LABORATORIO DEMOCRACIA Y GOBIERNO
UNIVERSIDAD SAN SEBASTIÁN

CPLD

CODEBOOK

Chilean Political Landscape Dataset

CPLD · Version 1.0 · Variable Definitions

FILE	consolidated_v1_0.xlsx
VERSION	1.0
OBSERVATIONS	5,301
VARIABLES	42
COVERAGE	1989–2023
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DATAVERSE	doi.org/10.7910/DVN/NGRY3R
WEBSITE	labdemgob.github.io/cpld
LICENSE	CC BY-NC-ND 4.0

HOW TO READ THIS CODEBOOK

Each entry names a variable, gives its definition, and where applicable the formula used to compute it, its type and unit, and its full source. Variables are numbered sequentially from the identification block onward. Entries sourced from the Servicio Electoral de Chile (SERVEL) are the author's elaboration based on certified electoral results.

Unit of observation. Each row represents one electoral list competing in one electoral unit in one election — a coalition, party, or independent candidate competing as a single entity in the D'Hondt seat allocation. The electoral unit varies by election type: district for Diputados and Constituyentes, region for Senadores and Gobernadores, province for Cores, and commune for Alcaldes and Concejales.

ANATOMY OF AN ENTRY

Number · name · type	Running variable number, the column name, and its data type or unit.
Definition	What the variable measures and how it is constructed.
Formula	The computation, shown in a tinted box where one applies.
Source	Full APA reference, repeated in each entry for self-contained citation.

NOTATION USED IN FORMULAS

v_i — vote share of list i

p_i — district vote proportion

w_i — weight (vote share)

dm — district magnitude

s_i — seat share of list i

P_i — national vote proportion

x_i — ideological score of list i

n — number of lists in the unit

01 IDENTIFICATION VARIABLES

01 type STRING

Type of election. Values: Diputados, Senadores, Constituyentes, Alcaldes, Concejales, Cores, Gobernadores, Municipales (elections prior to the split of Alcaldes/Concejales).

Source — Author's elaboration based on Servicio Electoral de Chile (SERVEL). (n.d.). *Certified electoral results*.

02 type2 STRING

Electoral system group. Identifies sets of elections sharing the same rules (district boundaries, magnitudes, seat totals) — e.g. Diputados 1989–2013 (60 districts, binominal); Diputados 2017–2021 (28 districts, proportional); Senadores Binominal (Pares/Impares); Cores 2021.

Source — Lijphart, A. (1994). *Electoral systems and party systems: A study of twenty-seven democracies, 1945–1990*. Oxford University Press.

03 type3 STRING

Election label. Concatenation of type and election year, identifying a specific election within a type. Example: "Diputados - 2021".

Source — Author's elaboration.

04 region_2024 NUMERIC

Regional identifier using 2024 regional boundaries, enabling longitudinal comparison across elections despite historical boundary changes. Units from elections under older boundaries are assigned to the region that contains them under the 2024 definition. Notable assignments: Diputados district 42 → region 16; Senadores circ. 1 (Arica y Tarapacá) → region 15; Senadores circ. 13 (Bio-Bio Cordillera) → region 8.

Source — Author's elaboration.

05 unit INTEGER / STRING

Identifier of the electoral unit. Integer for district- and region-based elections; string for commune-based elections.

Source — Author's elaboration based on Servicio Electoral de Chile (SERVEL). (n.d.). *Certified electoral results*.

06 election INTEGER · 1989–2023

Year of the election.

Source — Author's elaboration based on Servicio Electoral de Chile (SERVEL). (n.d.). *Certified electoral results*.

02 LIST STRUCTURE VARIABLES

07 list INTEGER

Number of electoral lists competing in the unit. Counts all distinct lists including IFP candidates; each IFP candidate constitutes one list.

Source — Author's elaboration based on Servicio Electoral de Chile (SERVEL). (n.d.). *Certified electoral results*.

08 lists_national INTEGER

Number of distinct electoral lists competing nationally in the election, excluding IFP candidates. Measures the national menu of partisan options.

Source — Author's elaboration based on Servicio Electoral de Chile (SERVEL). (n.d.). *Certified electoral results*.

09 listmin NUMERIC · %

Minimum vote share (%) obtained by any list in the unit.

Source — Author's elaboration based on Servicio Electoral de Chile (SERVEL). (n.d.). *Certified electoral results*.

10 listmax NUMERIC · %

Maximum vote share (%) obtained by any list in the unit.

Source — Author's elaboration based on Servicio Electoral de Chile (SERVEL). (n.d.). *Certified electoral results*.

11 candidates INTEGER

Total number of individual candidates competing in the unit, excluding null and blank votes.

Source — Author's elaboration based on Servicio Electoral de Chile (SERVEL). (n.d.). *Certified electoral results*.

12 **ifp_candidates** INTEGER

Number of Independientes Fuera de Pacto (IFP) candidates competing in the unit — independents running outside any coalition or party list.

Source — Author's elaboration based on Servicio Electoral de Chile (SERVEL). (n.d.). *Certified electoral results*.

13 **ifp_seats** INTEGER

Number of seats won by IFP candidates in the unit.

Source — Author's elaboration based on Servicio Electoral de Chile (SERVEL). (n.d.). *Certified electoral results*.

14 **percent_ind** NUMERIC · %

Percentage of total candidates who are IFP candidates.

```
percent_ind = (ifp_candidates / candidates) × 100
```

Source — Author's elaboration.

03 ELECTORAL SYSTEM VARIABLES

15 **dm** INTEGER

District magnitude — number of seats allocated in the unit. For majoritarian elections (Alcaldes, Gobernadores), dm = 1; for proportional elections, dm varies by unit.

Source — Author's elaboration based on Servicio Electoral de Chile (SERVEL). (n.d.). *Certified electoral results*.

16 **as** INTEGER

Assembly size (local). Equals dm for most proportional election types. For Cores, equals the total seats allocated within the region to which the unit belongs.

Source — Author's elaboration.

17 **as2** INTEGER

Assembly size (national). Total seats allocated nationally in the election — the sum of dm across all units.

Source — Author's elaboration.

18 **sp** NUMERIC

Seat product — key predictor of fragmentation in the Seat Product Model.

```
sp = dm × as
```

Source — Shugart, M. S., & Taagepera, R. (2017). *Votes from seats: Logical models of electoral systems.* Cambridge University Press.

19 **spm** NUMERIC

Seat Product Model predicted ENP — theoretical prediction of the effective number of parties from the seat product.

```
spm = (dm × as)^(1/6) = sp^(1/6)
```

Source — Shugart, M. S., & Taagepera, R. (2017). *Votes from seats: Logical models of electoral systems.* Cambridge University Press.

20 **logmag** NUMERIC

Natural logarithm of district magnitude.

```
logmag = ln(dm)
```

Source — Author's elaboration.

04 PARTY SYSTEM FRAGMENTATION

21 **enpv** NUMERIC

Effective number of parties by votes at the district level — parties weighted by vote share. IFP candidates included.

```
ENPv = 1 / Σ p_i²
```

Source — Laakso, M., & Taagepera, R. (1979). "Effective" number of parties: A measure with application to West Europe. *Comparative Political Studies, 12*(1), 3–27. https://doi.org/10.1177/001041407901200101

22 **enps** NUMERIC

Effective number of parties by seats at the district level. IFP candidates included.

$$ENPs = 1 / \Sigma s_i^2$$

Source — Laakso, M., & Taagepera, R. (1979). “Effective” number of parties: A measure with application to West Europe. *Comparative Political Studies, 12*(1), 3-27. https://doi.org/10.1177/001041407901200101

23 **enpv_national** NUMERIC

Effective number of parties by votes at the national level, computed on aggregated national vote totals, excluding IFP candidates.

$$ENPv\_national = 1 / \Sigma P_i^2$$

Source — Laakso, M., & Taagepera, R. (1979). “Effective” number of parties: A measure with application to West Europe. *Comparative Political Studies, 12*(1), 3-27. https://doi.org/10.1177/001041407901200101

24 **enps_national** NUMERIC

Effective number of parties by seats at the national level, excluding IFP candidates.

$$ENPs\_national = 1 / \Sigma S_i^2$$

Source — Laakso, M., & Taagepera, R. (1979). “Effective” number of parties: A measure with application to West Europe. *Comparative Political Studies, 12*(1), 3-27. https://doi.org/10.1177/001041407901200101

25 **dif** NUMERIC

Difference between the raw number of lists and ENPv at the district level — how many “effective” lists are lost to fragmentation of small parties.

```
dif = list - enpv
```

Source — Author’s elaboration.

26 **dif2** NUMERIC

Reduction in effective parties from translating votes into seats. Values below zero are set to zero to correct for rounding error.

```
dif2 = max(0, enpv - enps)
```

Source — Author’s elaboration.

05 DISPROPORTIONALITY INDICES

27 Rae

Rae disproportionality index over vote shares (v_i) and seat shares (s_i) across the n lists; higher values indicate greater disproportionality.

$$Rae = (1/n) \cdot \Sigma |v_i - s_i|$$

Source — Rae, D. W. (1967). *The political consequences of electoral laws*. Yale University Press.

28 LH

Loosemore-Hanby disproportionality index.

$$LH = 0.5 \cdot \Sigma |v_i - s_i|$$

Source — Loosemore, J., & Hanby, V. J. (1971). The theoretical limits of maximum distortion: Some analytic expressions for electoral systems. *British Journal of Political Science, 1*(4), 467-477. https://doi.org/10.1017/S000712340000925X

29 Lijphart_1

Largest deviation from proportionality among lists holding at least one seat.

$$Lijphart\_1 = \max |v_i - s_i| \text{ for } s_i > 0$$

Source — Lijphart, A. (1990). The political consequences of electoral laws, 1945-1985. *American Political Science Review, 84*(2), 481-496. https://doi.org/10.2307/1963530

30 Lijphart_2

Largest deviation from proportionality among all lists.

$$Lijphart\_2 = \max |v_i - s_i| \text{ for all } i$$

Source — Lijphart, A. (1994). *Electoral systems and party systems: A study of twenty-seven democracies, 1945-1990*. Oxford University Press.

31 Gallagher

Gallagher least-squares disproportionality index.

$$G = \sqrt{ 0.5 \cdot \Sigma (v_i - s_i)^2 }$$

Source — Gallagher, M. (1991). Proportionality, disproportionality and electoral systems. *Electoral Studies, 10*(1), 33-51. https://doi.org/10.1016/0261-3794(91)90004-C

32 Cox_Shugart

Regression-based measure of the relationship between vote and seat shares. A value of 1.0 indicates perfect proportionality; values above 1.0 indicate a bonus to larger parties.

```
Cox_Shugart = b, where s_i = a + b·v_i (OLS)
```

Source — Cox, G. W., & Shugart, M. S. (1991). Comment on Gallagher's "Proportionality, disproportionality and electoral systems." *Electoral Studies, 10*(4), 348–352. https://doi.org/10.1016/0261-3794(91)90025-N

06 PARTY SYSTEM NATIONALIZATION

33 Mainwaring_Jones NUMERIC · [0,1]

Nationalization score — homogeneity of a party's vote distribution across units. 1 = perfectly uniform; lower = greater regional concentration. Aggregated across parties weighted by national vote share.

```
PSN_i = 1 - Gini(p_i1, …, p_iK)
```

Source — Jones, M. P., & Mainwaring, S. (2003). The nationalization of parties and party systems: An empirical measure and an application to the Americas. *Party Politics, 9*(2), 139–166. https://doi.org/10.1177/13540688030092002

34 Chhibber_Kollman NUMERIC

Difference between national ENP and the average district-level ENP — how much more concentrated the national party system is than its local components.

```
CK = ENPv_national - mean(ENPv_district)
```

Source — Chhibber, P., & Kollman, K. (2004). *The formation of national party systems: Federalism and party competition in Canada, Great Britain, India, and the United States*. Princeton University Press.

07 IDEOLOGICAL VARIABLES

35 av_id NUMERIC · 1–10

Vote-weighted mean ideological score of the district, excluding IFP (score = 5). Scale: 1 (far left) to 10 (far right).

```
av_id = Σ(w_i · x_i) / Σ w_i
```

Source — Bunker, K. (2025). Mapping party systems over time: A spatial distribution of ideological competition in Chile. *Journal of Political Ideologies*. https://doi.org/10.1080/13569317.2025.2452179

36 polarization_district NUMERIC

Ideological polarization at the district level — vote-weighted dispersion across the spectrum, excluding IFP. NA for two communes in Alcaldes 2021 with no matchable lists.

```
P = √( Σ w_i · (x_i - x̄)² )
```

Source — Dalton, R. J. (2008). The quantity and the quality of party systems: Party system polarization, its measurement, and its consequences. *Comparative Political Studies, 41*(7), 899-920. https://doi.org/10.1177/0010414008315860

37 polarization_national NUMERIC

Ideological polarization at the national level — same formula applied to national vote shares, excluding IFP.

Source — Dalton, R. J. (2008). The quantity and the quality of party systems: Party system polarization, its measurement, and its consequences. *Comparative Political Studies, 41*(7), 899-920. https://doi.org/10.1177/0010414008315860

08 CONTEXTUAL VARIABLES

38 ethnic_frac NUMERIC · [0,1]

Ethnic fractionalization — probability that two randomly selected individuals from the unit belong to different ethnic groups (2017 census). 0 = homogeneous, 1 = maximally fractionalized.

```
F = 1 - Σ (n_g / N)²
```

Source — Alesina, A., Devleeschauwer, A., Easterly, W., Kurlat, S., & Wacziarg, R. (2003). Fractionalization. *Journal of Economic Growth, 8*(2), 155-194. https://doi.org/10.1023/A:1024471506938

39 ethnic_presence NUMERIC · [0,1]

Share of the population identifying as belonging to an indigenous people (2017 census).

```
ethnic_presence = n_indigenas17 / censo17
```

Source — Instituto Nacional de Estadísticas. (2017). *Censo de Población y Vivienda.*

40 ethnic_number NUMERIC · %

Share of the population identifying as indigenous (2002 census). NA for some units due to gaps in the 2002 census.

```
ethnic_number = (n_indigenas02 / censo02) × 100
```

Source — Instituto Nacional de Estadísticas. (2002). *Censo de Población y Vivienda.*

ACCESS THE DATASET

SCAN FOR THE PROJECT PAGE

labdemgob.github.io/cpld

Downloads, codebook, version history, and replication materials for the CPLD.

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