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## **Comparing the nationalization of party systems in 43 democracies**

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### **1 - Introduction**

In this paper I offer probably the first attempt, in the research field of the nationalization of party systems, of comparing countries from different continents and from different democratic traditions, through a comprehensive case-selection. To do so, I recover the only index in the literature on the nationalization of parties that weights the dissimilar electoral sizes of sub-national regions in a given country (ROSE and URWIN, 1975). And using it as my dependent variable, I present basic tests - that unexpectedly had not taken place in the literature - to preliminarily identify whether being a recent or an advanced democracy, or whether political institutions and other political concerns, do affect the level of nationalization of party systems of countries from all continents.

In what regards party systems, it is important to start stressing that the literature has been dealing with the concept of nationalization more as a synonym of nationalization of partisan electoral patterns than as a truly broad meaning of party nationalization that could perfectly also include the subjects of party organization, party substantial programs, national/regional oriented party activities in the Parliament. And even the understanding of the nationalization of parties and party systems as linked to the electoral outcomes throughout countries was not always consensually defined. As it was well acknowledged by the first time by Clagett, Flanigan and Zingale (1984), in what regards party systems the concept of nationalization has usually meant basically two different ideas.

On one hand is the meaning that, for Caramani (2004:58), had “given rise to major works on the nationalization of electoral politics”: nationalization as the homogenization across national subunits of the patterns of *changes* in the partisan electoral support, between two or more elections. In the words of Kawato (1987:1237): “if there is the same direction and amount of electoral change in every district, then the electorate is perfectly nationalized in movement”. Firstly operationalized (but not declared) by Stokes (1965, 1967), many scholars were inspired by this sort of analytical approach: Converse (1969), McLean (1973), Butler and Stokes (1974), Brady (1985), Taylor et al. (1986), in some extent also Clagett et al. (1984) and Kawato (1987), and most recently, Bawn et al. (1999) and the first and unique work that operationalizes that concept of nationalization regarding American countries, from Alemán and Kellam (2008).

On the other hand, there is a different understanding of nationalization as being the homogenization of the partisan relative electoral support across national subunits in *a given* election. It means that in any election “the electorate with a nationalized configuration is one that shows few regional and district differences in partisan support” (KAWATO, 1987). As well put by Clagett et al. (1984:80), talking about this concept of nationalization, “although it may not mean the homogenization of the electorate, it suggests that distinctive regional political cultures and traditions are being replaced by a more similar mixture of political sentiments across the nation”. This remark is important in the extent that the process of nationalization of a party would mean, therefore, that it is supported increasingly equally throughout a given country, *in spite of* social cleavages and also of territorial distribution of any of these cleavages. The first work to undertake analysis with that kind of approach was also the first to operationalize the subject of nationalization of parties as a whole: Schattschneider (1960). After him, a number of important works addressed at least analog concepts of nationalization: Sundquist (1973), Rose and Urwin (1975), Lee (1988), Jones and Mainwaring (2003), Caramani (2004) and Chhiber and Kollman (2004), among others.

Considering both possible meanings of nationalization, I follow Jones and Mainwaring (2003:142) when they say that “both conceptions are meaningful, but the term ‘nationalization’ of parties or the party system should be reserved for [the second concept]. Both Stokes and Brady measured not the nationalization of the party system, but rather the nationalization of electoral trends (or swings)” and “logically, however, the

concept of party system nationalization should refer to the structure of the party system, not to whether electoral swings are similar across districts”. Opting for the concept of nationalization as it was firstly worked by Stokes (1965) is, of course, not unthrifty. For instance, wouldn’t it be interesting to observe the intra-national voting movements that turned from supporting George W. Bush to electing Barack Obama in the United States? Was it a geographically or state demarked phenomenon or not? Still, in order to affirm anything on the nationalization of a given party system based on patterns of electoral trends is a little bit risky at least for one logical contradiction. Imagine a party A in a country divided into 10 provinces. In election number 1 that party had around 40% of the votes in each of 5 provinces, 20% in other 2 and around 1% in the other 3. And in the subsequently election, it had around 50% of the votes in each of the 10 provinces. While trough the criteria of homogenous electoral trends between elections that abstract example would stand for an electoral movement poorly nationalized, trough the criteria of homogeneous electoral support in a given election party A would have become perfectly nationalized in the second election. And that’s because the first criteria imply nationalization of the electoral changes<sup>1</sup>, not of the electoral support itself.

Worthy of note, however, is that really very few works of any of both natures have been of comparative natures. Regarding the concept of nationalization that I will adopt here, one can find mostly three major researches. Rose and Urwin compared 19 western nations, including Canada, USA, Australia, New Zealand and other fifteen nations from Western Europe. But they considered just two different elections: 1946 and 1975, in order to compare results from the immediate postwar with the most recent results available when they wrote their paper. Caramani, in turn, made the undoubtedly most wide comparative work in terms of time covered, from 1815 to 1998, but studying 18 countries only from Western Europe. Nevertheless, it is probably one of the most important books on nationalization ever, as it analyzes the older formation of parties in Europe and, mainly, as it compares many empirical measures of nationalization.

Recently, Jones and Mainwaring (2003) published the first work ever to undertake an analysis on the nationalization of parties and party systems in countries others than the central world democracies. They compared 17 American countries, including USA and Canada, from 1979 to 2001. While it was an enormous – and

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<sup>1</sup> One of the works that best assumes and even recently develops that point is Alemán and Kellam (2008), whose title is, not for nothing, *The Nationalization of Electoral Change in the Americas*.

noticeably recent – step in what concerns diversifying the empirical focus of the concept of nationalization, it is curious that no work had so far compared countries from both groups (more advanced democracies and non-advanced democracies, so to say) one with each other. And most impressive, nationalization of parties and party systems, even when empirically well operationalized, was almost never systematically tested for its imbrications with other political institutions or with main political concerns.

In this paper, I compare all elections held from 1975 to April 2009 in 43 democracies from all continents of the world, whose results were aggregated by sub-national levels. That effort has mainly 2 general aims. First of all, I want to investigate if and to which extent Jones and Mainwaring (2003) are correct when they affirm that there is a relevant difference between the nationalization of party systems in what they call advanced democracies and in what would be the non-advanced democracies. They say that “the extent of party and party system nationalization is an important topic that has been neglected by the scholarly literature, except for the United States. This is in part because the mainstream theoretical literature on parties and party system has focused on the advanced industrial democracies, which with a few exceptions have fairly nationalized party systems. But when we turn our attention to Africa, Asia and Latin America, a much greater proportion of party systems are weakly nationalized” (p. 158). While almost no comparative research has been made on Africa and Asia<sup>2</sup> and only theirs on Latin America so far, I intend to contribute to testing that sort of assertion more properly.

Secondly, I propose some exploratory tests in order to finally deliver a study – even still preliminary – of the influences that some political and social variables have been having upon the nationalization of party systems, such as: electoral systems, Executive branch type, federalism, country’s land area, number of national subunits, effective number of electoral parties, levels of ethnic, linguistic and religious fragmentation, age of democracy, Polity IV classification of democratic level and the inequality of regional electoral participation.

## **2 – Measuring nationalization**

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<sup>2</sup> Nevertheless, to some extent Chhibber and Kollman (2004) did include an Asian country, India, in a comparative effort with Canada, Great Britain and United States.

First of all, it is important to specify that the analytical objects of this paper are the party systems of each country in each election. That is to say: while it is needed to estimate the nationalization of each party in order to be able to estimate the whole party system's, I will not work with the individual partisan results in this paper for two reasons. On one hand, it would take a very time-consuming effort to compile individual results for each party, as I am dealing here with 372 elections in 43 countries, and so more than 3.000 parties. It was not possible to do that so far. And on the other hand, for now I am actually interested in the systemic nationalization, so to speak. Another important point to be made is that I chose to measure party system nationalization only regarding the elections held for the Legislative branch – and only for the Lower Chambers, when countries had a bicameral system.

But how can one empirically estimate the nationalization of party systems? The operationalization of the concept of nationalization as the homogeneity of electoral relative support of a party throughout a country has been including, as Caramani (2004:58) states, “mostly measures of dispersion that are typical of descriptive statistics”. Conversely, I adopt in this research a measure that is much possibly the today available procedure that best retains that meaning of nationalization: the *Cumulative Regional Inequality* (CRI) index from Rose and Urwin (1975). While *Party Nationalization Score* (PNS) from Jones and Mainwaring (2003) also hit that target almost perfectly, their index disregard electoral weight differences between intra-country regions, while CRI accounts for that.

This measure from Rose and Urwin is essentially a demographic measure known as index of dissimilarity and it is calculated for each party in a given election as follows:

$$\frac{1}{2} \sum_{i=1}^N \left| \frac{p_i}{P} - \frac{t_i}{T} \right|$$

Where:

- $p_i$  = a given party's number of votes in the  $i$ th region
- $P$  = a given party's number of votes in the whole country
- $t_i$  = number of  $i$ th region total voters
- $T$  = number of the whole country total voters

For each sub-national geographic unit in a given country, we subtract the percentage of a party's national vote obtained there from the percentage that the voting population in that region represents regarding the national total voting population. Then, we sum the results for each sub-national geographic unit not considering the signs and divide the whole result by two to avoid double counting. This final index varies between 0 (no inequality) and 1 (full inequality), comparing "the proportion of a party's vote that it receives in a region with the proportion it would expect to receive if it drew support nationwide in proportion to the size of each region" (ROSE and URWIN, 1975). Thus, a fully and perfectly nationalized party would score 0 because its electoral support has no inequality among geographical units.

Much more recent, the index proposed by Jones and Mainwaring (2003) applies the well known Gini coefficient to the electoral vote shares that a given party has along the different sub-national geographic units of a given country. The detailed process of calculating the Gini coefficient is a little bit exhaustive to be addressed here, as I am not adopting it in this paper. But the appendix in their article explains it much intuitively<sup>3</sup>.

Concerning the necessity of using this index to measure party system nationalization and not only the individual parties' nationalization, Jones and Mainwaring (2003) offer a good solution. Authors themselves also use the PNS to evaluate the whole party systems through a simple and correct procedure: one should multiply each party's score by the party's total national vote's percentage in the given election and then sum all those results. In other words, one should calculate the weighted average of the PNS, thus proposing the *Party System Nationalization Score* (PSNS).

And that seems to be a good procedure that we could transpose to the CRI in order to access a party system version of it. The only concern still left is that while CRI assigns 0 for the perfectly nationalized parties (the non territorially unequally supported parties), PNS and so PSNS assign 0 for the perfectly non-nationalized ones. It is a bit confusing and I strongly recommend we solve this to make reading the further results easier. The simplest way to do that seems to be subtracting the CRI from 1. Therefore, I invert the index proposed by Rose and Urwin (1975):  $1 - \text{CRI}$ , and then we can still calculate the weighted mean of the  $1 - \text{CRI}$  in order to measure the nationalization of the party systems.

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<sup>3</sup> For deeper analysis on Gini coefficient details and on other inequality measures, see: Allison (1978).

Both indices have, of course, advantages and disadvantages. It is true, as Jones and Mainwaring (2003:158) argue, that CRI “performs well, but has the disadvantage of being less well known and used than the Gini coefficient”, from which PSNS is based on. But at the same time it can’t be denied that it is much easier and intuitive to calculate and also to understand the calculation of the CRI (and so of the 1-CRI) than of the Gini coefficient. Moreover, 1-CRI is the only nationalization index in the literature that accounts for the dissimilar importance of each sub-national geographic unit in any country, as its formula naturally weights for sub-national units’ shares of total national votes “to control for the effect of differences in the size of regions” (ROSE and URWIN, 1975:30).

### **3 – Case selection, Data and other variables than the nationalization**

Since this paper endeavor to cover a truly worldwide country selection, a former concern was to not misrepresent any areas of the globe. Of course, it doesn’t mean that every continent should be equally represented in the case selection, as it is more or less intuitive that democracies are currently more numerous in Europe and then in the Americas, than they are in Asia or in Africa. Anyway, the point is that all continents should be represented as balanced as possible, including: Western Europe, Eastern Europe, North America, South America, Central America, Oceania, Asia and Africa.

And talking about democracies around the world, a second important criterion was apparently quite obvious: countries should be democratic. I say ‘apparently obvious’ because it is not so easy to decide whether even a present nation is or isn’t to be empirically considered fully or acceptably democratic. So, one can imagine that it is, therefore, even harder to classify democracies throughout time. The solution to that problem in this paper was to draw on the classification of democracies by the Polity IV project (MARSHALL and JAGGERS, 2008). While all well-known classifications of democracies have serious limitations, as demonstrated by Munck and Verkuilen (2002), I would still sustain that following one of them is better than arbitrarily deciding myself the countries that can or can not be considered democratic. If not for many other reasons, at least because democracies will mean the same thing in this paper and in many other works in the literature that had also draw on the same source. And also because then I

pass over profound considerations on the nature of political system of countries whose systems could be more polemic.

Essentially, if a country is or was democratic at any point from 1975 to April 2009 accordingly to Polity IV, it was of my concern. As a chronological cut-off point, I followed the same concept as Jones and Mainwaring (2003) did, based upon Huntington (1991): the beginning of the third wave of democratization. But while they opted to start data from 1979 as it would be the starting year of the third wave in the Americas, I felt necessary to start in a different date as to include, for instance, the democratization process that took place in Portugal and Spain or the new democratic wave in Turkey. And Polity IV also helps me on this because it is yearly updated and has data on most countries from 1800 to 2008.

Of course, however, a number of democracies will not be in my case selection anyway, because for some countries I simply could not find electoral data disaggregated by regions/states/provinces/constituencies for many elections<sup>4</sup>. That is the case, for instance, of South Korea, Israel<sup>5</sup>, Kenya, El Salvador, Nicaragua, Guatemala, Paraguay, among others. And three specific countries – Argentina, Venezuela and Botswana - are not considered in this version of the paper because data complexity to be properly compiled will still keep them out of my research for a while, as I was not able to compile it in time for this text. That said, I was still able to collect and compile data regarding: 3 African democracies, 5 Asian + 2 from Oceania, 13 Western European, 5 Eastern European, the 3 North American, 5 Central American and 7 South American. All elections of these 43 countries are included, with very few exceptions, with results generally for all parties or, in the more rare cases, with the category “other parties” holding less than 5% of total votes. Data is disaggregated into sub-national levels: these levels for each country and the few elections missing can be found in the table number 1 and with further details in the Appendix. As it is the first time that such a dataset with disaggregated electoral results is created for so many countries and with a comprehensive period covered, of course it will be soon available for scholars to use, check and help upgrading it.

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<sup>4</sup> If more than 2 elections with required data were missing for a given country for the considered period, this country was not included in this research.

<sup>5</sup> While Israel has only one nationwide electoral district, results for recent election are published also by administrative regions. Unfortunately, I was not able to gather results like that prior to 1999.

Another important matter of concern is by what criteria should one decide or accepts the sub-national levels into which the electoral results are or ought to be organized. There is not a natural or an obvious way to decide that, as remarked by Rose and Urwin (1975:8): “the number of regions into which a given territory is divided may be determined by the researcher on grounds of convenience, for there is a potentially infinite continuum of possibilities for disaggregation according to ratios of homogeneity/heterogeneity” and more important, both “the number and boundaries of regions may vary substantially according to the purpose of the classification”. Even so, regarding types of units, Jones and Mainwaring (2003:145) encourage the condition that geographic units of different countries should be of “roughly comparable political status”. As well, talking about the problems that the Gini coefficient can face in what concerns the number of sub-national units, they say (p.147): “it might not work well for comparisons of countries with a wide range in the number of geographic units”. In some sense, this warning might also be true for many other measures, as Caramani (2004:64) also demonstrated that all the indices that he had analyzed seemed “to be characterized by some degree of increase in the level of territorial disparity when the number of constituencies increases”.

So, it would be smart not to compare nationalization of parties in the more than six hundred electoral constituencies in the United Kingdom with nationalization of parties in the 9 Bolivian electoral departments. But at the same time, it would be too much arbitrary if I aggregate or disaggregate geographical units at my will, in a fully *ad hoc* decision. The solution is to choose one same objective and standardized criterion for all cases. In this paper, therefore, I decided to aggregate electoral data into the highest level of sub-national geographic units identified for each country by Gwillim Law’s *Administrative Subdivisions of Countries: A Comprehensive World Reference, 1900-1998* (1999) and also by his updated online data (LAW, 2009)<sup>6</sup>. Not surprisingly, in general the electoral results that had to be regrouped by this criterion were those that come from single-member plurality districts, while most others already had their electoral boundaries corresponding to the country’s highest level of administrative

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<sup>6</sup> The only exception was exactly the United Kingdom, as its highest level would still count around two hundred counties. In this case, I opted to group electoral data into the 11 regions utilized by the UK Major Census, disregarding the twelfth one that would be North Ireland. North Ireland has many different parties from the rest of the Kingdom and, at truth, behave politically differently in many aspects. Indeed, disregarding North Ireland results from the UK’s totals was also the option of other scholars when dealing with UK’s electoral results, as Caramani (2004) himself and also Pippa Norris (2005), for instance.

divisions. Through those expedients, the whole data accused a range of 84 sub-national units, mean of 25, median of 20. The very detailed information on this grouping, for each country, can be found in the Appendix.

After deciding the countries of my sample and the electoral data period and level of aggregation, I still had to classify countries according to a few other variables, in order to make further tests possible. My intention was to explore whether the nationalization of party systems, measured by both PSNS and 1-CRI, has any relation with some major political institutions and with some major political concerns. Regarding the institutions, I mobilized the three central ones: whether a country is federalist or not, the type of Executive branch and the electoral system adopted.

There is usually very little consensus in the literature when one makes an effort to identify whether a given country in a given year was federalist or not. So, as conclusions on that matter impressively varies, I opted to compare four different sources that classify countries concerning the federalist/unitary dimension: Watts (1998), Norris (2008), Garring and Thacker (2004), and the website Forum of Federations - The Global Network on Federalisms. In each case, I followed the conclusions offered by the majority of those works and when two sources suggested a federalist status and the other pair suggested the opposite, I followed the website Forum of Federations.

Now, in order to classify the government systems between presidentialism or parliamentarism, I followed the data from the ACLP Political and Economical Database (Alvarez et al. 1999) and, when not available, the data from Norris (2009). Countries, in the coding of both works, can be presidential, parliamentary or mixed. And in what regards the electoral system, I classified the countries considering the results from the ACLP Political and Economical Database (Alvarez et al. 1999), the information at the Inter-parliamentary Union website and the data at the International Foundation for Electoral Systems website. I present here the following possibilities of electoral systems: SMD – Single Member Districts, MMD – Multi Member Districts, PR – Proportional representation through party lists, AV – alternative vote, SMD+PR – mixed system that can be compensatory ‘C’ (i.e.: mixed member plurality, or MMP) or can be non-compensatory ‘nC’ (i.e.: mixed member majority, MMM, or even single transferable vote, STV). A summary with all the information explained so far can be found in the following table number 1. For further and deeper details, again Appendix describes minutiae of each country.

**Table 1 - Political institutions in each one of the 43 countries**

Continent	Country	Elections included	Name of the geographic unit considered (guc)	Average N of guc	Federalist or not?	Exec. Type	Electoral System
Africa	Ghana	1996-2008	Region	10	Non-Fed	Pres	SMD
	South Africa	1994-2009	Province	9	Federal.	Pres	PR
	Zambia	1991-2006	Province	9	Non-Fed	Pres	SMD
Asia	India	1977-2004	State	31,78	Federal.	Parl	SMD
	Japan	1979-1993	Prefectures	47	Non-Fed	Parl	MMD
		1996-2005	Prefectures	47	Non-Fed	Parl	SMD+PR (nC)*
	Russia	1993-2003	Region	88,5	Federal.	Mixed	SMD+PR (nC)
		since 2007	Region	85	Federal.	Mixed	PR
	Taiwan	1992-2004	Province	5	Non-Fed	Mixed	MMD
		2008	Province	5	Non-Fed	Mixed	SMD+PR (nC)
Turkey	1977-2007	Province	74,38	Non-Fed	Parl	PR	
Oceania	Australia	1977-2007	State	8	Federal.	Parl	AV
	New Zealand	1975-1993	Region	20,14	Non-Fed	Parl	SMD
		1996-2008	Region	17	Non-Fed	Parl	SMD+PR (C)
Europe - West	Denmark	1975-2005	District	16,42	Non-Fed	Parl	PR
	Finland	1975-2007	Constituency	14	Non-Fed	Mixed	PR
	France	1978-2007*	Region	22	Non-Fed	Mixed	SMD
	Germany	1976-2005	State	13,33	Federal.	Parl	SMD+PR (C)
	Greece	1977-2007	District	56	Non-Fed	Parl	PR
	Italy	1976-1992	Circumscription	32	Non-Fed	Parl	PR
		1994-2001	Circumscription	26	Non-Fed	Parl	SMD+PR (C)
		2006-2008	Circumscription	27	Non-Fed	Parl	PR
	Netherlands	1977-2006	Province	11,37	Non-Fed	Parl	PR
	Norway	1977-2005	Counties	19	Non-Fed	Parl	PR
	Portugal	1976-2005	District	20,18	Non-Fed	Mixed	PR

	Spain	1977-2008	Autonomía	19	Federal.	Parl	PR
	Sweden	1976-1998*	County	23,63	Non-Fed	Parl	PR
	Switzerland	1975-2007	Canton	25,89	Federal.	Pres	PR
	United Kingdom	1979-2005	Region	11	Non-Fed	Parl	SMD
Europe -	Estonia	1992-2007	County	11,6	Non-Fed	Parl	PR
East	Hungary	1990-2006	County	20	Non-Fed	Parl	SMD+PR (nC)
	Poland	1991-2007	District	44,00	Non-Fed	Mixed	PR
	Romania	1990-2004*	County	41,83	Non-Fed	Mixed	PR
	Ukraine	1994	Province	27	Non-Fed	Mixed	SMD
		1998-2002	Province	27	Non-Fed	Mixed	SMD+PR (nC)
		2006-2007	Province	27	Non-Fed	Mixed	PR
Central	Costa Rica	1978-2006*	Province	7	Non-Fed	Pres	PR
America	Dominican Rep.	1978-2006*	District	29,43	Non-Fed	Pres	PR
	Honduras	1981-2005	Department	18	Non-Fed	Pres	PR
	Jamaica	1980-2007	Parish	14	Non-Fed	Parl	SMD
	Trinidad & Tobago	1976-2007	County	16,44	Non-Fed	Parl	SMD
North	Canada	1979-2008	Province	12,4	Federal.	Parl	SMD
America	Mexico	1991-2006	State	32	Federal.	Pres	SMD+PR (nC)
	United States	1976-2008	State	50	Federal.	Pres	SMD
South	Bolivia	1985-1993	Department	9	Non-Fed	Pres	PR
America		1997-2005	Department	9	Non-Fed	Pres	SMD+PR (C)
	Brazil	1986-2006	State	26,83	Federal.	Pres	PR
	Chile	1989-2005	Region	13	Non-Fed	Pres	PR
	Colombia	1978-1990	Department	26	Federal.	Pres	MMD
		1991-2006*	Department	33	Federal.	Pres	PR
	Ecuador	1979-2009	Province	21,08	Non-Fed	Pres	PR
	Peru	1980-2006	Region	25	Non-Fed	Pres	PR
	Uruguay	1984-2004	Department	19	Non-Fed	Pres	PR

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\* Data for the following elections were not found or had not been properly compiled yet when this paper was written: France (2007), Sweden (2002 and 2006), Romania (2008), Costa Rica (1978), Dominican Republic (1990 and 2002), Colombia (1991) and all Japanese PR elections (1996-2005).

Abbreviations: SMD = Single Member Districts; MMD = Multi Member Districts; PR = Proportional party lists; SMD+PR = mixed member system, can be compensatory (C) or non-compensatory (nC); AV = Alternative Vote. Parl = Parliamentarism; Pres = Presidentialism.

For further detailed information on changes in the Electoral systems of some countries and in the number of geographical electoral units utilized in this paper, see Appendix.

It is important to draw attention that, when a country had a mixed electoral system, I worked with SMD results and with PR results separately. So, for instance, there are different results for a SMD-Mexico and for a PR-Mexico. Also, some countries changed their systems since 1975 and so I consider all the different kind of results of each one. And that is why, altogether, I ended up with more electoral systems (53) than the 43 countries: 28 PR systems, 11 SMD, 10 SMD+PR (4 compensatory systems, 6 non-compensatory), 3 MMD and 1 AV. But no country changed its government system or adopted/abandoned federalism during the considered period, so from 43 democracies, I ended up with: 19 parliamentarisms, 16 presidentialisms and 8 mixed types of Executive. And regarding the federative dimension: 31 non-federalists and 12 federalists.

Finally, there are other political concerns that I wanted to test for correlation with PSNS and 1-CRI, as previously said. I will address each of them and also their sources as they are employed in the text. Nevertheless, for space-saving reasons, I will not show a summary of how each one of them scores for each country as I did regarding the political institutions, but all data are available upon request.

#### **4 – The many tests**

When calculating 1-CRI for party systems of all countries in each election, it is important to decide how I should rank overall result of each democracy. The more intuitive option is to use averages, as no country's data presented outliers. But what to do when a country has SMD+PR system, i.e. two different results? Or what to do when a country had first one system and, after a reform, another one? One possibility would be to classify fully country's electoral systems and countries themselves, so New Zealand-PR 1996-2008 would be in a position within the rank and New Zealand-SMD

1975-2008 would be in another. While more detailed, that classification would of course lack in readability, as it should turn harder to talk about countries.

The other way is to calculate, for each nation, a mean of all systems it has or had. In that sense, the ideal procedure is to calculate a weighted mean taking in regard the importance of each system in a given election and throughout time, but it was not possible to be done, as the information on the amount of seats that each electoral system chooses in each country is often not easy to gather for past elections. So, I had to calculate a non weighted mean, while I really do not think it will be too perilous regarding the preciseness of the total country's measure of party system nationalization.

And a last methodological question is: trough which condition can we define categories of low-medium-high nationalization? I followed the simplest method: countries whose total 1-CRI mean are less or equal the first quartile of the total 1-CRI results are considered of having less nationalized party systems. Countries between the first and the third quartile have medium nationalized party systems. And when a nation total 1-CRI mean is greater than the third quartile of the total results of the 1-CRI, the party system of that democracy is, in average, among the more nationalized. This procedure seemed to work very well and it is very intuitive, as the first quartile was around 0,79 and the third was around 0,90. Table 2 shows the results of this ranking:

**Table 2 – Ranking of nationalization accordingly to the 1-CRI index: average results of all elections since 1975, trough any electoral system.**

Lower nationalization (<= first quartile)		Medium nationalization (between 1st - 3rd quartiles)		Higher nationalization (> third quartile)				
43	India	0,5911	30	Germany	0,8036	12	United States	0,9033
42	Switzerland	0,6653	29	Japan	0,8106	11	Sweden	0,9049
41	Ukraine	0,6800	28	Bolivia	0,8175	10	Denmark	0,9090
40	Ecuador	0,7157	27	Finland	0,8194	9	Netherlands	0,9095
39	Brazil	0,7387	26	Estonia	0,8226	8	Dominican Rep	0,9129
38	Zambia	0,7668	25	Peru	0,8245	7	Costa Rica	0,9184
37	Colombia	0,7725	24	Poland	0,8351	6	Australia	0,9190
36	South Africa	0,7795	23	New Zealand	0,8437	5	Greece	0,9261
35	Romania	0,7849	22	Mexico	0,8538	4	Honduras	0,9454
34	Trinidad & Tobago	0,7873	21	Turkey	0,8567	3	Chile	0,9476
33	Canada	0,7938	20	Ghana	0,8568	2	Taiwan	0,9510

32	Russia	0,7942	19	Italy	0,8577	1	Jamaica	0,9566
31	Spain	0,7953	18	Norway	0,8653			
			17	Uruguay	0,8675			
			16	Portugal	0,8796			
			15	United Kingdom	0,8826			
			14	France	0,8922			
			13	Hungary	0,8950			

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Results are interesting and would deserve meticulous analysis that, unfortunately, will not be possible to be done here for matters of space and scope limitation. But a few countries call attention: United States is the last country in the high nationalized party system category, meaning that at least since 1975 the nationalization issues that so much concerned authors in the beginning of the debates do not exist anymore. Germany is the last country in the medium nationalization level, almost being part of the low nationalized party systems. And that is also the case of Japan. Additionally, it is interesting to find traditional democracies that do not score so well and, on the other hand, very recent or non-traditional democracies performing well, as Taiwan and Honduras.

But while these results are useful to start comparing the many countries, they are exactly only the beginning of what can be asked regarding nationalization, not the end. After all, one could reasonably ask himself if can't results of this ranking be partially explained by country's size, by number of sub-national geographical units or by the inequality of demographic distribution throughout countries (i.e: does 1-CRI really control that effect?). To my knowledge, plausible concerns like these were never tested in the Political Science literature, for any well known measure, excepting the number of electoral boundaries considered. And not for only once I had listened that, for instance, it is normal if Brazil or India do not score very high in a nationalization index, as they are very big and diverse countries.

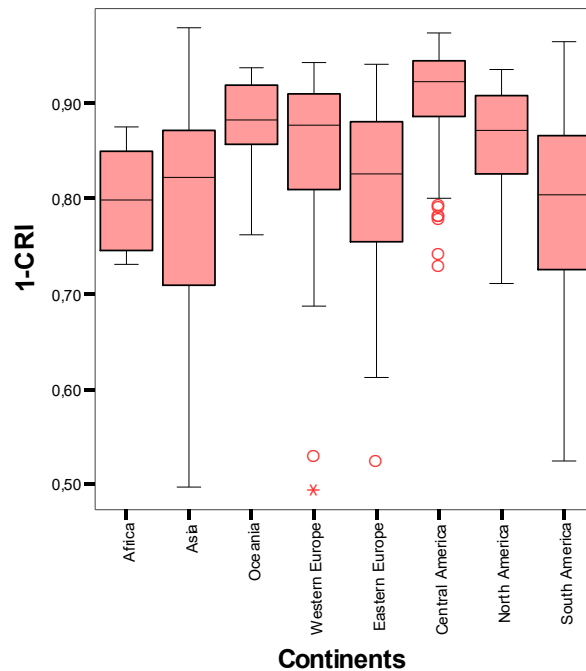
In what regards nations' size, I computed data on land area for all countries from the CIA World Factbook (2008). And a linear regression between this scale variable and the 1-CRI for all elections of all countries resulted in a remarkable  $R^2$  of 0,03 with a  $\beta$  of -0,01, even not having significance ( $p=0,298$ ). Size differences between smaller and bigger countries, therefore, don't seem to matter anyhow. But what about the number of sub-national geographic units considered? We should expect the same findings as those

previously mentioned from Caramani (2004), as one of the measures that he tested was exactly the CRI: greater the number of regions, lower the 1-CRI. I already have the information on the number of country's sub-divisions in each election through my own dataset and, once more, details can be found in the Appendix (including changes in the electoral boundaries throughout time). The correlation between this variable and the 1-CRI results in a  $R^2$  of 0,06 and  $\beta$  of 0 and no significance ( $p=0,133$ ). Apparently surprising in regard to the results of Caramani, it is not difficult to explain why I find no relation between number of sub-national units and the 1-CRI. It happens simply because he works with constituencies also for democracies that adopt SMD, with data on the lower levels of aggregation and, most important, he does not control the wide range in the number of sub-national units in the different countries. And, as said before, I chose to group them into levels whose numbers of sub-national units were less varied. So, not finding any significant correlation in this paper means that I succeeded to control the influences of the number of geographical units considered in the many countries on the 1-CRI.

Another general possibility would be that inequality in the distribution of electors throughout countries could affect measures of nationalization as indices usually do not account for the dissimilar national weights of sub-national regions. While 1-CRI is meant to correct that, it is worth to be sure that it works properly. We can compute a Gini coefficient of the inequality of electors across countries' regions that voted in each election in each democracy. Again, I do not offer a summary of those results due to space limitations, but the test of its relation to the 1-CRI variation is definitive: while significant at the 0,01 level,  $R^2$  scored 0,08 with a  $\beta$  of 0,03. It seems that the measure proposed by Rose and Urwin (1975) performs really well in that regard.

That said, it is very patent that geography doesn't help to understand the nationalization of party systems. But of course, my main concerns reside in whether political issues do matter or not. First of all, it is interesting enough to take a look on how 1-CRI performed by continents, as it is showed in Graphic number 1:

**Graphic 1 – Boxplots of nationalization of party systems (1-CRI) by continent**



In this graphic, 1-CRI medians from all continents are not so low: they stay from 0,80 to above. But clearly, in Western Europe, Oceania and Central America medians are a bit higher and the concentration of results between the first and the third quartiles is greater. And this is also slightly the case of North America. While South America, Eastern Europe, Asia and Africa not only have lower medians but also have much greater range of values between the quartiles. Total range is, moreover, extremely greater in South America and Asia than in the rest of the world, while being also big in Eastern Europe. At a first glance, tough, it seems that patterns of party system nationalization are somewhat higher and less variant around these high values in continents where it would be expected to be like that if we suppose, as Jones and Mainwaring (2003) do, that advanced democracies incise more nationalized parties: Western Europe, Oceania and North America. And this last specially matches this

expectation if Mexico is excluded, as median grows toward 0,9. Of course, in that sense one could contest that Central America seems to have the better results, but it is good to remember that among its considered countries I analyze two elderly democracies: Jamaica and Costa Rica.

And this question brings us to a central point I would like to address here: how could we test if advanced democracies would really have better nationalized party systems? Of course, only taking continents as a proxy of it would not be reasonable, even they being able to help on that task. I propose two other options. First, I classified each election of each country accordingly to the age of its democratic regime, in years, following the ACLP data (Alvarez et al. 2000), imagining that older democracies would have had more development in its political system and so more nationalized party systems than newer regimes. Secondly, I also classified each election year with both the Polity IV score of democratic/autocratic levels (MARSHALL and JAGGERS, 2008) and the Freedom House classification. But results of the following linear regression do not support any of these variables as having influence on nationalization, as the whole model is significant at the level 0,001, but the adjusted  $R^2$  is too low and also the  $\beta$  of the variable Freedom House, the only to be significant, is tiny:

**Table 3 – Linear regression of the influence of age and level of democracies on the nationalization of party systems (1-CRI):**

R <sup>2</sup>	F	Sig.
0,061	8,004	0,000*
Dependent Variable: 1-CRI		
Independent Variables:		
		$\beta$
(Constant)		0,873***
Age of Democracy:		0,000
Polity IV:		0,001
Freedom House:		-0,023***
*** $p < 0,001$		

Consequently, it can be preliminarily said that there is no direct linear correlation between the age or the level of democracies and the 1-CRI. It means that elections held in older or more comprehensive democracies do not have greater statistical chance of presenting more nationalized party systems.<sup>7</sup> Conversely, it does not mean that democracies' maturity does not matter at all for understanding the subject of nationalization. For instance, we can divide the sample of countries by democracy age or by democratic levels. I tested for both and while it can be somewhat interesting to use the Polity IV variable, it can be very interesting to use the Age of Democracies variable<sup>8</sup>. Now on, I will use Age of Democracy median (33 years) as a cut-off point for the next proceedings.

For instance, can the two groups created with this cut-off point (newer and older democracies) help to understand the effects of political institutions on the 1-CRI? Electoral systems, Executive type and federalist dimension were coded as categorical variables, according to their previous description. And so, it does not surprise that they seem to have no relation with 1-CRI through a linear regression<sup>9</sup>. The correct procedure for 'electoral system' and 'type of Executive branch' variables would be a univariate General Linear Model (GLM), but both do not pass the Levene's Test of Equality of Error Variances even after the appropriate rearrangements, what forces to use the less informative non-parametric tests for comparing medians. Thus, for electoral systems and Executive branch types, that have more than 2 categories, I give results from the Kruskal-Wallis test<sup>10</sup>. And for the federalist dimension, that is a dummy variable, I can give results from the Independent Samples T-test.

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<sup>7</sup> Of course, it is harder to test for "consolidated" democracies, as there is not even a precise definition and established measure for this concept. One option should be to use electoral volatility, and while I am very interested on it, I couldn't afford to calculate all volatilities in time for this paper.

<sup>8</sup> Care is needed at this point: the variable age of democracy in a given election logically changes each year. For instance, German election in 1980 was held when the democratic regime had 32 years, thus it is below the cut point. But when Germany had elections in 1983, regime was aged 35, so above the cut point. So, as my cases are elections in each country, not countries, I find the same nation to have elections in both groups of democratic age.

<sup>9</sup> This statement appears to be obvious, but it is not. Some data can present categorical variables influencing on a continuous variable with high and significant  $R^2$  in linear regressions. An intuitive example can be done: code fifty cases with values from 1 to 50 in a scalar variable and with value "A" in a categorical variable. Then code other fifty cases with values from 151 to 200 in the scalar variable and with value "B" in the categorical. Then code other fifty cases with values from 351 to 400 in the scalar and with value "C" in the categorical variable. Linear regression results in a  $R^2$  of 0,983.

<sup>10</sup> This non-parametric test adopted lets us identify if there are statistical significant differences between groups of the independent variable on the variation of the dependent variable. But it does not let us estimate how much each group influences. However, it is possible to identify a rank between groups of which rises or lowers more the continuous dependent variable.

Independently of the democracies' age when an election was held, being a non-federalist country raises the 1-CRI mean in comparison with being a federalist one at the significance level of 0,001. This finding is consistent with the correlation found by Jones and Mainwaring (2003:159): -0,36. For them, "federalism gives incentives for parties to organize and compete at the state level and tends to foster more differences than unitary systems in interstate patterns of electoral competition". But in my t-test, among newer democracies the eta-squared is moderate<sup>11</sup> at the level of 0,06, while among older democracies it doubles to 0,12. Thus, the amount of variation of 1-CRI that is explained by a country being or not federalist is doubled when democracies have more than 33 years.

On the other hand, different government systems do not statistically affect the index of nationalization within acceptable levels of significance, independently of the age of the democratic regimes. For the whole sample, its significance is 0,384; for the <33 years old group, it is 0,326 and for the  $\geq$  33 years old group it is 0,602. Thus, always much greater than the limit of 0,05. It also makes sense, as I use here only votes for the legislative and we have no reasons to suppose that in presidentialisms the voting patterns for the legislative would differ a lot from parliamentarisms, *ceteris paribus*.

But what happens with the electoral systems is especially interesting. For the whole sample of elections, electoral systems had a statistically significant effect (sign.=0,000) on the 1-CRI and the category rank was: in average, SMD presented the lowest 1-CRI values, followed by the MMD, and then PR showed higher and the Australian AV even higher values. The interesting point is that for elections held in regimes with less than 33 years old electoral systems are not significant at any level (sign.=0,226). While for elections held where democracies aged 33 years or more, electoral systems are significant at the lower level (0,000): in average, 1-CRI scores its lowest values when the adopted system is MMD, the second lowest when it is SMD, higher when it is PR and even higher with the Australian AV. Thus, in spite of a modification in the rank positions of the SMD and MMD electoral systems when we consider all cases or selected cases (age  $\geq$ 33), the most important picture is: SMD+MMD present, in general, lower nationalization of party systems than PR systems. Also, an important finding is: why electoral system statistically matters just for older democracies?

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<sup>11</sup> Cohen (1988) proposed a widely used guideline for interpreting eta-squared.

Similar results can be found when testing if social heterogeneity affects the party system nationalization measure. In order to operationalize that question, I draw on the classification of countries made by Anckar et al (2002:4). Authors applied the index of ethnic fractionalization proposed by Rae and Taylor (1970:24-33) on different data on ethnic, linguistic and religious different groups of each nation. So, they give the fragmentation of each of these 3 dimensions separately, for almost every country of the world. Zero would mean no fragmentation and one would mean total fragmentation. Table number 4 gives the correlation results between these variables (calculated separately) and the 1-CRI and also the correlations of Polity IV and federalist status of country and the 1-CRI, all by age of the current regime:

**Table 4 – Correlation between selected variables and the nationalization index (1-CRI), by age of democracies when elections were held**

	Age of current democracy in the election date:	
	< 33 years	>= 33 years
ENEP	-0,508**	-0,539**
Anckar LINGUISTIC frag	-0,212**	-0,592**
Anckar RELIGIOUS frag	0,086	0,064
Anckar ETHNIC frag	-0,470**	-0,337**
Anckar ETHN + LING frag	-444**	-536**
Polity IV	0,194**	0,366**
Is Federalism? 1= yes	-0,213**	-0,393**
** $p < 0,01$	n=185	n=187

While religious fragmentation is not statistically significant for any of the democracy-age groups, linguistic and ethnic fragmentation are significant in both. But while the correlation of ethnic fragmentation with 1-CRI seems to be similar between both democracies groups with more or less than 33 years, linguistic fragmentation correlates much more with 1-CRI in regimes with 33 years or more. It goes from a weak

correlation (-0,212) to a strong one (-0,592).<sup>12</sup> These results are interesting for particularly two reasons. First, ethnic and linguistic fragmentations are, so far, the variables that independently affect most the 1-CRI. Second, while the presence of fragmented ethnic groups influences the nationalization of party systems in any democracy, it seems that different linguistic groups inside nations affect much more the nationalization in elections held in older democracies than in newer ones<sup>13</sup>. I will be back to this point further. Also, elections that took place in regimes with more than 33 years old can expect Polity IV and the federalism to affect the 1-CRI through greater correlation coefficients than elections in regimes with less than 33 years. Both Polity IV and federalism status increased their coefficients towards 1-CRI from medium to strong levels in the second column of the table 4.

There is one more variable in that table that I wanted to test for correlation with the 1-CRI: effective number of electoral parties (ENEP) in each election of each country. For their samples, Jones and Mainwaring (2003:159) run a correlation test between ENEP and their PSNS index of nationalization and found “a remarkable - 0,87”. Here, regarding my whole sample of 43 countries and the ENEP correlated with my 1-CRI, I found a relevant, while less remarkable, correlation of - 0,507. There is an important reason that explains this difference between their result and mine: they analyze only American countries. If I group elections by major continents, I find the following correlations between ENEP and 1-CRI, all significant at 0,01 level: Asia+Oceania: -0,494; Europe: -0,390; and America: -0,742 (results are shown in table 5). For Africa, there was no statistical significance in the correlation between ENEP and 1-CRI. Now, it is more reasonable: my results do not differ too much from theirs in what regards the Americas. But the rest of the world relevantly differs from the Americas’ pattern of correlation between ENEP and 1-CRI. Therefore, the outstanding correlation that Jones and Mainwaring found between these variables is only outstanding for the American democracies, while it is not neglectable for Europe and even less for Asia+Oceania, and neglectable for the considered African countries<sup>14</sup>.

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<sup>12</sup> Again, I follow the classification proposed by Cohen (1988) in order to determine whether a correlation is weak, medium or strong: +0,1 to +0,29 is weak; +0,3 to +0,49 is medium and +0,5 to +1 is strong.

<sup>13</sup> The differentiation between ethnic and linguistic groups sometimes can be problematic. See Anckar et al (2002) for further details and also Alesina et al (2003).

<sup>14</sup> Regarding the previously mentioned grouping by regime age, ENEP does not differ in both, as it can be seen in table number 4.

Consequently, one should read carefully Jones and Mainwaring (2003):159) statement where they affirm that “in fragmented party systems, small parties win most of the vote, hence the powerful tendency towards low [nationalization]”. Moreover, if it is far from illogical to suppose that ENEP can influence nationalization of parties, it is also plausible to consider that Chhibber and Kollman (2004) powerfully advocated that the pattern of nationalization of parties and party systems can itself influence ENEP on the national level.

Discarding the cluster division done by the age of democracies, a new grouping of elections into these 4 major continents can also be of use. In the table number 5, I give results for the correlation between 1-CRI and a number of variables (just showed when significant at least at the 0,05 level), by continent:

**Table 5 – Correlation between selected variables and the nationalization index (1-CRI), by major continents**

	Africa	Asia+Oc	Europe	Americas
ENEP		-0,494**	-0,390**	-0,742**
Anckar LING	-0,755**	-0,500**	-0,726**	
Anckar RELIGION		0,348**		
Anckar ETHNIC		-0,447**	-0,541**	-0,569**
Anckar ETHN + LING		-0,530**	-0,670**	-0,442**
Polity IV			0,328**	
Is Federalism? 1= yes		-0,320**	-0,521**	

Note that coefficients for Europe are usually greater than for the rest and even Polity IV significantly affect 1-CRI in this continent: greater the level of European democracies, greater the nationalization of party systems. This table facilitates summarizing a previous question that must be recovered. Except for the ENEP, all other variables that have any effect on the nationalization of party systems (the 1-CRI index) have this effect increased both a) in elections whose age of democratic regime is beyond the median; and b) in European democracies when compared to nations in the rest of the

world<sup>15</sup>. Even that a Kruskal-Wallis Test among the 4 major continents shows that there is no statistical significant difference between each continent directly on the 1-CRI. ( $p=0,115$ , thus  $>0,005$ ). It means that, accordingly to the many results given before, an election held in more aged democracies or in any given continent, does not make any difference on the nationalization of party systems. But makes a difference on what other factors affect this pattern of nationalization.

## 5- Conclusions

Generally speaking, I've found that only 3 factors always affect the index 1-CRI of nationalization: ethnic (or a sum of ethnic + linguistic, as it can be seen in tables 4 and 5) fragmentation, effective number of electoral parties and federalist/non-federalist status of the country in which elections are held. But keep in mind that I am talking about effects isolated one from the others. This is important, for instance, because a country being federalist is statistically related to being socially fragmented. That said, just the two first affect the 1-CRI with equal strength disregarding any grouping possibilities: ethnic fragmentation and ENEP. While federalist status of countries affect with double intensity in elections held in 33 or more years old democracies than in elections held in regimes with less than 33 years.

In truth, if an election was held in a 33 or more years old regime, not only the federalist status affected in double the 1-CRI, as linguistic fragmentation also doubled its effect on the index too. Federalism or non-federalism influence also increased a little bit and the role taken by the level of democracies (Polity IV) on the 1-CRI also doubled. And remarkably, only in these elections did the electoral system have a significant influence (at 0,001 level) on the nationalization index, while not being significant at any level for elections held when regimes had less than 33 years. Controlling by major continents, we could see that all coefficients of correlations between any variable and the 1-CRI were near its major scores in Europe, except for the ENEP whose results was lower there than in Asia and even lower than in the Americas. Specially, in European countries, federalism took a greater correlation coefficient against 1-CRI (-0,521) and

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<sup>15</sup> Older democracies and European democracies are not statistically the same thing. And anyway, presuming it *a priori* can be tricky for two reasons: first, as the cases are the elections and not the countries, a European nation can easily have some elections considered below and others above the 33-years cut point. Second, while Europe has indeed good examples of elder democratic regimes, we can not neglect others not-new democracies like USA, Canada, Costa Rica, Jamaica, Japan, Australia, India, etc.

Polity IV was only significant in this continent, with a coefficient (0,328) that is of the same value that the one found by Jones and Mainwaring (2003) for the impact of federalism in Americas: -0,36.

How to interpret these findings, as this was an exploratory attempt to investigate the subject of nationalization of party systems? I would put preliminary conclusions as follows. First of all, talking about the whole sample of 43 countries, as it could be seen, the effective number of electoral parties and social ethnic+linguistic fragmentation are variable whose correlation with the nationalization of party systems are of medium-to-high strength: -0,507 and -0,487, respectively. Federalism correlates with 1-CRI with medium strength: -,308 and Polity IV with a small strength: 0,186. And different electoral systems make statistical difference: SMD and MMD entail less nationalized party systems, while PR and AV entail more nationalized ones. While government systems have no effect. In second place, differences in these coefficients when we group elections by the momentary age of democratic regime (<33 and >= 33) or by 4 major continents suggest two major findings. On the one hand, older or European democracies increase almost all correlation coefficients between independent variables and the 1-CRI. On the other hand, the exception is the effective number of electoral parties, that suffers no change when clustering by democratic regime age and is much lower in Europe when clustering by continents.

Shouldn't we expect that in the most mature or traditional democracies, as are the elder and the European, party systems' nationalization would be less responsive to other factors than in the rest of the world, once nationalization is in some sense interpreted, as mentioned in the beginning, as the process through which other cleavages are homogeneously replaced by the partisan support throughout countries? Possibly, but maybe a hard understanding of this assumption can also unclear what is different among countries.

Maybe in older democracies the party systems are more linked with social cleavages, and then more responsive to them. While in elections held in newer systems, parties can be less influenced by social support. Or maybe, in older regimes' elections, parties and party systems develop a more equal and standard pattern of electoral and political consolidation, with organizational penetration throughout territories, so that being constant and similar in these matters, they are exposed to more responsiveness to institutions and social fragmentations. While in elections held under newer regimes, parties vary from each other even in how and how much consolidated they are, or in

how much they were already able to spread and penetrate across sub-national units. So, unequal in regards to levels of penetration due to recent organization reasons, this scenery could blur some of the influences of other factors. If it is true, it would be less difficult to understand that the effective number of electoral parties affects more the nationalization of party systems in the Americas than in Europe. Parties that did not fully penetrate organizationally and electorally throughout territories, are under more intense competition with other parties, parties' strength and position within the party systems are frequently not established yet.

Of course, more research is needed in order to fill this newly found gap. It was not and it is still not my intention to answer it here in this paper, as my main concern was exactly to explore the new data I had compiled. After all, literature on nationalization of party systems never compared too many countries from different continents and with different democratic traditions. And more critical, in too few works had authors explored for relations between nationalization of parties and other political concerns in the context of more than a few nations. So, my intent so far was, precisely, more to open up for new questions than to answer major problems. And in that sense, we have now more material on which to work. I showed that federalism and effective number of electoral parties influence the nationalization of party systems, but not necessarily in the ways we had imagined. I confirmed that countries' land area, unequal electors distribution through the territory, government systems and religious fragmentation have no relation with the nationalization of party systems. Also, I demonstrated that the age of democratic regimes or levels of democracies do not have influence on the nationalization of party systems, but I suggested that they do modify the way and the intensity through which other factors influence it.

## Appendix – Detailed description of electoral systems and electoral boundaries of each country

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Abbreviations: SMD = Single Member Districts; MMD = Multi Member Districts; PR = Proportional party lists; SMD+PR = mixed member system, can be compensatory (C) or non-compensatory (nC). Compensatory is usually called 'mixed member proportional' (MMP) and non-compensatory is usually called 'parallel' or 'single transferable vote' (STV); AV = Alternative Vote.

**Australia:** Electoral constituencies were grouped into the 10 Australian States. There was no change in the number of States or in the Electoral system (AV) during the analyzed elections.

**Bolivia:** From 1985 to 1993, Bolivia adopted a PR electoral system. Since the election of 1997, it changed to a compensatory mixed member plurality (SMD+PR 'C'). For all PR results, the constituencies have been the 9 Bolivian Departments and that's how they appear in this research. For the SMD results, I also grouped the many constituencies into these 9 Departments.

**Brazil:** The electoral districts have always been the country's States. The only change in the number of the states was due to the creation of the State of Tocantins in 1988: 1986 (26 States) and 1990-2006 (27). There was no change in the Electoral system (PR) during the analyzed elections.

**Canada** Electoral constituencies were grouped into the Canadian provinces: 1979-1997 (12 provinces) and 2000-2008 (13). The change in the number of provinces was due to the new province of Nunavut created in 1999. There was no change in the Electoral system (SMD) during the analyzed elections.

**Chile:** Electoral constituencies were already grouped into the 13 Chilean regions in the official sources. There was no change in the Electoral system (PR) during the analyzed elections, but Chilean system deserves further explanation: each constituency elects 2 seats; if a party has at least 2/3 of the votes in a given constituency, it wins both seats; if the most voted party doesn't reach 2/3 of the votes, it wins 1 seat and the other seat goes to the second-placed party.

**Colombia:** Electoral system in Colombia has been formally a PR system from decades ago, but until the 2003 reform it worked alike a MMD system (BUIRAGO and SHUGART, 2009; COX and SHUGART, 1995). Since then, it can be really considered a PR system. Electoral boundaries always corresponded to country's department: they were 26 until 1990, and 33 after the 1991 political reform that had changed several minor electoral and administrative details.

**Costa Rica:** Electoral districts have been always the 7 country's provinces. And neither did this number

change, nor did the electoral system (PR). Unfortunately, the electoral results for 1978 remained missing to me when this paper was written.

**Denmark:** From 1971 to 2006, there were 17 electoral districts, quite correspondent to country's counties. Since 2007, Denmark abolished all administrative counties and replaced them by 5 regions, while 10 electoral districts were created: 1975-2006 (17 districts) and 2007 (10). Electoral system remained PR during all the considered period.

**Dominican Republic:** Electoral districts have been quite correspondent to country's provinces, and their number has been changed rather frequently: 1974-1981 (27 districts), 1982-2005 (30) and 2006 (32). Electoral system remained PR during all the considered period. Unfortunately, the electoral results for 1990 and for 2002 remained missing to me when this paper was written.

**Ecuador:** Electoral districts have been the country's provinces, and their number has been changed frequently: 1979-1991 (20 provinces), 1992-2001 (21), 2002-2008 (22) and 2009 (24). The electoral system always remained as PR, though many changes in its functioning details took place among the years. In some years, there was an additional ballot through which additional members were elected from a nationwide district, but I consider only the main elections.

**Estonia:** The number of electoral counties (not exactly the same as the administrative counties) changed twice since 1991: 1992 (12 counties), 1995-1999 (11) and 2004-2007 (12). Electoral system adopted since the Independence from the USSR is the PR system.

**Finland:** Since 1939, there are 14 electoral districts + the autonomous province of Åland. But I will not consider that special province for various reasons: although Åland has 1 seat at the Finnish parliament (chosen by SMD, while the rest of the country uses PR), it has its own Parliament, its own parties and many autonomous political and institutional attributes. Thus it would distort results for Finland. Regarding the whole country, PR has always been the electoral system.

**France:** Electoral constituencies were grouped into the 22 French regions. And there was no change in that number of regions or in the electoral system (SMD) adopted during the considered period. Unfortunately, although I had already found the 2007 results aggregated by constituencies, I was not able to compile them in time for this paper.

**Germany:** German states have been the country's electoral districts since the first postwar election, in 1949. They were in the number of 10 until 1987, but since the German reunification, the 14 districts of East Germany reverted to five new states and Berlin, as the new capital of the unified German, also gained the status of state: 1976-1987 (10 states) and 1990-2005 (16). Concerning the electoral system, Germany adopts a mixed member proportional system since 1949. It was the first - and for a long time the unique - system that mixed SMD and PR with a

compensatory rule (SMD+PR 'C'). Germans cast two separated votes and in this paper I work with them separately too, presenting both results for each election included.

- Ghana: The recent democracy in Ghana has always adopted the SMD as the electoral system and here I grouped its constituencies into the 10 official administrative regions for all elections.
- Greece: Since 1974, there are 56 electoral multimember districts that mostly correspond to the Greek prefectures. The country adopts the PR electoral system since 1958.
- Honduras: During all the considered period, there has been a PR electoral system, with the 18 administrative departments being the electoral districts.
- Hungary: The recent Hungarian democracy adopts a mixed SMD+PR system, non-compensatory (SMD+PR 'nC'), with the following geographical division: 20 districts for the PR voting and several constituencies for the SMD voting. In this paper, I grouped these SMD constituencies into the same 20 districts used for the PR votes.
- India: The many constituencies of the SMD electoral system adopted by India were grouped into the Indian States. Two changes happened in the number of States during the considered period: 1977-1991 (31 States), 1996-1999 (32) and 2004 (35). Two of the Indian states did not have elections for the parliament in 1984, but in 1985 when a complementary election was held just for them. And the same thing happened in 1992, when one state had complementary elections as it was out of the 1991 parliamentary election. Here, I consider 1984/85 and 1991/1992 as unique processes (dated as 1984 and 1991, respectively).
- Italy: Until 1992, the country had 32 electoral Circumscriptions and adopted the PR list system. From 1994 to 2001, Italy used a compensatory mixed electoral system: SMD + PR 'C'. For the SMD elections there were 27 electoral Circumscriptions, while for the PR list elections there were 26: Valle d'Aosta did not have PR list elections. After 2001, Italy adopted fully PR list again, then including Valle d'Aosta in that system and summing up 27 Circumscriptions.
- Jamaica: The electoral system adopted in Jamaica is the SMD, since the country was partially independent from the United Kingdom in 1958. In this paper I grouped the many constituencies into the 14 Jamaican administrative parishes (that are the same since 1930).
- Japan: Until 1993, the electoral system was MMD. Since 1996, it is mixed: PR list + SMD, but non-compensatory (SMD+PR 'nC'). Unfortunately, although Mr. Steven R. Reed had kindly sent me data containing the PR electoral results by Prefectures, I was not able to properly compile them yet. Thus for the period 1996-today I will consider in this work just the SMD electoral results. I grouped all results into the 47 Japanese Prefectures.

- Mexico: While Mexico has been holding elections for many decades and has a party system dated from the beginning of the 20<sup>th</sup> century, it is usually considered to be democratic just since the early 1990's. I follow the classification of democracies by Polity IV and thus consider only Mexican elections since 1991. The electoral system is a mixed SMD+PR, non-compensatory (SMD+PR 'nC') and so, in this paper results are considered separately. For PR, there have been 5 multi-state districts and for SMD, 300. I aggregated both votes into the 32 Mexican states.
- Netherlands: Electoral boundaries correspond to the provinces and major cities, but they have practical purposes only as the seats apportionment considers one nationwide district only. I work in this paper with results per province: 1977-1982 (11 provinces) and 1986-2007 (12 provinces). In 1986, the Flevoland province was formed. Electoral system adopted (PR) didn't change.
- New Zealand: Electoral constituencies were grouped into the administrative regions, whose total number varied over the time: 1975-1989 (22 regions), 1989-1991 (14), 1992-2009 (17). Regarding the electoral system, New Zealanders used SMD until 1993. Since the 1996 election, they adopted a mixed member proportional system with compensatory rule (SMD+PR 'C'). Thus, in this paper I deal with results for SMD for all election and for PR since 1996.
- Norway: Electoral constituencies have been corresponding to country's 19 counties during all the elections considered. Also, the electoral system remains the same: PR.
- Peru: Electoral constituencies have been corresponding to country's 26 administrative regions, excepting Lima City, that is considered together with Lima Region, thus counting 25 electoral regions. During all the considered period, the electoral system remained the same: PR. But accordingly to the democracy classification by Polity IV and also to disseminated knowledge on Peruvian recent history, the elections held in 1995 and 2000 can hardly be considered democratic and so they were not considered in this paper.
- Poland: Number of electoral districts changed twice during the recent democracy: 1991 (37 districts), 1993-1997 (52) and 2001-2007 (41). Electoral system, however, has remained the same: PR.
- Portugal: Electoral constituencies correspond to the country's 20 provinces since they were formally established in 1977, after democratization. In the first election, in 1976, there were those 20 provinces, but Azores Islands were split into 3 electoral boundaries, thus counting 22 electoral provinces: 1976 (22), 1977-2009 (20). The electoral system (PR), however, hasn't changed.
- Romania: There were 41 electoral counties in 1990, but all elections since 1992 had 42. The extra county was SAI (Ilfov Agricultural Sector), that also turned into an official administrative county in 1997. The electoral system adopted has been the PR.

- Russia: The states/republics are the electoral districts: in 1993 they were 88 (as Chechnya was still effectively independent) and since 1995, with Chechnya, 89. But in 1999, again no elections were held there due to the 2nd Chechnya War. Thus, for 1995, 2003 and 2007, Chechnya is included among the electoral results, while no expected to be for 1993 and not included due to a war for 1999. Since 2007, number of regions changed to 85: 1993 (88 regions), 1995 (89), 1999 (88), 2003 (89) and 2007 (85). Also in 2007, the electoral system changed from mixed non-compensatory (SMD + PR 'nC') to PR. Until 2003, thus, I work with separately results.
- South Africa: Since the democratization, electoral constituencies correspond to the 9 provinces and the electoral system adopted has been the PR system.
- Spain: Since first election in 1977, there are 50 multi-member constituencies (correspondent to country's province) voting via PR system and 2 single-member constituencies (North African enclaves of Ceuta and Melilla) voting via SMD. For all elections, I grouped results into the 19 official "autonomías" (autonomous communities) and I consider Spanish electoral system as being PR, not mixed, as both SMD constituencies contribute with one seat each for the 350.
- Sweden: Electoral districts correspond to country's counties: 24 until 1997, and 21 since 1998. The electoral system hasn't changed from PR. Unfortunately; I was not able to properly compile Swedish elections held in 2002 and 2006 until writing this paper, although having the row data.
- Switzerland: Electoral districts correspond to country's cantons. They were 25 until 1978, and 26 since then (Jura canton split from Bern): 1975 (25) and 1979-2007 (26).
- Taiwan: Electoral system was multi-member districts (MMD) until 2007 and a mixed non-compensatory system (SMD+PR 'nC') since then. I grouped the electoral districts into the 5 Taiwanese provinces (4 + Aborigines area). Thus, for 2008 elections I consider separately results for SMD and PR.
- Trinidad & Tobago: Electoral districts were grouped into the administrative counties, whose total numbers have changed many times: 1976 (12 counties), 1981 (13), 1986 (921), 1991 (22), 1995-2007 (16). Electoral system, however, has been the same: SMD.
- Turkey: Electoral constituencies correspond to country's provinces, though the number of provinces has been changing: 1977-1987 (67), 1991 (74), 1995 (79), 1999-2002 (80) and 2007 (81). Electoral system (PR) has been remaining the same.
- Ukraine: Democracy started recently with a SMD electoral system in force during the 1994 election, but for the elections held in 1998 and 2002, the Ukrainians adopted a mixed non-compensatory

system (SMD+PR 'nC'). For the 2006 and 2007 elections, however, the electoral system has been fully PR with one nationwide constituency. I grouped all different results into the 27 official provinces.

United Kingdom: While the SMD electoral system remains the same from decades, the number of electoral districts changes a lot (and is currently greater than 600). It is very hard to group British districts and the greater administrative level would be the several counties. So I decided to group the results into the 11 Major Regions adopted by the UK Official Census, excluding North Ireland because of the very different party system it has (and not considering it I follow, for instance, Norris, 2005).

United States: Electoral constituencies were grouped into the 50 states. Electoral system has always been SMD.

Uruguay: Electoral constituencies have been corresponding to country's 19 departments. Electoral system (PR) didn't change during the considered period.

Zambia: Electoral districts were grouped into country's 9 provinces. The four election since democratization have been adopting SMD as the electoral system.

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