Data Dictionary: Bureaucratic Autonomy in Environmental Governance

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Abstract

This document provides a data dictionary for the dataset used in *Bureaucratic Autonomy in Environmental Governance* (Greenstein 2026). The dataset covers 39 national environmental agencies as of 2010, drawn from Jordana et al. (2018) and supplemented with country-level indicators from the World Bank and the Database of Political Institutions. For each variable the dictionary records the column name as it appears in the `data.csv` file, a plain-language label, the variable type, the coding scheme or range of values observed in the sample, and the original data source.

1 Variable Descriptions

Column name	Label	Type	Values	Source
`country`	Country name	String	39 unique country names spanning six continents	Jordana et al. (2018)
`autonomy`	Composite autonomy index	Continuous	Simple average of the 12 binary autonomy dimensions listed below. Range: 0.33–0.83	Author, from Jordana et al. (2018)
`agency_head_prof_req`	Agency head professional requirement	Binary	1 = appointment of the agency head is dependent upon a particular professional requirement; 0 = no such requirement	Jordana et al. (2018)

Column name	Label	Type	Values	Source
agency_board_prof_req	Agency board professional requirement	Binary	1 = appointment of agency board members is dependent upon a particular professional requirement; 0 = no such requirement	Jordana et al. (2018)
cap_implement_sanctions	Capacity to implement sanctions	Binary	1 = agency has the capacity to impose sanctions; 0 = no such capacity	Jordana et al. (2018)
cap_supervise	Capacity to supervise	Binary	1 = agency has the capacity to supervise (control, inspection, surveillance); 0 = no such capacity	Jordana et al. (2018)
cap_research	Capacity to do research	Binary	1 = agency has the capacity to conduct research; 0 = no such capacity	Jordana et al. (2018)
cap_elaborate_norms	Capacity to elaborate norms	Binary	1 = agency has the capacity to elaborate its own regulations and norms; 0 = no such capacity	Jordana et al. (2018)
cap_conflict_resolution	Capacity to promote conflict resolution	Binary	1 = agency has conflict resolution capabilities; 0 = no such capacity	Jordana et al. (2018)

Column name	Label	Type	Values	Source
cap_establish_prices	Capacity to establish prices	Binary	1 = agency has the capacity to establish tariffs and prices in the sector; 0 = no such capacity	Jordana et al. (2018)
cap_est_markets	Capacity to establish markets	Binary	1 = agency has the capacity to regulate entry to and exit from the market, including mergers and absorptions; 0 = no such capacity	Jordana et al. (2018)
no_review_minister	Minister does not review	Binary	1 = the minister does not have the power to review agency decisions; 0 = ministerial review exists*	Jordana et al. (2018)
no_review_pres_pm	President/Prime Minister does not review	Binary	1 = the president or prime minister does not have the power to review agency decisions; 0 = such review exists*	Jordana et al. (2018)
no_review_parliament	Parliament does not review	Binary	1 = parliament does not review agency decisions; 0 = parliamentary review exists*	Jordana et al. (2018)

Column name	Label	Type	Values	Source
gdp_pc_2000_2009	GDP per capita, 2000–2009 average	Continuous	Average GDP per capita (USD, constant 2024) over 2000–2009. Range: $189–$63,280	World Bank Development Indicators
dominant_system	Dominant political system, 2000–2009	Categorical	Modal political system type during 2000–2009: *Presidential*; *Parliamentary*; *Assembly-Elected President*	Database of Political Institutions
corruption_2000_2009	Control of Corruption, 2000–2009 average	Continuous	Average World Bank Control of Corruption indicator over 2000–2009. Higher values = better. Range: −1.44–2.38	World Bank Governance Indicators
reg_quality_2000_2009	Regulatory Quality, 2000–2009 average	Continuous	Average World Bank Regulatory Quality indicator over 2000–2009. Higher values = better. Range: −1.93–1.78	World Bank Governance Indicators
rule_law_2000_2009	Rule of Law, 2000–2009 average	Continuous	Average World Bank Rule of Law indicator over 2000–2009. Higher values = better. Range: −1.76–1.94	World Bank Governance Indicators

Column name	Label	Type	Values	Source
gov_effect_2000_2009	Government Effectiveness, 2000–2009 average	Continuous	Average World Bank Government Effectiveness indicator over 2000–2009. Higher values = better. Range: −1.45–2.16	World Bank Governance Indicators

* Recoded from original so that 1 = more autonomy.

References

Cruz, Cesi, Philip Keefer, and Carlos Scartascini. 2016. *Database of Political Institutions: 2015.* IDB Open Data. https://doi.org/10.60966/a8qbhh3e.

Greenstein, Gus. 2026. "Bureaucratic Autonomy in Environmental Governance." Working paper, Leiden University.

Jordana, Jacint, et al. 2018. "Agency proliferation and the globalization of the regulatory state: Introducing a data set on the institutional features of regulatory agencies." *Regulation & Governance* 12 (4): 524–540.

World Bank. *World Development Indicators: GDP per capita.* https://tinyurl.com/4bzmp95b. Last accessed 17 May 2024.

World Bank. *Worldwide Governance Indicators.* https://tinyurl.com/ye28umjc. Last accessed 17 May 2024.