strong presidents. These items are; if a president has special powers if parliament is unable to meet (22), and whether the president appoints the prime-minister (4), which is unexpected.⁹

⁹ The small amount of significant coefficients, and negative associations between the power to appoint the prime ministers and other items might be explainable by the composition of the population under study. 27 out of the 33

[Table 1.4 About here]

Examining inter-item associations between weighted items (reducing the score of each item by half in the countries where a president is indirectly elected) might elucidate why the researchers sought to aggregate a group of seemingly unrelated indicators into a single composite measure. Table 1.5 present Spearman's ρ correlation coefficients between all 29 weighted indicators. Again using the same liberal interpretation of statistical significance, the pairs of items that produce significant associations are bold-lettered, while this time around, insignificant coefficients are boxed. Looking at Table 1.5, it is evident that halving the scores of 8 out of 33 cases has massive effects on the patterns of association in the data. Clearly, weighting items has increased the amount of significant associations between items from 25% to more than 70%.¹⁰ The present results indicate that there are now relatively large correlations among the indices of presidential power, whereas there were few before. From now on, a large amount of items appear to measure some aspects of a shared construct. Yet here has well, some of the same items as those in Table 1.4 still present a number of insignificant coefficients with most other indicators of presidential power: the power to dissolve parliament (1), to appoint senior officers (12), special powers if parliament is unable to meet (22), whether he/she participates in parliamentary sessions (24), and last the prerogative to convene cabinet sessions (26). Including or lending equal weight to these prerogatives in an additive index, given that variation in these is not associated with variation in others, probably has adverse effects on the validity of the final composite measure.

This minor correspondence notwithstanding, there are major distinctions in the patterns of associations between un-weighted and weighted items; for instance we no longer find cases of negative associations between variables in the weighted scores. Further, some of the items that displayed the most notable independence in Table 1.4, such as the authority to appoint the prime minister (4), now correlate with all but 5 items. Other presidential prerogatives, like sending laws to the constitutional court (17), proposing amendments to the constitution (20), calling special sessions of the parliament (21), assuming emergency powers (23) also change in a similar fashion when cases are weighted.

[Table 1.5 About here]

cases share this power with another body, while in only 6 cases does a president hold this power exclusively. In no cases is this variable coded 0.

¹⁰ It should be stressed here that the magnitude of τ_b and Spearman's ρ coefficients should not be compared together since they are obtained by different processes.

Despite the marked improvement in correlation patterns, it remains unclear why the creators of this measurement scheme decided to weight the scores of indirectly elected presidents by a factor of 0.5. The decision is all the most puzzling since the coding scheme already contains a code for instances where presidents share certain powers with another body, which is often the case in semi-presidential regimes. It is also worth to ask if, substantially, the exclusive hold over a prerogative by a president is really reduced by half its influence if a president is indirectly elected. Given that the effects of direct elections on presidential powers is an area that was recently characterized as a theoretical void, where “the differences in the functioning of the regime resulting from direct elections are assumed rather than tested” (Tavits, 2009b, pp.6-7), this decision is questionable at best. To visualize the effects of weighting the data substantively, Table 1.6 presents a ranking of presidential powers by total scores in both weighted and un-weighted versions of the data. The result of the weighing is simply a shifting of Latvia, Albania, Estonia, Czech Republic, Slovakia and Hungary from their initial positions where the powers are roughly equal with other (functionally) parliamentary systems to systematically much lower scores and rank order. This choice of scoring technique yields rankings that contradict findings from previous studies, where the nominal powers of indirectly elected Eastern European presidents were found not to be weaker than those of their elected counterparts (Metcalf, 2002).

[Table 1.6 About here]

To further present the consequences of this weighting graphically, Figure 1.1 displays a Kernel density plot of total un-weighted scores (assuming for a moment they are part of the same latent construct). The curve representing the overall distribution closely follows a normal distribution. However, turning to Figure 1.2 displaying a Kernel density plot of weighted scores by direct elections, against a normal distribution, reveals a different pattern. Once weighted, there are very few middle range scores on the presidential power index: most cases are located on the extremes. Figure 1.2 makes clear that the weighted index is no longer normally distributed, but in fact displays a bi-modal distribution, with clusters of cases on both the high and low ends of the possible spectrum. The peak of the graphic does not correspond to the most typical value, but to one of the least typical values instead. If the distribution following the normal density, cases would be distributed around a single peak located around the middle, just as in Figure 1.1.

[Figure 1.1 About here]

[Figure 1.2 About here]

In public opinion research, bimodal distributions generally indicate either, that the question asked to respondents is unclear, that there are serious disagreements within the sample, or that we are facing two different demographic groups, which could here be presidential and parliamentary regimes. Hypothesizing that semi-presidential regimes should theoretically receive middle-range scores, knowing our sample is mostly composed of these arrangements, the end items should be normally distributed. Bimodality in these cases is thus a disturbing discovery since it points towards the fact that the index is a mixture of two different unimodal distributions, whose underlying influences were introduced by the weighting scheme using direct elections as a discrete cut-off. Substantively, in this case, bimodality suggests that there are crucial variations between the types of political arrangements, parliamentary and presidential if we consider the mode of election of the head of state as a defining feature. Bimodality also means that it is also not possible to systematically differentiate semi-presidential arrangements from the other arrangements with this index and that high or low scores on this index cannot not be used to reliably do so. Therefore, both weighted and un-weighted composite indices are unsatisfactory for different reasons. The un-weighted index contains a majority of items that are not associated with each other, which in turn negatively affects the validity of the final product. The weighted index is also unsatisfactory due to the questionable weighting scheme and partly because it is a composite of two unimodal distributions, thus likely not of the single latent construct it aims to capture, thus here affecting both the validity and the reliability of the index.

Because of the large amount of items representing presidential power, the small amount of cases on which to perform analyses, and the categorical coding of the variables between three and five values, conventional EFA or CFA at this stage are bound to produce unstable solutions.¹¹ Moreover, taking into account that considering irrelevant variables in a factor analysis will affect the factors which are uncovered, we should seek to remove the least related variables before we perform factor analyses. For this purpose, and also relying on the insight from Tables 1.4 and 1.5, I employ the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy to verify if the strength of the relationship among variables is large enough to justify performing a factor analysis with the data at hand, in both the weighted and un-weighted versions of the dataset. In general, the higher the scores (ranging between 0, and 1), the more the variables have in common, hence

¹¹ Although for EFA, the “rule-of-thumb” for minimum amount of cases necessary to perform an analysis is hotly debated in the literature. However because of the small amount of cases, and the comparatively large amount of authoritarian regimes in the 33 cases included in the dataset, it is not possible to perform an independent factor analysis excluding this subpopulation since the number of indicators would be superior to the number of cases.

warranting a factor analysis. The overall KMO measure of sampling adequacy is 0.23 in the un-weighted data, and of 0.56 for the weighted data.¹² Removing items (1), (3), (12), (22), (24), and (26) in the un-weighted data helps boost KMO to the minimum acceptable level (0.57) to perform a factor analysis.¹³

Given the ordinal nature of the items, I have used parallel analysis to select the number of retained factors rather than the Kaiser eigen-one rule.¹⁴ A single factor was retained in the un-weighted data, accounting for 38% of the variance, while two factors were retained in the weighted data, accounting for respectively 48% and 9% of overall variance.¹⁵ Table 1.7 presents the rotated factor loadings in the two versions of the dataset of Armingeon and Careja (2007), side by side. Factors with (rotated, where applicable) loadings greater than 0.60 in absolute value were considered “dominant” and were highlighted in boxes in the cases where there were no significant cross loadings on a different factor, while loadings below 0.4, or negative, were left blank to ease interpretation.

[Table 1.7 About here]

Comparing the un-weighted and weighted data, we notice a similar number of items with high loadings on the first factor (10 items with loadings above 0.6 and no significant cross-loadings). The power to annual acts of other bodies (28) displays the highest loading with the latent construct in both cases, along with the power to remand law (16) and to appoint ministers (5): the two first are veto powers and the last pertains to cabinet formation rules, a defining feature of the parliamentary versus presidential distinction. A series of powers of appointment

¹² The rule-of-thumb with KMO being that under 0.5, one should not perform a factor analysis. What this means is that over 0.5, but still below 0.6, The degree of common variance among the 29 variables is still mediocre. If a factor analysis is conducted, the factors extracted will account for a fair amount of variance, but not a substantial amount.

¹³ The items were removed on the basis of the small amount of significant inter-item associations in Table 1.4 as well as their low KMO values.

¹⁴ Previous analysis has demonstrated that dichotomous data tend to yield many factors (when referring to the Kaiser criterion), and also that many variables tend to load on these factors (by the usual .40 cut-off), even when analyses were performed with randomly generated data (Shapiro, Lasarev, & McCauley, 2002). The different approach I take to select factors in this case is due to the level of measurement of each item in only 3 categories (rather than 7 in Shugart and Carey), to minimize the risk of retaining random factors. The factor solutions uncovered in parallel analyses were also confirmed in conjunction with Cattell’s (1966) Scree plots as recommended by many practitioners (Fabrigar, Wegener, MacCallum, & Strahan, 1999; Ford, MacCallum, & Tait, 1986; Hayton et al., 2004).

¹⁵ In the case of the factor analysis using weighted data, 7 items displayed non-negligible cross-loadings in both factors retained, which made the interpretation of these items more complex. To address this problem, Costello and Osborne (2005) suggest removing the cross-loading items from the analyses in the event correlations are strong to moderate (0.5 or higher) and that are a non-negligible number of them, which is the case with the data at hand. With this, the items depicting the powers to call a referendum (2), to appoint the prime minister (4), the constitutional court(6), and senior commanders (13), whether the president is the commander in chief of the armed forces (14), proposes amendments to the constitution (20), and calls specials sessions of parliament (21) were removed from the factor analysis using the weighted data.

also correlate highly in both versions of the data, these are: the powers to appoint the supreme court (7), judges (8), the prosecutor general (9), the central bank chief (10), and the security council (11). Also highly correlated with the latent construct are the powers to issue decrees in non-emergencies (19), and assuming emergency powers (24). Given their stability across different testing conditions, these 10 items could be considered as core features of presidential powers allotted in constitutions.

The weighted data produced a two factor solution, with some interesting results. A series of items that refer more to symbolic functions of presidents in functionally parliamentary systems correlated closely with the second factor. The prerogatives to call elections (3), to address the parliament (25), and to convene cabinet session (26), and last to participate in cabinet sessions seem to pertain to a different latent construct. However, quite surprisingly, the prerogative to dissolve parliament (1) correlates with this latent construct, but only once weighted, which leads me to suspect that weighting by half of the taps into a concept that does not necessarily follow the original coding logic of each item.¹⁶

In the end, considering both weighted and un-weighted data, many of the items included in the 29 presidential power are not closely linked to any factor: the power to call referendums (4), to appoint the prime minister (4), the constitutional court (6), senior officers (12), whether the president is the commander in chief of the armed forces (14), chair the national security council (15), sends laws to the constitutional court (17), proposes amendments to the constitution (20), calls special session of the parliament (21), has special powers if parliament is unable to meet (22), and participates in parliamentary sessions (24) all likely pertain to different latent constructs and should not be part of a single index. Including such items in a composite index would only serve to make the end measurement difficult to interpret since the components do not share a common causation influence. One way to explain these findings is that certain powers can be

¹⁶ The first thing to note about this item is that in the case of former communist countries, in only 6 cases out of 33, is the legislature immune from executive dissolution (Mongolia, Tajikistan, Macedonia, Belarus 1994 and Uzbekistan), and in all these countries the executive is directly elected. In 5 countries (Uzbekistan, Russia, Czech Republic, and Latvia are coded 0.5, meaning that the power is “shared”), and only two countries have indirectly elected presidents (Czech Republic and Latvia). This “shared” coding decision was probably taken to represent cases where there are some (sometimes narrow) conditions for dissolving the legislature stipulated in constitutional articles: however, it was seemingly not applied evenly across cases. For instance, the Czech Republic was coded (before weighting) 0.5, while Albania and the Slovak Republic were given scores of 1 when all three presidents face a roughly similar amount of constraints to dissolve the assembly. Weighting the data by 0.5 in the case of indirectly elected presidents serves to blur the scores further. Once weighted Latvia the Czech Republic get scores of 0.25, although their presidents can dissolve the legislature, while Slovakia retains its score of 1, and Albania now gets a score of 0.5. As a result, after the score transformation proposed by the authors, each item’s scoring might no longer be accurate, or even less accurate.

interpreted differently depending of the country, and do not necessarily have the same import in all cases; for instance the powers associated with being the commander in chief of the armed forces (Gallagher, 1999; Müller, 1999; Tavits, 2009b). Knowing this, keeping such items would likely be a source of measurement error.

IV.TOWARDS A MORE (OR LESS) PARSIMONIOUS APPROACH TO MEASURING EXECUTIVE POWER

In making composite indices of presidential powers, the main dilemma seems to be about reaching a balance between exhaustive measurement that are low in validity, or reductive measures that are higher in validity and reliability, but potentially fail to capture a few important dimensions. In the short term, my proposal for addressing the issues raised in this paper goes along the line of André Krouwel's (2003) earlier suggestion to identify the core elements of presidentialism instead of using a laundry-list of powers assigned to president. However, I propose to go a step further, and focus index construction on items that pertain to a single latent construct, to boost validity and reliability. With this, all items selected should be closely linked with each other in a manner that is internally consistent.

In the case of the indices proposed by Shugart and Carey, as well as Frye et al., given that the data did not confirm to a two-dimensional operationalization of the concept of executive power in legislative and non-legislative prerogatives, it would make sense to eliminate this distinction. Further, I would propose reducing the number of items from 10 to 6, focusing on items with higher inter-item correlations, but also the highest factor loading on the single factor uncovered: this would yield a much more focused measurement (presented in Table 1.8). The consequence of this decision will be to leave out some items that are theoretically important, such as decree powers, budget prerogatives, referenda initiation, and dissolution of the assembly. The argument that justifies leaving these items outside an index is definitely not because these features are not pertinent. Rather, they likely are parts of different constructs with different causation influences, and their effects might be lost by trying to aggregate them together: analyses from the previous section already made clear that including all 10 items in a single index would be at the cost of measurement validity and reliability.

[Table 1.8 About here]

Finding an appropriate compromise solution for composite indices made of a larger amount of powers with ordinal measurement in an even smaller amount of cases, such as the one

proposed by Armingeon and Careja (2007) in CPD, is even more challenging. Especially if we take into account that; “[..], in many polities, legislatures hold a grab bag of powers rather than neat sets from prerogatives typically association with a distinct type of constitutional system” (Fish & Kroenig, 2009, p.5). Given that this observation likely applies to executives as well, it raises the question as to whether it is the nature of each component-power that matters for overall levels of presidential power, rather than the sheer accumulation of individual powers, some of great magnitude, some more ceremonial. In other words, is a president considered constitutionally powerful based on his/her holding a myriad of powers—the more items, the more powerful—or because of his/her holding a set of central key powers? Table 1.9 presents a factor analysis of 11 core items thought to represent powerful presidents from the analyses conducted in the preceding section, complemented by an item depicting method of selection of president serving as a proxy for enhanced legitimacy, and the total aggregate score of all potential 29 powers, to control for the quantity of items a president holds power over, the size of the “grab bag.”

[Table 1.9 About here]

Since the items included are slightly different than those proposed by Shugart and Carey (1992), we can reasonably expect the items correlated on the factor to exhibit dissimilarities as well. For instance, CPD includes a series of items on appointments that likely affect the covariance between items, that are not considered by the other indices reviewed in this paper. On the flip side, Shugart and Carey , as well as Frye et al., include items such as powers of cabinet dismissal and censure, which are not part of CPD’s list, likely with the same result. Despite having considered a dissimilar set of items, we also find comparable patterns between the two approaches to measurement that could be interpreted as evidence of the centrality of certain items in defining the concept of presidential power. One of the highest loading factors in both cases is the power to appoint ministers, or what Shugart and Carey call cabinet formation. Presidential veto powers are also strongly correlated with the factors retained: the power to remand law for reconsideration from CPD as well as the package and partial veto items. Both indicators depicting the exclusive introduction of legislation also present moderately strong correlation with the retained factor.

One of the other interesting results of Table 1.9 is the magnitude of the coefficient depicting the method of selection of the president: this item displays the weakest correlation with the latent construct. Arguably, while this item seems to present non-negligible covariance with

other indicators included in the analysis, it is by no means a central pillar of the factor, and probably does not justify weighting indirectly elected presidencies by half their score. As well, although not shown in Tables 1.8 and 1.9, in both measurements, the item representing the power to dissolve the legislative assembly presents a small negative coefficient with the retained factor; this finding is somewhat surprising given the centrality that is given to this power in the literature.¹⁷ The strong positive correlation coefficient of the item measuring powers of cabinet dismissal, however, in the SC data, is perhaps a hint that considering the cabinet might pertain more to the core concept of presidential power, or that the continuum on which the power of dissolution is measured is not helpful to gauge the extent and direction of the prerogative.

V. CONCLUSIONS

What are the rules for the establishment of a measurement of presidential prerogatives? Do all powers vested presidents in constitutions map a single latent construct? Or more simply, should we even make a composite index? In all likelihood, some of the individual features of presidential powers present inter-item correlations of such magnitude that their aggregation in an index is advisable. However, what I hope the results from the analyses performed in this paper make clear, is that researchers should proceed with caution when clustering a series of elements hypothesized to measure an abstract concept into composite indices such as the ones proposed by Shugart and Carey (1992), and Frye et al. (2002), Armingeon and Careja (2007), and many others (Elgie, 1998; Frye, 1997; Krouwel, 2003; Lucky, 1993-1994; Metcalf, 2000; Siaroff, 2003), or also when using a composite measurement of this type to be linked with other phenomena such as democratic consolidation, or policy performance, for example. Although the size of the population of potential cases is too limited for rigorous testing, I strongly believe it is still sensible to attempt to address the issues of validity and reliability of composite measurements, especially if these are set to be employed in statistical models.

What also transpires from the empirical investigations conducted here, is that when looking at individual indicators of presidential powers separately, in regimes where the head of state is a president, not all items hypothesized to capture the concept of presidential power seem to matter equally in accounting for composite scores. Conversely, not all potentially relevant items were tested. Moreover, even if we hypothesize that the concept of presidential power is

¹⁷ A similar scenario unfolded with budgetary powers. In the larger initial factor analyses, in both cases, high levels of presidential budgetary powers present positive, but smaller correlation coefficients with the retained factors.

unidimensional, which probably is not the case, some items might just be too dissimilar to others to warrant inclusion in a composite index: adding together all possible items reduces the usefulness of the measurement after a certain point. By introducing too much variance coming from unrelated processes which are left unaccounted for, the effects of core items will be washed-out in un-interpretable noise. I should add, there is nothing improper with keeping some indicators of presidential power separately in analyses: it is perhaps more useful for some of them to be apart than to use black-box composite measures that are not measuring what they claim to measure.

To conclude, these findings raise a series of unanswered questions, and open the door to additional testing that lay beyond the scope of this paper. For instance, revisiting the level of measurement of each particular approach to measuring presidential powers. In particular, to evaluate the effects of using fundamentally ordinal or categorical variables as metric: it is not clear that the numerical labels given to categories really means that these numbers can be considered to represent quantities of a certain attribute (Nunnally, 1978). The implicit assumption of equal distance between categories—a very strong assumption that remains untested—could serve to introduce more sources of unreliability in measurement, and might also mask substantively interesting variations in institutional arrangements. Beyond the scope of this paper as well would be to address the changes in substantive rankings any modification in item selection brings about: if accuracy is improved or not. Last, and perhaps more importantly, is the issue of bimodality. Does the pervasive bimodality hint that we are in the presence of a phenomenon that has different manifestations in more parliamentary, versus more presidential regimes? Bimodality also means that it is also not possible to systematically differentiate semi-presidential arrangements from the other arrangements, and that high or low scores on most indices cannot not be used to reliably do so. In light of the findings of non-normal distributions of composite index scores, performing (regression) analyses using a single continuum of presidential powers across different political systems might prove technically problematic, and I would urge researchers to proceed with caution in interpreting parameter estimates from models exhibiting departures from linearity, and given the low validity of existing indices, to revisit their findings altogether.¹⁸

¹⁸ The vast majority of composite indices of presidential powers, including those presented in section IV, are not normally distributed, but present bimodal distributions.

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TABLE 1.1
CORRELATION MATRIX BETWEEN TEN INDICATORS OF PRESIDENTIAL POWER
(SHUGART AND CAREY, FRYE et. AL.)

Legislative Powers

- Variable 1: Package Veto
- Variable 2: Partial Veto
- Variable 3: Decree
- Variable 4: Exclusive Introduction
- Variable 5: Budget
- Variable 6: Referenda

Non-Legislative Powers

- Variable 7: Cabinet Formation
- Variable 8: Cabinet Dismissal
- Variable 9: Censure
- Variable 10: Dissolution of Assembly

Total:

- Variable 11: Total Composite Score

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
[1]	1										
[2]	0.28	1									
[3]	0.17	0.15	1								
[4]	0.17	0.54	0.11	1							
[5]	0.21	0.28	0.01	0.63	1						
[6]	-0.25	-0.07	0.22	-0.03	-0.15	1					
[7]	0.27	0.40	0.20	0.31	0.14	-0.08	1				
[8]	0.54	0.43	0.10	0.29	0.33	-0.19	0.74	1			
[9]	0.54	0.42	0.09	0.32	0.32	-0.34	0.50	0.58	1		
[10]	-0.26	-0.35	-0.01	-0.18	-0.19	0.16	-0.04	-0.18	-0.38	1	
[11]	0.58	0.60	0.42	0.52	0.43	0.03	0.77	0.82	0.66	-0.05	1

All bold lettered correlation coefficients are significant at the 0.1 level(2-tailed)
Table excludes Authoritarian countries

TABLE 1.2
 ROTATED FACTOR LOADINGS OF TEN INDICATORS OF PRESIDENTIAL
 POWER ON A SINGLE FACTOR
 (SHUGART AND CAREY, FRYE et. AL.)

<i>Items</i>	<i>Factor 1</i>
<u>Legislative Powers</u>	
Package veto	0.58
Partial veto	0.64
Decree	0.17
Exclusive Introduction	0.59
Budget	0.51
Referenda	-0.24
<u>Non-Legislative Powers</u>	
Cabinet dismissal	0.68
Cabinet formation	0.82
Censure	0.74
Dissolution	-0.36

Table excludes Authoritarian countries, for a total of 47 cases.
 Minimum Eigen Value set at 1
 Factor loading cutoff normally set at .4 (See Hair, Jr. I Anderson, Tatham, & Black, 1998)

TABLE 1.3
 ROTATED FACTOR LOADINGS OF TEN INDICATORS OF PRESIDENTIAL
 POWER ON TWO FACTORS
 (SHUGART AND CAREY, FRYE et. AL.)

<i>Items</i>	<i>Factor 1</i>	<i>Factor 2</i>
<u>Legislative Powers</u>		
Package veto	0.61	0.11
Partial veto	0.42	0.51
Decree	0.08	0.19
Exclusive Introduction	0.20	0.79
Budget	0.20	0.65
Referenda	-0.30	0.03
<u>Non-Legislative Powers</u>		
Cabinet dismissal	0.71	0.16
Cabinet formation	0.85	0.19
Censure	0.73	0.24
Dissolution	-0.28	-0.23

Table excludes Authoritarian countries, for a total of 47 cases
 Minimum Eigen Value set at 0.8
 Factor loading cutoff normally set at .4 (See Hair et al., 1998).

TABLE 1.4
PATTERNS OF ASSOCIATION BETWEEN 29 UNWEIGHTED CONSTITUTIONAL POWERS IN 28 POST-COMMUNIST COUNTRIES
(FROM ARMINGEON AND CAREJA, 2008)

CONSTITUTIONAL POWER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1 DISSOLVES PARLIAMENT																												
2 CALLS REFERENDUM	.14																											
3 CALLS ELECTIONS	.65	.11																										
4 APPOINTS PRIME MINISTER	.05	.00	.15																									
5 APPOINTS MINISTERS	-.08	.23	-.19	-.10																								
6 APPOINTS CONSTITUTIONAL COURT	-.06	.07	-.14	-.45	.17																							
7 APPOINTS SUPREME COURT	-.14	-.03	-.06	.01	.58	.46																						
8 APPOINTS JUDGES	-.30	.19	-.06	-.08	.64	.14	.52																					
9 APPOINTS PROSECUTOR GENERAL	-.11	.11	-.24	-.18	.60	.32	.56	.49																				
10 APPOINTS SENIOR CENTRAL BANK CHIEF	-.19	.32	-.07	-.22	.47	.39	.44	.59	.32																			
11 APPOINTS SECURITY COUNCIL	-.20	.29	-.18	-.05	.47	.34	.36	.29	.51	.46																		
12 APPOINTS SENIOR OFFICERS	.08	.10	-.21	-.34	.13	.23	-.22	-.14	-.13	.06	.07																	
13 APPOINTS SENIOR COMMANDERS	-.08	.42	-.09	-.22	.35	.26	.23	.23	.44	.38	.49	.18																
14 COMMANDER IN CHIEF ARMED FORCES	-.21	.16	-.19	-.11	.28	-.14	-.04	.18	.13	.15	.25	.10	.34															
15 CHAIRS NATIONAL SECURITY COUNCIL	-.21	-.10	-.21	-.01	.17	-.04	-.09	.15	.17	.07	.39	.22	.01	.32														
16 REMANDS LAW	-.32	.23	-.25	-.09	.60	.28	.53	.69	.65	.41	.44	.01	.26	.31	.28													
17 SENDS LAWS TO CONSTITUTIONAL COURT	.34	.44	.16	-.54	.10	.26	.03	.09	.16	.11	-.11	.02	.25	.03	-.11	.07												
18 PROPOSES LEGISLATIONS	-.12	.30	-.29	.17	.52	-.06	.26	.46	.45	.21	.19	.02	.26	.22	.24	.56	.08											
19 ISSUES DECREES IN NON-EMERGENCIES	-.04	.27	-.16	.11	.38	.36	.47	.49	.27	.47	.33	.06	.37	.10	-.12	.47	-.04	.20										
20 PROPOSES AMENDMENTS TO CONSTITUT	-.19	.12	-.21	.03	.11	.19	.16	.07	.16	.14	.60	-.04	.25	.20	.40	.29	.05	.12	.21									
21 CALLS SPECIAL SESSIONS OF PARLIAMENT	.25	-.01	.32	-.04	.03	.13	.31	-.12	.14	.01	.29	-.16	.22	.26	.13	.10	.15	-.09	.12	.30								
22 SPECIAL POWERS IF PARL UNABLE TO MEET	-.01	-.45	.08	.20	-.47	-.24	-.35	-.35	-.35	-.45	-.23	-.24	-.34	-.20	.15	-.48	-.17	-.39	-.35	.24	-.14							
23 ASSUMES EMERGENCY POWERS	-.10	.59	-.15	-.07	.39	.11	.16	.25	.20	.51	.47	.25	.42	-.35	.11	.39	-.13	.31	.36	.26	.15	-.57						
24 PARTICIPATES IN PARLIAMENTARY SESSIONS	-.13	.11	-.10	-.29	.06	-.15	-.15	.13	.09	-.01	-.34	.12	.18	.19	-.09	.12	.26	.30	-.17	-.24	-.20	-.13	-.13					
25 MAY ADDRESS PARLIAMENT	.08	.24	.12	-.17	-.11	.11	-.20	.01	-.02	.01	-.11	.22	.10	.01	.34	.00	.37	.07	-.18	-.13	-.03	-.04	-.17	.43				
26 MAY CONVENE CABINET SESSIONS	.02	.17	.21	.44	-.20	-.35	-.15	-.06	-.29	-.17	-.29	-.22	.08	-.01	-.43	-.24	-.10	-.05	.16	-.18	-.18	.07	-.04	-.02	-.06			
27 PARTICIPATES IN CABINET SESSIONS	.03	.30	.24	.09	.19	.11	.11	.11	-.07	.15	.08	-.09	.42	.27	-.39	.00	.17	-.20	.38	-.12	.19	-.27	.17	.16	-.04	.39		
28 ANNULS ACTS OF OTHER BODIES	-.22	.43	-.14	-.20	.64	.38	.46	.54	.61	.62	.77	.11	.47	.24	.24	.70	.10	.38	.48	.45	.13	-.49	.61	-.10	-.12	-.28	.10	
29 PREPARES AND SUBMITS BUDGET	-.18	-.05	-.41	.07	.44	.13	.47	.28	.33	.15	.28	-.01	.11	.12	-.01	.26	-.16	.27	.21	.09	.04	-.23	.12	-.23	-.33	.01	.06	.22

NOTES ON THE TABLE: Cells contain Kendall's Tau b measures of association between ordinal level variables. Coefficient that are bold lettered are significant at the 0.1 level (Pearson's Chi2). All items contain 3 categories, save categories 4, (5 or 1), 15 (0 or 1), 25 (0 or 1), 27 (0 or 1) that contain only two categories.

TABLE 1.5
PATTERNS OF CORRELATIONS BETWEEN 29 WEIGHTED CONSTITUTIONAL POWERS IN 28 POST-COMMUNIST COUNTRIES
(FROM ARMINGEON AND CAREJA, 2008)

CONSTITUTIONAL POWER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1 DISSOLVES PARLIAMENT																												
2 CALLS REFERENDUM	.48																											
3 CALLS ELECTIONS	.80	.57																										
4 APPOINTS PRIME MINISTER	.47	.52	.76																									
5 APPOINTS MINISTERS	.27	.53	.45	.44																								
6 APPOINTS CONSTITUTIONAL COURT	.33	.52	.52	.39	.54																							
7 APPOINTS SUPREME COURT	.23	.38	.42	.53	.84	.66																						
8 APPOINTS JUDGES	.11	.50	.44	.42	.81	.50	.76																					
9 APPOINTS PROSECUTOR GENERAL	.20	.46	.38	.41	.69	.63	.77	.69																				
10 APPOINTS SENIOR CENTRAL BANK CHIEF	.22	.61	.43	.31	.68	.66	.67	.70	.58																			
11 APPOINTS SECURITY COUNCIL	.29	.60	.53	.44	.64	.62	.57	.51	.68	.71																		
12 APPOINTS SENIOR OFFICERS	.34	.38	.41	.44	.36	.52	.17	.17	.19	.33	.33																	
13 APPOINTS SENIOR COMMANDERS	.30	.65	.49	.38	.55	.62	.57	.49	.70	.63	.72	.31																
14 COMMANDER IN CHIEF ARMED FORCES	.30	.59	.60	.66	.62	.57	.57	.58	.62	.63	.63	.44	.66															
15 CHAIRS NATIONAL SECURITY COUNCIL	.14	.27	.39	.49	.36	.41	.23	.35	.44	.31	.54	.51	.35	.69														
16 REMANDS LAW	.10	.53	.41	.51	.77	.66	.75	.85	.82	.66	.62	.37	.55	.76	.55													
17 SENDS LAWS TO CONSTITUTIONAL COURT	.49	.67	.46	.26	.36	.54	.34	.38	.40	.40	.24	.23	.50	.50	.22	.44												
18 PROPOSES LEGISLATIONS	.11	.51	.30	.55	.69	.50	.68	.74	.69	.59	.49	.28	.55	.63	.46	.82	.40											
19 ISSUES DECREES IN NON-EMERGENCIES	.36	.56	.65	.55	.65	.62	.71	.68	.55	.64	.42	.30	.60	.57	.17	.70	.29	.58										
20 PROPOSES AMENDMENTS TO CONSTITUT	.19	.48	.45	.57	.42	.58	.43	.41	.54	.51	.72	.32	.61	.76	.64	.60	.43	.53	.49									
21 CALLS SPECIAL SESSIONS OF PARLIAMENT	.50	.37	.56	.47	.45	.47	.51	.23	.52	.37	.55	.19	.57	.71	.48	.47	.45	.39	.43	.58								
22 SPECIAL POWERS IF PARL UNABLE TO MEET	.26	.09	.51	.47	-.13	.19	-.03	-.10	.00	-.15	.10	.15	.02	.32	.40	-.02	.03	-.12	-.02	.48	.19							
23 ASSUMES EMERGENCY POWERS	.28	.75	.47	.38	.66	.55	.52	.54	.54	.77	.71	.47	.66	.67	.42	.66	.47	.62	.57	.59	.52	-.19						
24 PARTICIPATES IN PARLIAMENTARY SESSIONS	-.06	.26	-.00	.03	.20	.12	.07	.28	.28	.07	-.09	.26	.28	.27	.13	.35	.37	.41	.08	.15	.00	-.02	.16					
25 MAY ADDRESS PARLIAMENT	.33	.48	.40	.42	.16	.39	.10	.23	.24	.14	.22	.40	.32	.46	.61	.37	.51	.34	.11	.35	.27	.29	.17	.44				
26 MAY CONVENE CABINET SESSIONS	.39	.51	.67	.57	.12	-.00	.18	.17	.05	-.04	-.02	-.03	.31	.34	-.11	.06	.13	.16	.31	.15	.18	.28	.03	.22	.14			
27 PARTICIPATES IN CABINET SESSIONS	.28	.54	.61	.39	.42	.32	.39	.32	.30	.28	.32	.06	.55	.49	-.07	.27	.40	.14	.51	.23	.47	.04	.40	.25	.09	.57		
28 ANNULS ACTS OF OTHER BODIES	.27	.66	.55	.38	.75	.67	.65	.74	.76	.82	.85	.36	.71	.62	.42	.81	.40	.65	.68	.61	.42	-.14	.81	.15	.19	-.02	.34	
29 PREPARES AND SUBMITS BUDGET	.31	.47	.53	.44	.61	.44	.69	.50	.50	.39	.44	.22	.34	.46	.22	.47	.11	.49	.42	.34	.29	.03	.35	-.07	-.05	.21	.25	.38

NOTES ON THE TABLE: Cells contain Spearman's correlation coefficients. Coefficient that are bold lettered are significant at the 0.1 level.

FIGURE 1.1
KERNEL DENSITY PLOT OF UNWEIGHTED PRESIDENTIAL POWERS INDEX
(FROM ARMINGEON AND CAREJA, 2008)

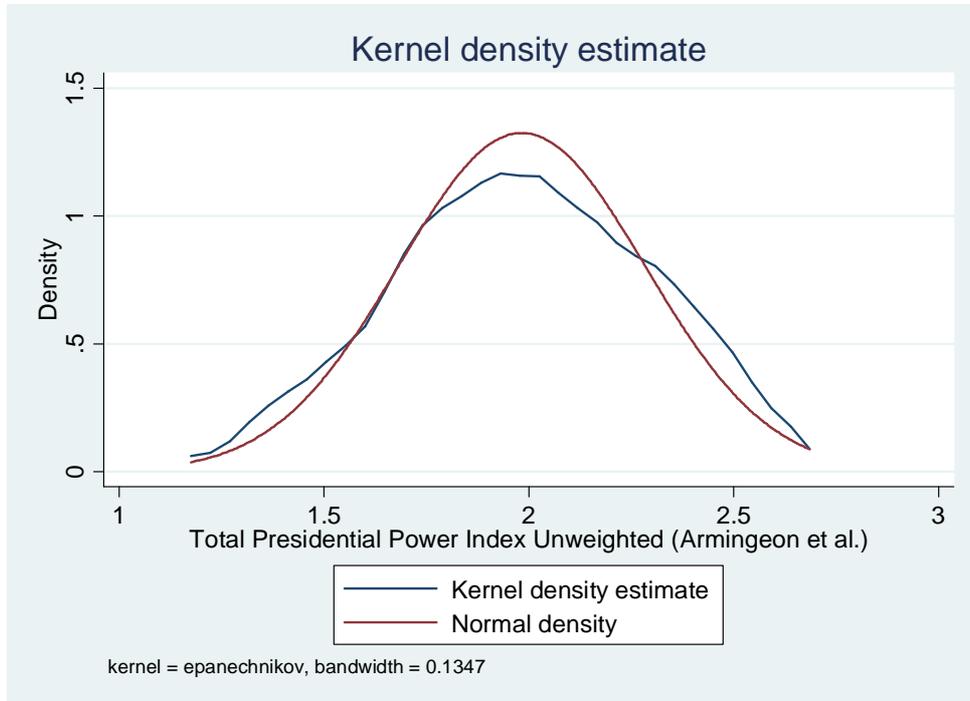


FIGURE 1.2
KERNEL DENSITY PLOT OF WEIGHTED PRESIDENTIAL POWERS INDEX
(FROM ARMINGEON AND CAREJA, 2008)

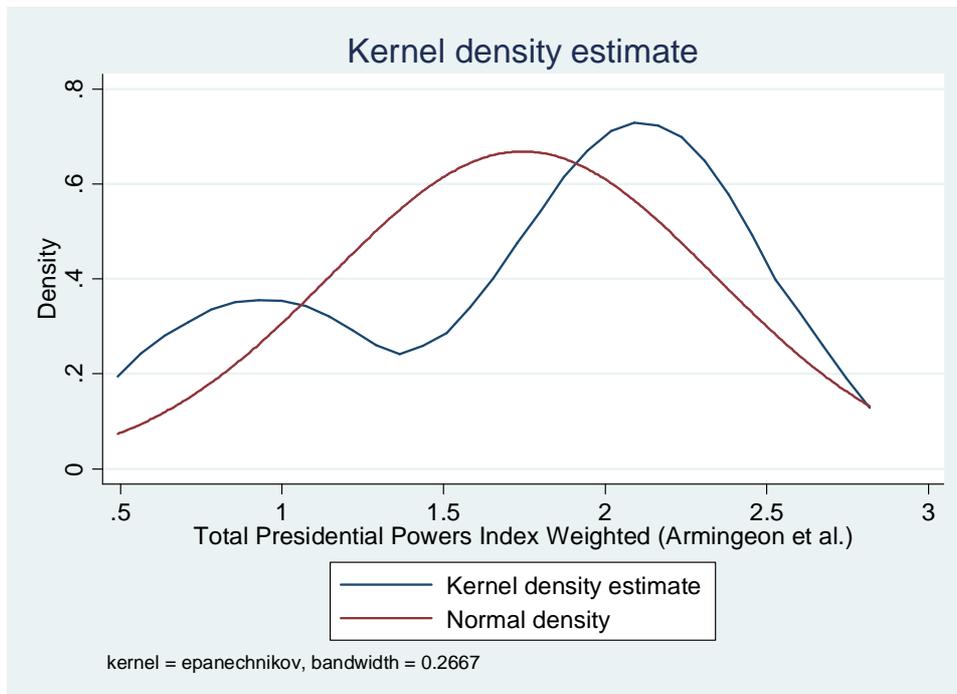


TABLE 1.6
COUNTRY RANKINGS BETWEEN UNWEIGHTED AND WEIGHTED PRESIDENTIAL
POWER INDICES IN 28 POST-COMMUNIST COUNTRIES
(FROM ARMINGEON AND CAREJA, 2008)

UNWEIGHTED COMPOSITE INDEX			WEIGHTED COMPOSITE INDEX		
<i>Ranking</i>	<i>Total score</i> <i>(1-3)</i>	<i>Country</i>	<i>Ranking</i>	<i>Total score</i> <i>(0.5-3)</i>	<i>Country</i>
1	1.31	Slovenia	1	0.76	Latvia
2	1.52	Latvia	2	0.78	Albania 1998
3	1.55	Albania 1998	3	0.79	Estonia
4	1.55	Macedonia	4	0.84	Albania 1991
5	1.59	Estonia	5	0.88	Czech
6	1.69	Albania 1991	6	0.91	Slovakia
7	1.76	Croatia 2001	7	0.93	Moldova 2000
8	1.76	Czech Republic	8	0.95	Hungary
9	1.83	Bulgaria	9	1.31	Slovenia
10	1.83	Slovakia	10	1.55	Macedonia
11	1.86	Moldova 2000	11	1.76	Croatia 2001
12	1.90	Croatia 1990	12	1.83	Bulgaria
13	1.90	Hungary	13	1.90	Croatia 1990
14	1.90	Romania 1991	14	1.90	Romania 1991
15	1.93	Lithuania	15	1.93	Lithuania
16	1.93	Mongolia 1992	16	1.93	Mongolia 1992
17	1.93	Poland 1997	17	1.93	Poland 1997
18	1.97	Belarus 1994	18	1.97	Belarus 1994
19	2.00	Turkmenistan	19	2.00	Turkmenistan
20	2.07	Armenia	20	2.07	Armenia
21	2.07	Tajikistan 1994	21	2.07	Tajikistan 1994
22	2.10	Tajikistan 1999	22	2.10	Tajikistan 1999
23	2.14	Ukraine	23	2.14	Ukraine
24	2.17	Moldova 1994	24	2.17	Moldova 1994
25	2.24	Georgia	25	2.24	Georgia
26	2.28	Kazakhstan 1994	26	2.28	Kazakhstan 1994
27	2.28	Kazakhstan 1999	27	2.28	Kazakhstan 1999
28	2.28	Uzbekistan	28	2.28	Uzbekistan
29	2.38	Azerbaijan	29	2.38	Azerbaijan
30	2.38	Kyrgyzstan 2003	30	2.38	Kyrgyzstan 2003
31	2.41	Kyrgyzstan 1993	31	2.41	Kyrgyzstan 1993
32	2.41	Russia	32	2.41	Russia
33	2.55	Belarus 1996	33	2.55	Belarus 1996

TABLE 1.7
FACTOR ANALYSES OF UNWEIGHTED AND WEIGHTED PRESIDENTIAL POWER
INDICATORS IN 28 POST-COMMUNIST COUNTRIES
(FROM ARMINGEON AND CAREJA, 2008)

<i>ITEMS</i>	<i>UN-WEIGHTED ITEMS</i>	<i>WEIGHTED ITEMS</i>	
	<i>Factor 1</i>	<i>Factor 1</i>	<i>Factor 2</i>
1 DISSOLVES PARLIAMENT			0.81
2 CALLS REFERENDUM	0.44		
3 CALLS ELECTIONS			0.91
4 APPOINTS PRIME MINISTER			
5 APPOINTS MINISTERS	0.77	0.87	
6 APPOINTS CONSTITUTIONAL COURT	0.44		
7 APPOINTS SUPREME COURT	0.65	0.84	
8 APPOINTS JUDGES	0.71	0.83	
9 APPOINTS PROSECUTOR GENERAL	0.66	0.84	
10 APPOINTS SENIOR CENTRAL BANK CHIEF	0.67	0.78	
11 APPOINTS SECURITY COUNCIL	0.74	0.80	
12 APPOINTS SENIOR OFFICERS			
13 APPOINTS SENIOR COMMANDERS	0.61		
14 COMMANDER IN CHIEF ARMED FORCES			
15 CHAIRS NATIONAL SECURITY COUNCIL		0.47	
16 REMANDS LAW	0.80	0.91	
17 SENDS LAWS TO CONSTITUTIONAL COURT			0.56
18 PROPOSES LEGISLATIONS	0.55	0.81	
19 ISSUES DECREES IN NON-EMERGENCIES	0.64	0.68	0.40
20 PROPOSES AMENDMENTS TO CONSTITUTION			
21 CALLS SPECIAL SESSIONS OF PARLIAMENT			
22 SPECIAL POWERS IF PARL UNABLE TO MEET			
23 ASSUMES EMERGENCY POWERS	0.64	0.74	
24 PARTICIPATES IN PARLIAMENTARY SESSIONS			
25 MAY ADDRESS PARLIAMENT			0.51
26 MAY CONVENE CABINET SESSIONS			0.67
27 PARTICIPATES IN CABINET SESSIONS			0.65
28 ANNULS ACTS OF OTHER BODIES	0.89	0.90	
29 PREPARES AND SUBMITS BUDGET		0.60	

NOTES: Factor loading cutoff set at .4 (See Hair et al., 1998).

Dominant factors above 0.6 are in boxes, except in cases where there are significant cross-loadings

UNWEIGHTED DATA: The items depicting the powers to dissolve the assembly (1), to call elections(3), to appoint senior officers (12), if the president has special powers if parliament is unable to meet (22) and if he/she may convene cabinet sessions were removed from the analyses.

WEIGHTED DATA: The items depicting the powers to call a referendum (2), to appoint the prime minister (4), the constitutional court(6), and senior commanders (13), whether the president is the commander in chief of the armed forces (14), proposes amendments to the constitution (20), and calls special sessions of parliament (21) were removed from the analyses.

TABLE 1.8
 ROTATED FACTOR LOADINGS OF SIX INDICATORS OF PRESIDENTIAL
 POWER ON A SINGLE FACTOR
 (SHUGART AND CAREY, FRYE ET AL.)

<i>Items</i>	<i>Factor 1</i>
PACKAGE VETO	0.58
PARTIAL VETO	0.61
EXCLUSIVE INTRODUCTION	0.48
CABINET DISSMISSAL	0.74
CABINET FORMATION	0.85
CENSURE	0.71

NOTES: Table excludes Authoritarian countries, for a total of 47 cases.
 The single factor retained captures 92% of variance in the items.
 Cronbach's $\alpha=0.81$ KMO=.73

TABLE 1.8
 FACTOR LOADINGS OF 13 UNWEIGHTED PRESIDENTIAL POWER ITEMS ON A
 SINGLE FACTOR (ARMINGEON AND CAREJA, 2008)

<i>Items</i>	<i>Factor 1</i>
APPOINTS MINISTERS	0.79
APPOINTS SUPREME COURT	0.64
APPOINTS JUDGES	0.77
APPOINTS PROSECUTOR GENERAL	0.65
APPOINTS SENIOR CENTRAL BANK CHIEF	0.66
APPOINTS SECURITY COUNCIL	0.70
REMANDS LAW	0.81
PROPOSES LEGISLATIONS	0.56
ISSUES DECREES IN NON-EMERGENCIES	0.65
ASSUMES EMERGENCY POWERS	0.60
ANNULS ACTS OF OTHER BODIES	0.90
DIRECT ELECTION	0.46
TOTAL ACCUMULATION OF POWERS	0.89

NOTES: The single factor retained captures 72% of variance in the items.
 Cronbach's $\alpha=0.91$ KMO=.81

APPENDIX: INDIVIDUAL COMPONENTS OF MEASUREMENT

Shugart and Carey's Powers of Presidents (similar to Frye, Hellman, Tucker (2000))

Legislative Powers

Package Veto/Override

- 4 Veto with no override
- 3 Veto with override requiring majority greater than 2/3 (of quorum)
- 2 Veto with override requiring 2/3
- 1 Veto with override requiring absolute majority of assembly or extraordinary majority less than 2/3
- 0 No veto; or veto requires only simple majority override

Partial Veto/Override

- 4 No override
- 3 Override by extraordinary majority
- 2 Override by absolute majority of whole membership
- 1 Override by simple majority of quorum
- 0 No partial veto

Decree

- 4 Reserved powers, no rescission
- 2 President has temporary decree authority with few restrictions
- 1 Authority to enact decrees limited
- 0 No decree powers, or only as delegated by assembly

Exclusive Introduction of Legislation (reserved policy areas)

- 4 No amendment by assembly
- 2 Restricted amendment by assembly
- 1 Unrestricted amendment by assembly
- 0 No exclusive powers

Budgetary Powers

- 4 President prepares budget; no amendment permitted
- 3 Assembly may reduce but not increase amount of budget items
- 2 President sets upper limit on total spending, within which assembly may amend
- 1 Assembly may increase expenditures only if it designates new revenues
- 0 Unrestricted authority of assembly to prepare or amend budget

Proposal of Referenda

- 4 Unrestricted
- 2 Restricted
- 0 No presidential authority to propose referenda

Non-legislative Powers

Cabinet Formation

- 4 President names cabinet without need for confirmation or investiture
- 3 President names cabinet ministers subject to confirmation or investiture by assembly
- 1 President names premier, subject to investiture who then names other ministers
- 0 President cannot name ministers except upon recommendation of assembly

Cabinet Dismissal

- 4 President dismisses cabinet ministers at will
- 2 Restricted powers of dismissal
- 1 President may dismiss only upon acceptance by assembly of alternate minister or cabinet
- 0 Cabinet or ministers may be censured and removed by assembly

Censure

- 4 Assembly may not censure and remove cabinet or ministers
- 2 Assembly may censure, but president may respond by dissolving assembly
- 1 "Constructive" vote of no confidence (assembly majority must present alternative cabinet)
- 0 Unrestricted censure

Dissolution of Assembly

- 4 Unrestricted
- 3 Restricted by frequency or point within term
- 2 Requires new presidential election
- 1 Restricted only as response to censures
- 0 No provision

Shugart, M. S., & Carey, J. M. (1992). *Presidents and Assemblies : Constitutional Design and Electoral Dynamics*. Cambridge: Cambridge University Press (p.150).

Armingeon and Careja's List of Presidential Powers

1. dissolves the parliament;
2. calls referendum;
3. calls elections;
4. appoints prime minister;
5. appoints ministers;
6. appoints constitutional court;
7. appoints supreme court;
8. appoints judges;
9. appoints prosecutor general;
10. appoints central bank chief;
11. appoints security council;
12. appoints senior officers;
13. appoints senior commanders;
14. commander-in-chief of armed forces;
15. chairs national security council;
16. remands law for reconsideration [2/3 override = 1];
17. sends laws to constitutional court;
18. proposes legislation;
19. issues decrees in non-emergencies [no review = 1];
20. proposes amendments to constitution;
21. calls special sessions of the parliament;
22. special powers if parliament unable to meet;
23. assumes emergency powers at other times;
24. participates in parliamentary sessions;
25. may address or send messages to the Parliament;
26. may convene cabinet sessions;
27. participates in cabinet sessions;
28. Annuls acts of other bodies;
29. Prepare and submits the budget.

Codes were given as follows: 1 – if the president holds exclusively a given power;

0.5 – if the president is sharing a power with another body

0 – if the president does not hold the power under question

For presidents indirectly elected, the score obtained was multiplied by 0.5. In the Table, countries with indirectly elected presidents are marked by ‘ * ‘.

3. Although in some countries the presidential powers were increased through referendum, this information was not included in calculation of presidential powers, as the referenda were not considered as amendments to constitution.

Source: Armingeon, K., & Careja, R. (2007). *Comparative Data Set for 28 Post-Communist Countries, 1989-2007*. Bern: Institute of Political Science, University of Berne.

Revised Powers of Presidents (METCALF)

Legislative Powers

Package Veto/Override

- 4 No override
- 3 Override by extraordinary majority
- 2 Override by absolute majority of whole membership
- 1 Override by simple majority of quorum
- 0 No veto

Partial Veto/Override

- 4 No override
- 3 Override by extraordinary majority
- 2 Override by absolute majority of whole membership
- 1 Override by simple majority of quorum
- 0 No partial veto

Decree

- 4 Reserved powers, no rescission
- 2 President has temporary decree authority with few restrictions
- 1 Authority to enact decrees limited
- 0 No decree powers, or only as delegated by assembly

Exclusive Introduction of Legislation (reserved policy areas)

- 4 No amendment by assembly
- 2 Restricted amendment by assembly
- 1 Unrestricted amendment by assembly
- 0 No exclusive powers

Budgetary Powers

- 4 President prepares budget; no amendment permitted
- 3 Assembly may reduce but not increase amount of budget items
- 2 President sets upper limit on total spending, within which assembly may amend
- 1 Assembly may increase expenditures only if it designates new revenues
- 0 Unrestricted authority of assembly to prepare or amend budget

Proposal of Referenda

- 4 Unrestricted
- 2 Restricted
- 1 Countersignature of minister required
- 0 No presidential authority to propose referenda

Judicial Review

- 4 President alone refers
- 2 President, cabinet, or majority of assembly may refer
- 1 President, cabinet, or minority of assembly may refer
- 0 President may not refer or no prior judicial review

Non-legislative Powers

Cabinet Formation

- 4 President appoints ministers without need for assembly confirmation
- 3 President appoints ministers with consent of assembly
- 2 President names cabinet ministers subject to confirmation or investiture by assembly
- 1 President nominates prime minister, who needs confidence of assembly; prime minister appoints other ministers, possibly with consent of president
- 0 President cannot name ministers except upon recommendation of assembly

Cabinet Dismissal

- 4 President dismisses ministers at will
- 3 President dismisses ministers with consent of assembly
- 2 President dismisses ministers, but only under certain conditions
- 1 President dismisses ministers on the proposal of the prime minister
- 0 Ministers may be removed only by assembly on vote of censure

Censure

- 4 Assembly may not censure and remove cabinet or ministers
- 2 Assembly may censure, but president may respond by dissolving assembly
- 1 "Constructive" vote of no confidence (assembly majority must present alternative cabinet)
- 0 Unrestricted censure

Dissolution of Assembly

- 4 Unrestricted
- 3 Restricted by frequency or point within term
- 2 Requires new presidential election
- 1 Restricted: only as response to specific events
- 0 No provision

Source: Shugart and Carey (1992), Shugart (1996)

Metcalf, L. K. (2000). Measuring Presidential Power. *Comparative Political Studies*, 33, 660-685.

Timothy Frye's List of Presidential Powers

1. Dissolves parliament
2. Calls referendums
3. Calls elections
4. Appoints prime minister
5. Appoints ministers
6. Appoints constitutional court
7. Appoints supreme courts
8. Appoints judges
9. Appoints prosecutor general
10. Appoints central bank chief
11. Appoints security council
12. Appoints senior officers
13. Appoints senior commanders
14. Commander-in-chief of armed forces
15. Chairs national security council
16. Remands law for reconsideration
17. Sends law to constitutional court
18. Proposes legislation
19. Issues decrees in non emergencies
20. Proposes amendments to constitution
21. Calls special sessions of parliament
22. Special powers if parliament unable to meet
23. Assumes emergency powers at other times
24. Participates in parliamentary sessions
25. May address or send messages to parliament
26. May convene cabinet sessions
27. Participates in cabinet sessions

"NOTE: The presidency rating is based on 27 formal powers. Powers shared with the assembly are counted as 0.50 The presidential power index was developed jointly with Joel Hellman (1996) based on previous work by McGregor (1994) and Lucky (1993-1994). This scale differs from McGregor's in several ways. First it offers a different weight system of the powers. Second it reduces the number of powers to 27 by eliminating ceremonial powers. Third it includes the countries of the former Soviet Union. The scale differs from Hellman's (1996) by not counting the powers of the prime minister if there is no president, and it offers a highly different weighting of powers."

Source: Frye, T. (1997). A Politics of Institutional Choices: Post-Communist Presidencies. *Comparative Political Studies*, 30(5), 523-552.

Alan Siaroff's List of Presidential Powers

1. Popular election
2. Concurrent election of president and legislature
3. Discretionary appointment powers
4. Chairing of cabinet meetings
5. Right to veto
6. Long-term emergency and/or decree powers
7. Central role in foreign policy,
8. Central role in government formation
9. Ability to dissolve the legislature.

Source: Siaroff, A. (2003). Comparative Presidencies: The Inadequacy of the Presidential, Semi-presidential and Parliamentary Distinction. *European Journal of Political Research* 42, 287-312.

André Krouwel's List of Presidential Powers

1. Election of the president (direct, indirect)
2. Dissolution of Parliament
3. Ministerial Appointment
4. Vote of Investiture (yes/no)
5. Vote of Confidence (yes/no)
6. Introduce Legislation (yes/no)
7. Executive Powers, government can ignore a parliamentary vote of no confidence (yes/no)

Source: Krouwel, A. (2003). Measuring Presidentialism and Parliamentarism. *Acta Politica*, 38, 333-364.

Christian Lucky's List of Presidential Powers

1. Candidacy requirements
2. Compatibility requirements
3. Nomination requirements
4. Electoral Body
5. Required Mandate for Election
6. Length of Term
7. Vice-President?
8. Term Limits
9. Call Elections to Assembly
10. Appoint Government?
11. Recall Government
12. Relationship with Cabinet
13. Appointments made Unilaterally
14. Appointments Requiring Approval of other Office or Institution
15. Control over State Agencies
16. Referendum Powers
17. Convene Assembly
18. Dismiss Assembly
19. Right to Address Assembly
20. Right to Propose Legislation
21. Veto Power (override requirements)
22. Appoint constitutional Court
23. Appoint Highest Appellate Court
24. Right to Delay promulgation of law
25. Appoint Professional Judges
26. Judicial Standing
27. Powers over Foreign Policy

28. Emergency Powers
29. Martial Powers
30. Police Powers
31. Control Over Citizenship
32. Power to Pardon
33. Interim Powers
34. Requirements for Forced Removal From Office
35. Amending Powers
36. Local Powers
37. Sweeping Clauses
38. Description of position (head of state, government)

Source: Lucky, C. (1993-1994). Tables of Presidential Power. *East European Constitutional Review*, 2(4), 81-94.