

Conference Paper

Institutionalization of party systems: a cross-regional approach using the Weighted Volatility Index

Eduardo OLIVARES CONCHA
e.olivaresconcha@manchester.ac.uk

University of Manchester
United Kingdom

Prepared for the Political Studies Association 64th Annual International Conference
Manchester, April 14-16, 2014

Abstract

Stability of inter-party competition is one of the most relevant conditions that developed democracies feature as characteristic of their maturity. Traditionally, scholars have employed different ways to assess electoral volatility. The Pedersen Volatility Index is regarded as the most important and widely accepted measure. In this paper, I use a unique update dataset for a sample of 64 countries, showing that developing countries do not only have higher levels of volatility than developed societies, but also higher levels of volatility dispersion, especially in Latin America. Nevertheless, passage of time matters: one should expect that the more years of elections a country has, the less volatile it becomes. In profiling countries as being more or less volatile, scholars have neglected the prominence that more current events have over past events in a country's electoral experience; that is, elections in a country's history are treated as if they all contribute equally to the volatility outcome of such a country. Here, a new measure is proposed to assess the relative importance that more recent elections should have in profiling the electoral stability of a country. Results suggest that 1) a few old democracies are losing stability, 2) most of developing countries are gaining consolidation, and 3) among the developing countries, post communist European polities are reducing their volatility at faster speed. These analyses are relevant to better our understanding of the origin and evolution of party systems in developing democracies in general, and enrich the ways to operationalize electoral volatility.

Electoral volatility has been regarded as “the most important indicator of the absence of party system stabilization” (Tóka 1997: 3). To measure volatility, the most prominent and widely used indicator is the Pedersen Index of Electoral Volatility (Pedersen 1979, 1983; for a reflection about the index’s contribution to the political science scholarship, see Katz 1997). This measure has been employed by almost every single study concerning party system stability (e.g. Bartolini and Mair 1990, Coppedge 1998, Croissant and Volkel 2010, Lindberg 2007, Luna and Altman 2011, Mainwaring 1999, Mainwaring and Scully 1995, Jones 2007, Payne 2006, Tavits 2005).

The Pedersen Volatility Index (V) shows the change in the share of votes (or seats) per party per election. It takes the sum of total net changes for each party, divided by 2. Its formula¹ is represented by:

$$V = \frac{\sum_{i=1}^n |p_{it} - p_{i(t+1)}|}{2} \quad (1)$$

where n is the number of parties in the given election, p the percentage of votes received by i party in time t , which is then subtracted by the percentage received in time $t+1$.

The contribution of this measure to the literature of party systems has been enormous. Yet, there is still room to take its contribution one level up in the scholarship. Time is probably the most important factor that scholars miss when electoral volatility is calculated. As a matter of fact, time does play a highly relevant role in voting behavior and party system evolution (Converse 1969, Mainwaring and Zoco 2007, McPhee 1963). Pederson (1997) himself acknowledges that the V index has its limits when time variable brings about. The passage of time is an aspect that should be included in any analysis of electoral volatility either using the V index or any other operationalization of volatility and measure. This paper aims to strengthen the way scholars can use the Volatility index by adding a new method that gives value to the passage of time in the development of party systems. By doing so, scholars can get more reliable results in the study of party system institutionalization.

The importance of stable competitive behavior

Stable patterns of inter-party competition show that a system can become more predictable over time. That is, the system acquires a certain regularity that gives it shape and consistency. If parties were not stable, either because they disappear after every election or because they change their names, or split and merge constantly, voters would face a confused menu of options in every election. If unclear options were on the table, voters would be impeded to cast their decisions in an informative and coherent manner.

Predictability means that voters can trust the parties they vote for, because they supposedly know them and know their past behavior. Voters choose between alternatives they can

¹ For example, if party A grows from 10% to 40% of votes between one election and the other, party B goes from 30% to 10%, party C falls from 50% to 30%, and party D grows from 10% to 20%, the total net change is 80 percentage points. If we divide that figure by 2, the volatility index is 40%, a very unstable system.

recognize as longstanding platforms, and parties can offer programs that have short, medium and also long-term objectives. If programs were only achievable in the short-term, the electorate would lack predictability (Downs 1957, Mair 2001).

Strongly institutionalized systems tend to be more stable, such that citizens choose governments based on programmatic platforms (Mainwaring and Torcal 2006). Such programs come from consolidated and well organized parties, avoiding the probability of the emergence of personalistic and anti-system actors as well as preventing leaders to follow authoritarian paths (Mainwaring and Zoco 2007). Citizens recognize parties and feel close to them, so that both parties and citizens, who represent the demand and supply side of the political system, can interact over time following predictable preferences (Holcombe and Gwartney 1989, Panebianco 1988, Ware 1996)

The meaning of stability

What do stable patterns of party system competition mean? In a broad sense, patterned behavior is a neutral concept: it only refers to systematic events that a given structure follows over time. The idea of 'stable patterns', as it is, only says that the system is not chaotic. For instance, a country that has low electoral volatility in an election T1, high in T2, again low in T3, and high in T4, shows a clear and stable pattern of high fluctuation or, indeed, high overall volatility. That case may mean, on the supply side, that political parties frequently change their programmatic offers, leaders or coalition partners. Highly fluctuating systems lack programmatic predictability, because parties might prefer to propose event-oriented manifestos rather than longstanding platforms. As Alesina (1988) suggests, the repetition of inter-party competition in two-party systems can end up limiting the magnitude of policy platform fluctuations. In the same case, on the demand side, if voters change their preferences very often, their behavior will become fluid and feeble (Bartolini and Mair 1990, Rose and Mishler 2010, Zuckerman, Dasovic, and Fitzgerald 2007). This kind of fluctuation is neither desirable for parties nor for voters, because they both lose the minimum necessary understanding to sustain a coherent and responsive political system. In sum, fluctuating patterns of stability do not fit into the idea of stable inter-party competition, because the latter needs substantial and perdurable programmatic content to exist. The only way to discern the fluctuation of party systems is watching its behavior over long periods of time; at least, after four consecutive elections. Party systems where new parties enter the electoral arena with instant success, or where important parties in one election disappear in the next or in two more elections, are not predictable. Stable patterns in party systems implies that voters tend to choose between broadly the same set of parties over time, so that all the components of the system are expected to remain more or less constant.

Nonetheless, stability should not be confused with immobility. Immobile stability is by no means a desirable condition of party systems, because of the risk of political stagnation or, on the other extreme, democratic rupture (Almond 1956: 408). For instance, in 1958, after the so-called period of La Violencia (The Violence), between 1930 and 1953 in Colombia, main rival parties agreed to share the government in turns: one government for the Liberal Party, the next one for the Conservative Party, with mixed cabinet positions. Although the pact

served as a kind of political armistice to avoid violence among followers of each party, it also impeded competition. Until the 1970s, real inter-party competition was absent in Colombia. Lebanon is other example: political religious elites from Maronite Christians and Sunni Muslims decided to share top positions in a joint government to assure peace, but such arrangements also involved a lack of competition (and yes, also lack of violence) between 1943 and 1975. Immobilization or political deadlock is regarded as a typical problem that some consociational examples have, following Lijphart (Reynolds 2002: 41). Consociational democracy refers to systems where governments practice power-sharing in deeply divided societies, typically along ethnic, religious, or ideological cleavages, to avoid violence or conflict (Lijphart 1969).² Although power-sharing governments have a huge potential to become stable, because the main political actors are represented in the executive, it might be at the expense of competition. In that case, key political actors may prefer to secure their seats in the government rather than put them at risk in elections. But as it has been defined here, party systems require minimal levels of competition to exist as such. Therefore, it is not conceptually feasible to regard immobile stability as a stable party system.

Finally, the debate about stability refers to the electoral part of a government cycle. That is, stability is not linked to the inter-electoral period. This distinction is of great importance, because the sole occurrence of free and fair elections is part of the classical procedural definition of democracy (Huntington 1968, Schumpeter 1943), but not of a more complex exploration of democracy that considers how a given system performs in between elections (Dahl 1982, Merkel 2004, Schmitter and Karl 1991). Stability of inter-party competition, therefore, relates to democracy only in terms of ensuring competitive elections, because having elections is the first requirement for any democracy to be called as such (Huntington 1968). The extent to which the quality of democracy is better or worse depends on other elements, especially those that happen in between elections (Merkel 2004, Schmitter and Karl 1991).

In sum, in the way this paper is conceived, stable party systems are those that follow predictable patterns of low electoral volatility. As such, this dimension can only be undertaken specifically for electoral periods, assuming that such elections are fair and free enough to claim they are competitive. The latter also means that such systems have the minimum requisites to be democracies or, at least, semi-democracies.

Measuring volatility

One of the challenges with the Pedersen Index is how to measure systems where parties split, merge and are born after every election (Mainwaring and Zoco 2007, Sikk 2005). In these cases, which are quite common in recently democratized polities, clearly volatility will be high because for each new party there is an 'old' party that has been replaced. The first

² The consociational democratic theory has suggested many examples of its application. Lijphart has named the Netherlands, Belgium, Austria, Cyprus, Switzerland, and many others as countries where, at a given year or period, successfully implemented this kind of power-sharing government. There is a rich debate about the appropriateness of the consociational conceptualization and its desirability between Lijphart and Donald Horowitz in Reynolds (2002).

possible approach to this challenge is just to compute any change of name of a party as a new entity, regardless if it is the direct heir of an existing party or the product of a merge or split. This approach does not seem to be useful for the objective of finding out if a party system is less or more predictable, because it is expected that voters will note if a party is the successor of another. On the other extreme, the second approach is that all parties resulting, for example, from a split, should be considered as the sum of the preexisting party; the same the other way round: a party resulting from a merge is the sum of the preexisting parties. Finally, the third approach is to assume that the largest party represents the resulting split of a previous organization (so this larger party becomes the replacement), or the other way round, that the only predecessor of a merge is the previous largest party. The latter two approaches have their advantages and disadvantages. The shared flaw is that in all the cases a transformation has occurred, thus voters are casting a ballot for a formally different organization that neither approach is recognizing entirely; nonetheless, at least the third approach can partially assess both the degree of continuity of an entity and the degree of institutional rupture implicit in any split or merge. As for the advantages, both approaches assume that there is an implicit (and often, explicit) continuity in the party organization that need to be addressed, in spite of formal change of names or mergers and splits. For the matter of this paper, I will follow Mainwaring and Torcal (2006) and Mainwaring and Zoco (2007), who take the third approach, in particular because it shares similar advantages with the second approach, but have, in my view, less conflicting flaws.

There are also questions about the ultimate objective of the Pedersen Index (V index). Luna and Altman (2011) suggest that the way the Pedersen Index of electoral volatility is built can be misleading. They draw attention to the fact that in cases like Chile the index should evaluate the performance of pre-electoral coalitions rather than parties. However, this is of course not a problem of the index, but of how scholars use it. In addition, in their view the Pedersen Index does not measure what it is supposed to—voters' preferences over time—but rather the parties' reception of votes over time. In fact, the index does not measure the volatility at the individual-level, but of the electorate as a whole (aggregate level). As it has been pointed out elsewhere (for a critical reflection, see Rattinger 1997, esp. 87-8), the analysis of the aggregate level is not only not obsolete, but necessary when there are not reliable data of voters' behavior over time. Hence, the index indeed gauges general trends of voting behavior of the electorate at the aggregate level, regardless of individual preferences, turnouts, changes in the universe of the electorate, the compulsory type of vote (for instance, to have mandatory vote in election t and have non-mandatory vote in election $t+1$), the size of the party and the magnitude of its losses and gains (conceptually and legally, it can be treated differently a big party losing 3 percentage points of votes from 30 to 27%, than a small party losing 3 percentage points from 5% to 2%), and the spatial position of the parties. Yet, all these mentioned factors can enrich the analysis of the electoral outcomes, once the volatility is measured and known.

The V index considers systems as a whole, but it is flexible enough to allow innovation to capture intra-system differences. For example, scholars can look at sub-national level of electoral volatility in federal countries, or at supra-national level for the European elections. At the same time, and especially among newer democracies, it is common to have a mix of consolidated parties with newcomers that may explain why these countries have higher

degrees of instability. It is not unusual for parties to be created only to compete for specific elections (Randall and Svåsand 2002), as frequently occurred during the 1990s and/or 2000s in, for example, Ecuador, Lithuania, Papua New Guinea, Paraguay, Peru, the Philippines, Poland, Romania, and Thailand, as well as cases of re-labeled parties (due to merging and splitting, essentially) in places such as South Korea, Estonia, Latvia, and Venezuela. Western European party systems have also experienced these phenomena,³ but to a far lesser extent than third wave countries. To assess this reality, one approach to measuring these systems is to simply use a replacement method, by which we only compute one volatility score for existing parties and another score for new and *exiting* parties (Birch 2001, Sikk 2005). Building on that, Powell and Tucker (2010) propose to have two different volatility indexes, one for stable parties (volatility ‘type B’) and one for entry-exit parties (‘type A’). The advantage they see is that after we sum up both indexes, the result is still compatible with the traditional V index, so it can still be compared with other party systems. Mainwaring et al (2009) offer a similar distinction of volatility, naming it ‘extra-system volatility’ in the case of new parties, and ‘within-system volatility’ in that of more stable parties. All of these distinctions work well when the objective of the research is to explain particular cases, but it seems less convincing when the purpose is to analyze larger time series for larger samples of countries.

The passage of time

Time is one of the most important factors that students of political science miss when they use the V index. Pederson (1997) comments that the index that measures electoral volatility has its constraints when the variable for time is considered. In his own experience with datasets that were further expanded, he realized that different volatility scores can result from different time series: “We will all of us probably have to reconsider earlier, time-bound, statements in the light of new events” (Pedersen 1997: 94). The passage of time is, then, an aspect that should be included in any analysis of electoral volatility either using the V index or any other operationalization of volatility and measure.

In his seminal findings, Pedersen (1979) contested the hypothesis of the ‘frozen systems’ advanced by Lipset and Rokkan (1967). However, in their classic work, Bartolini and Mair (1990) assessed volatility as a long-term indicator that needed, therefore, large number of observations to make conclusions. They then suggested that the ‘freezing hypothesis’ was mainly proved to be correct: on average, the electoral volatility of old Western democracies was 8.6% between 1885 and 1985, a quite low figure in the political science scholarship. In more recent work, Webb (2002) stated that electoral volatility in industrial countries has increased over time, with the notable exception of Spain (Holliday 2002), which is taken as a recent example of transitional democracy (Schmitt and Freire 2011, Webb, Farrell, and Holliday 2002). As it is, no conclusion about the tendency of the electoral volatility in Western European countries can be made but to say that they have been fluctuating in a low score band. Yet, such a conclusion should be neither surprising nor concerning, because electoral systems are not static (despite the symbolic label of ‘frozen’ for Europe).

³ For instance, the Pirate parties in some European countries, or the extreme right movements in Greece.

The index (and its innovations) has also been applied fully or partially to several developing regions in the world: Latin America (Coppedge 1998, Luna and Altman 2011, Mainwaring and Scully 1995, Mainwaring and Torcal 2006, Payne 2006, Roberts and Wibbels 1999),⁴ Eastern Europe (Cotta 1996, Lewis 2000, Rose and Munro 2003, Tavits 2005), Africa (Ferree 2004, Kuenzi and Lambright 2005, Lindberg 2007, Mozaffar 2005), and Asia (Hicken and Kuhonta 2011, Mainwaring and Torcal 2006, Stockton 2001). All in all, the general conclusion is that electoral volatility is high in the developing world, although the range is also large. This means that, differently from developed countries, in new democracies there is a large span of cases moving at different degrees of electoral volatility, some of them closer to those of Western countries, some at the odds of any stability, and some in between.

One should expect that the more time passes, the more loyalty voters cultivate for parties (McPhee 1963). Converse (1969) proposes that citizens create attachments to parties that strengthen over time and pass across generations. These increasing attachments remain more or less constant, giving the system more stability. In this sense, electoral stability becomes a function of time, and the unit of analysis is the years of experience in the system. Mainwaring and Zoco (2007) tested the importance of the passage of time in the electoral stability of developed and developing countries. They do not find significant support for the claim that stability becomes higher over time; rather, their findings suggest that stability is related to the period when countries became democratic: those where democracy was inaugurated before 1978 are more stable than post-1978 democratic countries, regardless of the age of democracy itself or the number of democratic consecutive elections.

With a more up to date dataset of 64 countries, and 671 observed elections, which includes countries' elections in the 2000s and even after 2010,⁵ we can again examine to what extent time (measured as electoral experience) matters for party system stability. Evidence suggests that the longer a country conducts elections, the lower the level of electoral volatility it will have. Using a dataset updated as recently as of April 2012, it is observable that a linear slope of electoral volatility goes down as the number of elections in 60 countries increases (Fig. 1).

⁴ In some cases, like in Mainwaring and Scully (1995), and Payne (2006), the results are considered for the Lower Chamber and for the Presidential elections, taking a simple average of both. Mainwaring and Torcal (2006) compute the index for the Lower Chamber for 39 countries, for elections started in 1978. Unfortunately, this measurement tactic lacks specificities (it does not say whether they measure volatility in seats or votes; Mainwaring told me it is in votes in a personal communication) and timing (it includes elections in countries both just exiting from authoritarian regimes as well as older democracies). They do state that there is a significant correlation of volatility between first and subsequent elections, therefore they imply that volatility is an intrinsic characteristic of developing countries' party systems.

⁵ This dataset is updated as recently as of November 2012, so it includes the 2012 United States' House of Representatives elections (provisional results). With the exceptions of the Philippines, Papua New Guinea, Benin, and Mauritius, all the data include figures from 1940s (or the most recent starting point of democracy) to post-2000.

Fig. 1
Electoral volatility and number of elections

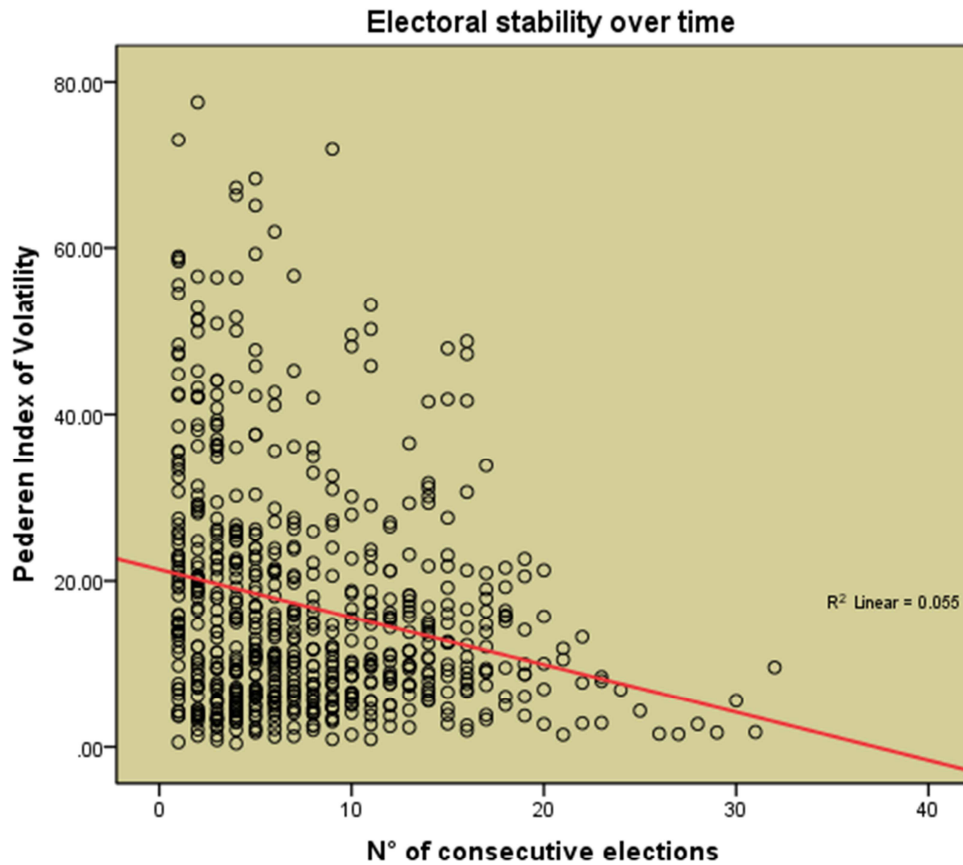
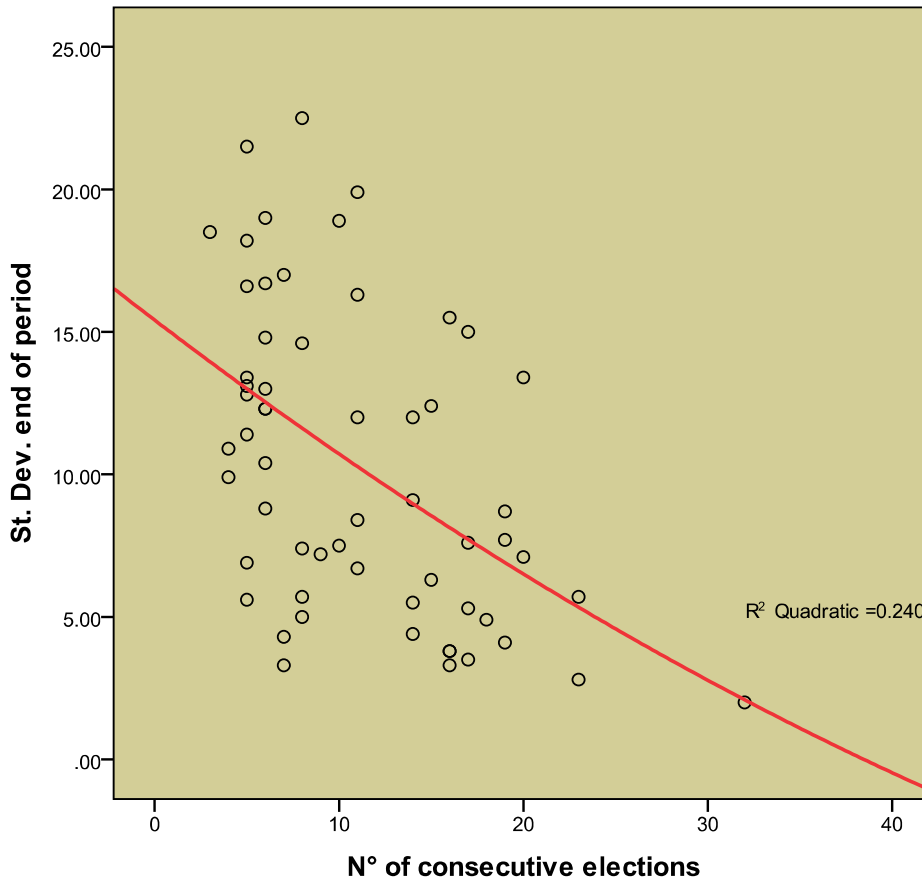


Fig. 1 sheds light on the understanding of volatility outcomes. As a trend, it shows that countries having more experience with elections are less electorally volatile than those countries that have had a few elections. If more attention is paid to the graph, it is plausible to say that only after having 17 consecutive elections countries tend to decrease the electoral volatility at a more evident pace. The high levels of dispersion indicate the great degree of volatile outcomes, giving the model a weak explanatory power ($R^2 < 0.1$).

Another way to analyze the patterns of electoral stability is by focusing on dispersion. High levels of dispersion in the electoral volatility scores would indicate very fluctuant electoral behavior in a country, which reveals very unstable degrees of inter-party competition. The phenomenon of high levels of variability is shown through the standard deviation of each country's Pedersen Index of Electoral Volatility over time (Fig. 2). The square root is taken to standardize the results.

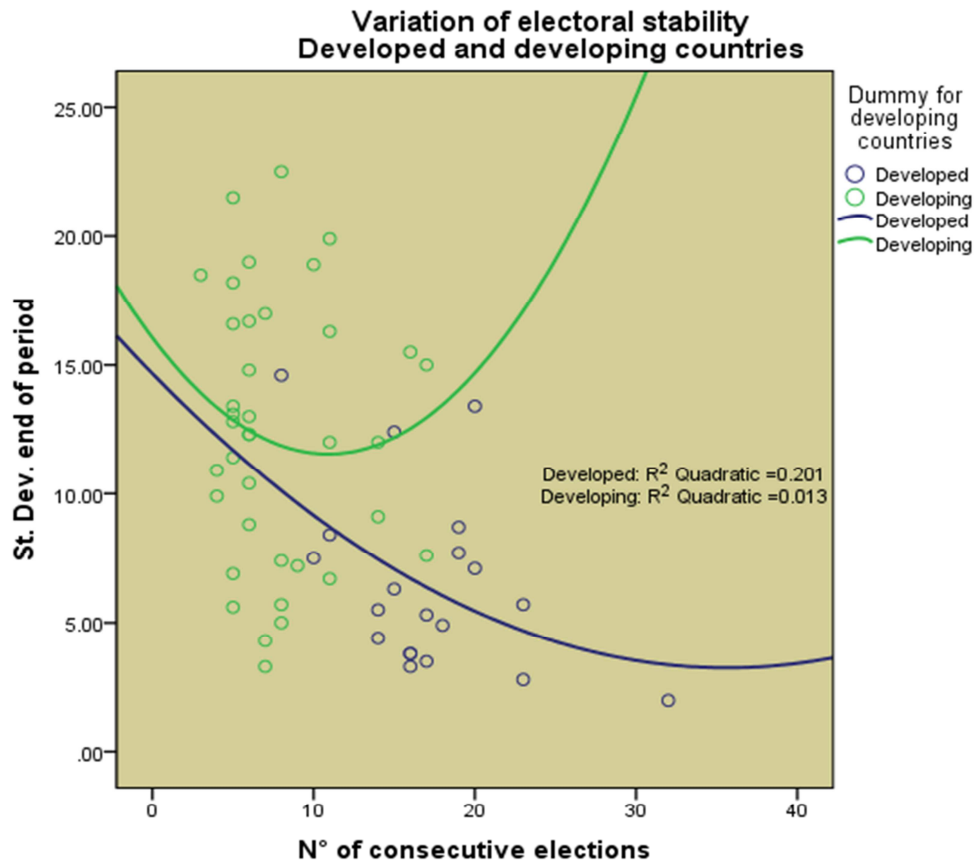
Fig. 2
Variability of electoral volatility in all the cases



According to Figure 2, values for standard deviations for countries that have had 12 consecutive elections or fewer are almost three times higher the figures accounting for countries that have already had around 20 elections or more. It means that, in general, countries with less electoral experience tend to have periods of low and high stability, whereas countries with more electoral background are less fluctuant in its (already high) levels of stability. As more experienced countries have more stability (Fig. 1), Figure 2 implies that such stability is more consolidated.

To ascertain the differences between developing and developed countries in terms of dispersion of electoral volatility, both categories are now separated for analysis (Fig. 3). Figure 3 shows the standard deviations of electoral volatility outcomes over a given number of consecutive elections for two classes: developed and developing countries.

Fig. 3
Variability of electoral volatility by level of development



When only developed countries are selected, the explanatory power increases to show that the more elections a country has, the lower the values for standard deviation. Likewise, no clear trend can be observed nor explained by only selecting the cases of developing democracies (Fig. 3). Evidence suggests that Western Europe and the US are much more institutionalized than their counterparts in the developing world, but also the variability of degrees of institutionalization seems to be much higher among third wave democracies than among developed societies. That is, the variation of instability within the group of developing democracies is greater than in the group of mature democracies, because in the former the heterogeneity of cases is also higher. Hence, there are many developing democracies close to becoming, or already becoming, developed, while at the same time there are many others still at odds of being developed.

The changing nature of the electorate

As expected, developed countries outperform developing countries in terms of stabilization, according to an updated dataset comprising 60 countries. At the same time, we see that as more time passes, taken time as the number of consecutive elections, the more stable systems

in general become. Among developed countries, the variance of stability is lower than in developing countries; and among the latter, the variance is the highest in Latin America and is the lowest in Central Eastern Europe.

Among all the possible classifications, none takes into consideration the changing nature of party systems over time. As it has been discussed elsewhere (Bartolini and Mair 1990, Pedersen 1997, Rattinger 1997), short periods do not necessarily show tendencies of volatility. All the studies cited in previous pages, including those separating extra-system and within-system volatility, calculate a simple average of the period analyzed per country. However, it is not the same, for example, the period beginning in post-World War II for advanced democracies which democracy was then inaugurated, with has happened after 1990, when the first elections occurred in most of the post soviet countries.⁶ Due to the well-known properties of the arithmetic mean, all values weight the same in average. The use of simple averages allows to distribute figures equally over time; that is the aim of arithmetical averages. However, since more recent events are more relevant to comparing current levels of institutionalization, the inclusion of data points far away in time (for developed cases) still influences the final result for comparative purposes. In other words, for the sake of the V index, it is as important an election of 1950 as of 2012. This of course has nothing wrong in nature: it is adequate for fitting countries in a historical scale or for drawing conclusions about their electoral volatility evolution over a large lifespan.

Nevertheless, as it is measured, the V index does not deal with other prominent issues. First, we are not able to compare the volatility of a country regarding its own history without segmenting it in certain periods (for example, separated by decades or by certain party ruling). Dawson and Robinson (1963) studied the public policy outcomes in different states in the United States according to some variables, including the inter-party competition. They criticized previous studies that treated inter-party competition as the result of too few or too many electoral periods under analysis. For too long periods, these authors said that “there is a danger that long base periods may obscure one or more shifts in voting and party identification” (p. 272); on the other hand, short time periods “may measure only deviations from normal patterns of voting behavior, owing to special economic conditions, particular personalities and specific short-term issues” (p. 272)⁷.

Second, how can we compare the electoral volatility of two or more countries with different ages of democracy, different numbers of elections, and different years for each election? The arithmetical average does not provide enough information for those questions. The arithmetic average can give an overall picture of a system, but it misses nuances even if we talk at the aggregate level.

Third, as Converse (1969) illuminates, the generational impact for electoral volatility does matter: time is not an entity empty of nuances. At the aggregate level, the electorate should not dramatically change in terms of age and composition over time, but at individual get older and die, and new and younger people become voters. This intra-electorate change can have an

⁶ The volatility measure only makes sense after the second consecutive election, since it is based on the previous election as reference point.

⁷ The final span they selected (21 years period of 1938 to 1958) is, however, arbitrary chosen based on the “appearance” that it is not too long and not too short.

effect on electoral volatility, which is not noted using the average method. Before moving forward, it is important to emphasize that intra-electorate trends are not important for this research; rather, they are relevant for theoretical consequences they can have. However, it is important to underline why there may be such effects. According to *The American Voter* (Campbell et al. 1980 [1960]), party attachments are a function of age; likewise, younger cohorts are more likely to be independents. If we assume that voters remain loyal to parties as time passes, then the country should show high levels of stability. Yet, if younger cohorts enter the electorate more as independents, and they have a different choice than older cohorts, as those young voters get older (and the old cohorts exit the electorate), their preferences will slowly prevail over the previous dominant preferences; if younger cohorts enter the electorate following the same parties as their parents, in a consuetudinary process (Converse 1969), then dominant preferences over time should not dramatically change. Many other events can occur: the entering of a new group (e.g., women, illiterates, minorities, foreigners, new legally adults, new registered voters from compulsory to non compulsory vote), an economic breakdown, national security concerns, and the birth and death of parties. All of these elements can impact the electoral outcome over time, which can be captured in a regression analysis. But the aim of this paper is to address the question of how countries can be compared taken into account the changing nature of time, and the experience that the aggregate electorate gains in its participation in elections.

The current scholarship does not have a simple instrument—at least as simple as the V Index—to calculate how more recent events sculpt the electoral volatility profile of a system. Given the enormous importance that electoral volatility has in political science to infer how stable or consolidated party systems are, a more accurate, flexible and ease of operate method would bring a more reliable and suitable way to contribute at such party system studies.

Proposing the Weighted Volatility Index

If the research question deals with the orientation that the electoral volatility takes over time, none of the previous measures seem to be useful or accurate. As a matter of fact, what would matter is what happens with more current developments rather than electoral results of many decades ago, although such remote results are not meant to be irrelevant. The way to deal with this missing link between electoral volatility and passage of time is weighting such volatility over time, being the last electoral periods more relatively important than the oldest ones.

The rationale behind assigning an increasing value to more recent electoral periods is two-fold: periods of elections do matter for the electorate in terms of experience in casting votes and deciding whom they want as representatives, but also matters to effectively gauge the direction and the intensity of change of volatility patterns in party systems. In addition, the weighting process itself is logically correct, but it is also conceptually beneficial for clarifying the contribution of changing electorates and other conditions (e.g., economy, changes of electoral rules, parties' transformation) alongside electoral evolution.

The operationalization of the Weighted Volatility (WV) Index has several advantages. First and most important, it is useful for contextualizing the stability of party system, because the passage of time is now included as a relevant framework for analysis. Here, time is not a function of the years, but of the number of consecutive elections. In the traditional manner of calculation, the V Index does not consider time as an in-progress factor, but as a plain datum. With this new way of measuring volatility, the passage of time becomes a relevant factor to the understanding of more recent changes of electoral stability, because it assumes that people get use to the system. Second, it correctly gauges what is intended to measure: the increasing amount of learning experience that the electorate accumulates *over time*. The emphasis on ‘over time’ means that the more elections a country has, the more the practice of voting strengthens. Third, history still matters. Results should always include all the values in a given series, no matter how far in time they are. Fourth, the mechanism of calculation is rather simple and straightforward: no matter how many electoral periods are included, all of them will be measurable as far as they cover consecutive elections and at least three elections have occurred. The simplicity of the instrument is required to make it accessible, but also it goes in line with the simple original formula of the V Index. Fifth, it does not replace the original V Index; rather, they complement each other. Indeed, the WV Index would work better if its results are compared with the traditional V Index, because we then would be able to appreciate the changes (or not change) in the directional and intensity of the new electoral waves in a system. And sixth, just like the traditional Pedersen index, this Weighted Pedersen index has a universal application, so it allows to compare a country in isolation, as well as to make intra-country, cross-country, cross-regional, and inter-regional comparisons. It includes, then, a fairer way to measure the behavior of any system, regardless its developing status; in fact, it can show more evidence of raising volatility for some developed democracies.

It is also necessary to make clear what this index does not do. First, and also more important, it does not explain why changes occur. This measure may only present the signals of a change over time, but the reasons behind them ought to be found elsewhere. This is not a flaw of the measure, but rather a window it opens to ascertain which kind of factors provokes certain variations in the volatility. Second, it should be understood as measuring time experience more than time alone. Since its unit of measure is each electoral period, and countries have different periods for elections (some fixed, some variable), it happens that for a same time elapse a country may have more elections than another. Yet, experience can only be accumulated with time. Third, it shares with the traditional V Index the lack of institutional context: the index does not consider itself other criteria, such as turnout levels, electoral system, or how many parties compete⁸.

Methods and data

The method seeks to be as straightforward as the original V Index. The WV consists of the establishment of a new arithmetic measure: to assign an incremental weight to each

⁸ Mentioned variables (and others) can be regressed with the electoral volatility as dependent variable to make further conclusions.

consecutive election. That is, for the final output of the volatility index, the most recent elections will have a heavier weight than the oldest elections. In countries with lower number of elections, the distance between the oldest and the newest scores of any volatility index will not be as high as in more established democracies; thus, developing democracies have less ‘chances’ to show more stable patterns of electoral outcomes. To cut off the number of elections under analysis (i.e., to measure only the last four, five or so elections for every unit of analysis) would not be an appropriate method either, because historical behavior does also matter. With this proposed method, even in the most established democracies all of their elections will count towards the final result.⁹

This proposal considers an automatic weighting method which is adjusted by the number of consecutive elections, regardless the years of elections and the age of the democratic regime.¹⁰ The formula goes as follows:

$$WV = \sum_{i=1}^T w_t WV_t \tag{2}$$

where t is the time period of each score of electoral stability, w is the resulting weighting coefficient obtained after multiply each period number by the sum of all periods, and i indicates that any period should be positive and start at 1.

The application of this formula is straightforward. For practical reasons, a country should have four or more consecutive elections to provide meaningful results about changes over time.

To apply this method, a sample of 44 countries, with an overrepresentation of developing polities, were considered. In total, 449 electoral periods were included for analysis.

Results

When electoral volatility’s outcomes are weighted to give more importance to the more recent electoral periods, some developing countries perform better than some developed countries. Indeed, some older democracies show a trend of losing stability, whereas newer democracies are becoming less volatile over time. Among the latter, post communist European countries are still the least stable.

⁹ It should be noted that this is exactly correct for all countries where democracy was inaugurated after 1945, when the dataset under analysis here starts. However, some data are missing for initial elections of countries where democracy began before 1945, like, for example, the United States, the United Kingdom and Australia.

¹⁰ Other measures of central tendency were also considered, notably the geometric mean and the harmony mean. The flaw of both methods is that they still treat each numeric value as equally important for the final outcome, regardless their allocation in time. Whereas the geometric mean tends to normalize values, the harmony mean tends to give more weight to small relative to high values. Another option was to employ moving averages to soften the trend of the electoral volatility outputs, but this alternative does not incorporate the progressive passage of time as an increasing function. Likewise, the exponential options (for instance, the exponential smoothing) adjust series mechanically, not taking into account the different degrees of experience with elections.

Table 1 shows the whole sample of countries, and how they differ if are measured by the traditional average of the Volatility Index proposed by Pedersen, and by the Weighted Volatility Index proposed here, for a number of elections in the lower (or unique) chamber of each polity. In the extremes, the United States has the largest number of consecutive elections shown here, whereas the data for the Philippines only account for three elections during the 1990s. In average, each country in this sample has had 10 consecutive elections. The sample of developed countries is underrepresented here.

Table 1
Pedersen Index of Electoral Volatility and Weighted Pedersen Index of Electoral Volatility¹¹

Country	Periods in data	Last election considered	V Index (A)	WV Index (B)	Difference B - A ¹²	St. Dev. (Ave)
USA	32	2010	3.4	3.6	-0.2	2.0
Australia	25	2010	7.3	7.9	-0.6	3.2
Japan	20	2009	14.2	14.8	-0.6	13.4
Sweden	19	2010	8.4	10.1	-1.7	4.1
Netherlands	19	2010	13.4	16.2	-2.8	7.7
Austria	19	2008	7.3	8.7	-1.4	5.4
UK	17	2010	7.6	8.3	-0.7	3.5
Israel	17	2009	20.9	22.4	-1.5	7.6
Colombia	17	2010	15.9	22.3	-6.4	15.0
Germany	16	2009	8.3	7.9	0.4	3.8
Costa Rica	16	2010	29.0	23.0	6.0	15.5
Italy	15	2008	15.2	17.6	-2.4	12.1
India	14	2009	25.1	23.7	1.4	12.0
Argentina	14	2011	25.1	27.7	-2.7	9.1
Venezuela	11	2010	34.5	37.5	-3.0	12.0
Ecuador	11	2009	33.0	36.2	-3.2	16.3
Trin. & Tob.	11	2010	25.1	18.5	6.6	19.9
El Salvador	9	2012	15.5	12.7	2.8	7.2
Dominican R.	8	2010	32.3	33.6	-1.3	22.5
Malaysia	8	2008	13.7	14.5	-0.8	7.4
Honduras	7	2009	7.8	8.7	-0.9	3.3
Thailand	7	2011	27.2	29.6	-2.4	17.0
Singapore	7	2011	10.8	10.9	-0.1	4.3
Bolivia	6	2009	35.9	37.4	-1.5	19.0
Brazil	6	2010	18.2	14.9	3.2	8.8
Macedonia	6	2011	32.0	26.7	5.3	32.0
Bulgaria	6	2009	39.9	41.7	-1.8	12.3
Czech Rep	6	2010	27.7	25.1	2.6	13.0
Poland	6	2011	36.0	30.7	5.3	16.7
Latvia	6	2011	36.4	31.3	5.1	15.4
Taiwan	6	2012	16.9	16.4	0.5	10.4
South Korea	6	2012	29.3	25.8	3.5	14.8
Chile	5	2009	13.9	12.3	1.6	5.0
Mexico	5	2009	21.0	22.8	-1.8	5.6
Uruguay	5	2009	14.6	15.2	-0.6	6.9
Estonia	5	2011	32.5	24.9	7.6	18.2
Hungary	5	2010	25.1	23.4	1.8	11.4
Romania	5	2008	36.9	29.3	7.6	21.5
Russia	5	2011	34.8	30.2	4.7	12.8
Lithuania	5	2012	39.7	34.2	5.5	13.5

¹¹ Most of the data was generously provided by Scott Mainwaring. I updated most of the here selected cases as of Nov 2012 (when applicable and possible), and amended some previous figures in 10 countries, notably Italy.

¹² Figures in bold represent the cases where more notable changes have occurred in either way (gain or loss of electoral stability). As a rule of thumb, changes of 1.5 points or more are bolded.

Mongolia	5	2008	24.3	21.5	2.8	13.4
Paraguay	4	2008	25.6	23.9	1.7	9.9
Papua N. G.	4	1997	27.8	25.5	2.3	10.9
Philippines	3	1998	39.8	33.6	6.2	18.5

Results from Table 1 suggest that some old democracies are losing stability, which goes in line with Webb's (2002) findings. Notwithstanding the selection of cases here presented is not necessarily representative of the developed world, it is worth mentioning that while the US, the UK and Germany do not show big differences between the averaged and the Weighted electoral indexes, the same cannot be said for Sweden, the Netherlands, Israel, and Italy. The WV of Sweden (10.1) is higher than in Honduras (8.7), the Netherlands (16.2) is higher than in Chile (12.3), in Israel (22.4) is higher than in Mongolia (21.5), and in Italy (17.6) is greater than in Taiwan (16.4), just to mention some cases. Such developed countries have better figures when the averaged V Index is used. In all of them, while the developed cases evidence increasing levels of volatility (average versus weighted measures), the levels in the abovementioned developing countries go downwards (except in Honduras).

According to Table 1, most of developing countries are gaining consolidation. But not all of them are in the same bulk. Latin American and Asian countries are distributed along the range of the electoral volatility index. However, post communist countries of Europe are concentrated in the last part of the list, among the countries with greater levels of instability. All the cases from developing Europe presented here have levels of volatility higher than 24.9 points (Estonia) in either measure, which is almost 8 points greater than the worst figure of Western Europe (Italy).

Are these results also consistent with interregional differences? In Table 2, results for the interregional comparison between developing countries are displayed. They include the standard deviation for both the traditional Pedersen index and the weighted measure.

Table 2
Interregional comparison of electoral volatility indexes

Developing cases	N	Consecutive elections (mean)	V Index (mean)	WV Index (mean)	St. Dev. V Index	St. Dev. WV Index
Latin America	15	10	23.2	23.1	8.7	9.6
Europe	10	6.5	34.1	29.8	4.8	5.4
Asia	9	7.3	22.9	21.5	9.2	7.6

The figures in Table 2 present a more complex mix of results. First, Latin America has underwent more elections than the other two regions, but this longer democratic experience has not yielded higher levels of party system stability than, for example, Asia. These findings also suggest that whereas both Latin America and Asia are getting more stabilize over time, the pattern is much clearer in Asia; the WV Index for Asia is not only significantly lower than its V Index (1.4 points, versus 0.1 points in Latin America), but also its standard deviations for each measure. The higher dispersion that Latin American cases show indicate that the region, as a whole, is running its democratic consolidation at different speeds, and even in different directions. On the other hand, Eastern Central Europe still presents high

levels of volatility, although also fewer consecutive elections so far. Their pattern shows decreasing degrees of instability, though, and also lower levels of variance among cases.

Discussion

Unlike the situation in consolidated democracies, party systems in most developing countries are weakly institutionalized. This phenomenon is apparent when electoral levels of volatility are compared. In a dataset for a sample of 60 countries, the levels of the Pedersen Index of Electoral Volatility (V Index) are higher in developing countries. Such countries also show more dispersion in terms of electoral outcomes; that is, the volatility of elections zigzags more markedly than in developed societies. Such performance is more evident in Latin America.

However, the inter-party competition is better gauged by a weighted index of volatility (WV Index), in which the latest elections have a greater impact than the earliest ones on the final output. This method is simpler than dividing each party system between extra-system and within system (or types A and B), but it does integrate both, considering extra- and within systems as what they are: equally important parts of any party system. Furthermore, this method is more accurate than the simple average of N elections. If the WV Index is dramatically different from the classical method of averages, it means that there is a pattern of strong institutionalization (or deinstitutionalization). In any case, the weighted measure will always provide directional information and levels of intensity of party systems.

When electoral volatility's outcomes are weighted to give more importance to the more recent electoral periods, some developing countries perform better than some developed ones. Indeed, some old democracies such as Sweden, the Netherlands, Israel and Italy show a general trend of losing stability, whereas newer democracies are becoming less volatile over time. Among the latter, post communist European countries are the least stable. Part of the behavior of the post communist cases might be explained by the high levels of party switching and defections, a phenomenon that erodes the institutional continuity of political preferences.

These analyses are relevant to better our understanding of the origin and evolution of party systems in developing democracies. More research is required to properly assess the reasons behind the diverged tendencies that developed and developing countries are following in terms of electoral stability. In addition, further research would need to focus on the different patterns that recently democratized countries from Latin America, Europe, and Asia represent.

References

- Bartolini, Stefano, and Peter Mair. *Identity, competition, and electoral availability: The stabilization of European electorates, 1885-1985*. Cambridge: Cambridge University Press, 1990.
- Basedau, Matthias, and Alexander Stroh. "Measuring Party Institutionalization in Developing Countries: A New Research Instrument Applied to 28 African Political Parties," in *GIGA Working Papers*, n° 69, Feb. 2008.
- Campbell, Angus; Philip E. Converse, Warren E. Miller, and Donald E. Stokes. *The American Voter*. Chicago and London: The University of Chicago Press, 1960 [Reprinted by Midway, 1980].
- Converse, Philip E. "Of Time and Partisan Stability," in *Comparative Political Studies*, 2(2), 1969, 139-71.
- Coppedge, Michael. "The Dynamic Diversity of Latin American Party Systems," in *Party Politics* 4(4), 1998, 547-68.
- Cotta, Maurizio. "Structuring the new party systems after the dictatorship," in Geoffrey Pridham and Paul G. Lewis (eds.), *Stabilizing Fragile Democracies: Comparing New Party Systems in Southern and Eastern Europe*. London: Routledge, 1996.
- Croissant, Aurel, and Philip Volkel. "Party system types and party system institutionalization: Comparing new democracies in East and Southeast Asia," in *Party Politics*, Dec. 2010, 1-30.
- Dahl, Robert A. "Party Systems and Patterns of Opposition," in *The West European Party System*. Oxford: Oxford University Press, 1966.
- Dargent, Eduardo and Paula Muñoz. "Democracy Against Parties? Party Deinstitutionalization in Colombia", in *Journal of Politics in Latin America*, 3(2), 2011, 43-71.
- Downs, Anthony. *An Economic Theory of Democracy*. New York, NY: Harper and Row, 1957.
- Ferree, Karen. "How fluid is fluid? The mutability of ethnicity and electoral volatility in Africa." Working Paper, San Diego, California. 2004.
- Hicken, Allen, and Erik Martinez Kuhonta, "Shadows From the Past: Party System Institutionalization in Asia," in *Comparative Political Studies*, 44(5), 2011, 572-97.
- Hicken, Allen. "Stuck in the Mud. Parties and Party Systems in Democratic Southeast Asia," in *Taiwan Journal of Democracy*, 2(2), 2006, 23-46.
- Holliday, Ian. "Spain: Building a Parties State in a New Democracy." In Paul Webb, David Farrell, and Ian Holliday (eds.), *Political Parties in Advanced Industrial Democracies*. New York, NY: Oxford University Press, 2002.
- Huntington, Samuel P. *The Third Wave: Democratization in the Late Twentieth Century*. Norman, OK: University of Oklahoma Press, 1991.

- Huntington, Samuel. *Political Order in Changing Societies*. New Haven, CT: Yale University Press, 1968.
- Jones, Mark P. "Democracy in Latin America, Challenges and Solutions: Political Parties and Party System Institutionalization and Women's Legislative Representation." Paper presented for the Consulta de San José 2007.
- Katz, Richard S. "Nomination: Changing patterns of electoral volatility," in *European Journal of Political Science*, 31(1), 1997, 83-85.
- Kitschelt, Herbert; Zdenka Mansfeldova, Radoslaw Markowski, and Gábor Tóka. *Post-Communist party System: competition, representation, and inter-party cooperation*. Cambridge, MA: Cambridge University Press, 1999.
- Kreuzer, Marcus, and Vello Pettai. "Patterns of Political Instability: Affiliation Patterns of Politicians and Voters in Post-Communist Estonia, Latvia, and Lithuania," in *Studies in Comparative International Development*, 38(2), 2003, 76-98.
- Kuenzi, Michelle, and Gina Lambright. "Party Systems and Democratic Consolidation in Africa's Electoral Regimes," in *Party Politics*, 11 (4), 2005, 423-446.
- Laakso, Markku, and Rein Taagepera. "Effective Number of Parties: A Measure with Application to West Europe," in *Comparative Political Studies*, 12(1), 1979, 3-27.
- Lewis, Paul G. *Political Parties in Post-Communist Eastern Europe*. London: Routledge, 2000.
- Lijphart, Arend. "Consociational Democracy," in *World Politics*, 21(2), 1969, 207-25.
- Lindberg Staffan I. "Institutionalization of Party Systems? Stability and Fluidity among Legislative Parties in Africa's Democracies," in *Government and Opposition* 42(2), 2007: 215-41.
- Lipset, Seymour Martin, and Stein Rokkan. "Cleavage Structures, Party Systems, and Voter Alignments: An Introduction." In Seymour Martin Lipset and Stein Rokkan (eds.), *Party Systems and Voter Alignments: Cross-National Perspectives*. New York, NY: Free Press, 1967, 1-64.
- Luna, Juan Pablo, and David Altman. "Uprooted but Stable: Chilean Parties and the Concept of Party System Institutionalization," in *Latin America Politics and Society*, 53(2), 2011, 1-28.
- Mainwaring, Scott, and Edurne Zoco. "Political Sequences and the Stabilization of Interparty Competition: Electoral Volatility in Old and New Democracies," in *Party Politics*, 13(2), 2007, 155-78.
- Mainwaring, Scott, and Mariano Torcal, "Party System Institutionalization and Party System Theory After the Third Wave of Democratization." In Richard S. Katz and William J. Crotty (eds.), *Handbook of Party Politics*. London, UK: SAGE Publications, 2006.

Mainwaring, Scott, and Timothy R. Scully, "Introduction," in Scott Mainwaring and Timothy R. Scully (eds.), *Building Democratic Institutions. Party Systems in Latin America*. Stanford: Stanford University Press, 1995.

Mainwaring, Scott. *Rethinking Party Systems in the Third Wave of Democratization: The Case of Brazil*. Stanford, CA: Stanford University Press, 1999.

Mainwaring, Scott; Annabella España, and Carlos Gervasoni. "Extra System Volatility and the Vote Share of Young Parties." Paper presented at the annual meeting of the Canadian Political Science Association, May 28, 2009.

Mair, Peter. "Comparing Party Systems." In Lawrence De Luc, Richard G. Niemi, and Pippa Norris (eds.), *Comparing Democracies 2: New Challenges in the Study of Elections and Voting*. London, UK: Sage, 2002, 88-107.

Mair, Peter. "Party System Change." In Richard S. Katz and William J. Crotty (eds.), *Handbook of Party Politics*. London, UK: SAGE Publications, 2006.

Markowski, Radoslaw. "Party System Institutionalization in New Democracies: Poland—A Trend-Setter with No Followers." Paper to be discussed at the conference Re-thinking Democracy in the New Millenium, organized by the University of Houston. Feb 16-19, 2000.

McPhee, William N. *Formal Theories of Mass Behavior*. New York: Free Press, 1963.

Mozaffar, Shaheen, and James Scarritt. "The puzzle of African party systems," in *Party Politics*, 11(4), 2005, 399-421

Panbianco, Angelo. *Political Parties: Organization and Power*. Cambridge, MA: Cambridge University Press, 1988.

Payne, Mark J., "Sistema de partidos y gobernabilidad democrática." In Banco Interamericano de Desarrollo, *La política importa: Democracia y Desarrollo en América Latina*, Washington, DC: Banco Interamericano de Desarrollo and Instituto Internacional para la Democracia y la Asistencia Electoral, 2006.

Pedersen, Mogens N. "The dynamics of European party systems: Changing patterns of electoral volatility," in *European Journal of Political Research*, 7, 1979, 1-26.

Pedersen, Mogens N. "Changing Patterns of Electoral Volatility in European Party Systems, 1948-1977," in Hans Daalder and Peter Mair (eds.), *Western European Party Systems: Continuity and Change*. Beverly Hills, CA: Sage, 1983, 29-66.

Pedersen, Mogens N. "Reflections: Dynamics of European party systems. A Catalyst for a discussion," in *European Journal of Political Research*, 31(1), 1997, 93-96.

Powell, Eleanor N., and Joshua Tucker. "New Approaches to Electoral Volatility: Evidence From Postcommunist Countries." Unpublished paper, 2010.

Przeworski, Adam. *Capitalism and Social Democracy*. New York, NY: Cambridge University Press, 1985.

Randall, Vicky, and Lars Svåsand. "Party Institutionalization in New Democracies," in *Party Politics*, 8(5), 2002, 5-29.

Rattinger, Hans. "Nomination: To swing or not to swing," in *European Journal of Political Research*, 31(1), 1997, 87-93.

Roberts, Kenneth, and Erik Wibbels. "Party Systems and Electoral Volatility in Latin America: A Test of Economic, Institutional, and Structural Explanations," in *The American Political Science Review*, 93(3), 1999, 575-90.

Rose, Richard, and Neil Munro. *Elections and parties in new European democracies*. Washington, DC: CQ Press, 2003.

Schmitt, Hermann, and André Freire. "Ideological Polarisation. Different Worlds in East and West." Paper presented at the Elections, Public Opinion and Parties Conference, University of Exeter, 9-11 September 2011.

Schmitter, Philippe C., and Terry Lynn Karl. "What Democracy Is... and What Is Not," in *Journal of Democracy*, 1991, 2 (3).

Soós, Gábor. "Institutionalized Party System in a New Democracy. Hungary as an Outlier." Paper prepared for the EPOP Conference, University of Exeter. Sep 9-11, 2011.

Stockton, Hans. "Political Parties, Party Systems, and Democracy in East Asia: Lessons from Latin America," in *Comparative Political Studies*, 34(1), 2001, 94-119.

Tavits, Margit. "The Development of Stable Party Support: Electoral Dynamics in Post-Communist Europe," in *American Journal of Political Science*, 49(2), 2005, 283-98.

Tóka, Gabor. "Political Parties and Democratic Consolidation in East Central Europe", in *Studies in Public Policy*, 279, 1997.

Ufen, Andreas. "Political party and party system institutionalization in Southeast Asia: Lessons for democratic consolidation in Indonesia, the Philippines and Thailand," in *The Pacific Review*, 21(3), 2008, 327-50.

Ware, Alan. *Political Parties and Party Systems*. New York, NY: Oxford University Press, 1996.

Webb, Paul. "Conclusion." In Paul Webb, David Farrell, and Ian Holliday (eds.), *Political Parties in Advanced Industrial Democracies*. New York, NY: Oxford University Press, 2002.

Webb, Paul; David Farrell, and Ian Holliday (eds.), *Political Parties in Advanced Industrial Democracies*. New York, NY: Oxford University Press, 2002.