

Predicting democratic backsliding with Machine learning

Model comparison

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Abstract

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magnam aliquam quaerat voluptatem. Ut enim aequo doleamus animo, cum corpore dolemus, fieri tamen permagna accessio potest, si aliquod aeternum et infinitum impendere malum nobis opinemur.

Quod idem licet transferre in voluptatem, ut postea variari voluptas distinguere possit, augeri amplificarique non possit. At etiam Athenis, ut e patre audiebam facete et urbane Stoicos irridente, statua est in quo a nobis philosophia defensa et.

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1. Motivation and Context

In an era characterized by pervasive democratic erosion, emerging conflicts, and the ascent of radical right movements in Europe, a systematic and data-driven approach to analyzing and predicting these shifts is urgently required. The complex nature of these multifaceted challenges calls for an analytical framework capable of capturing their inherent dynamism. Recent advances in data availability have rendered the phenomenon of democratic backsliding both measurable and observable, enabling us to harness a wealth of indicators for rigorous analysis as can be seen in Figure 1.

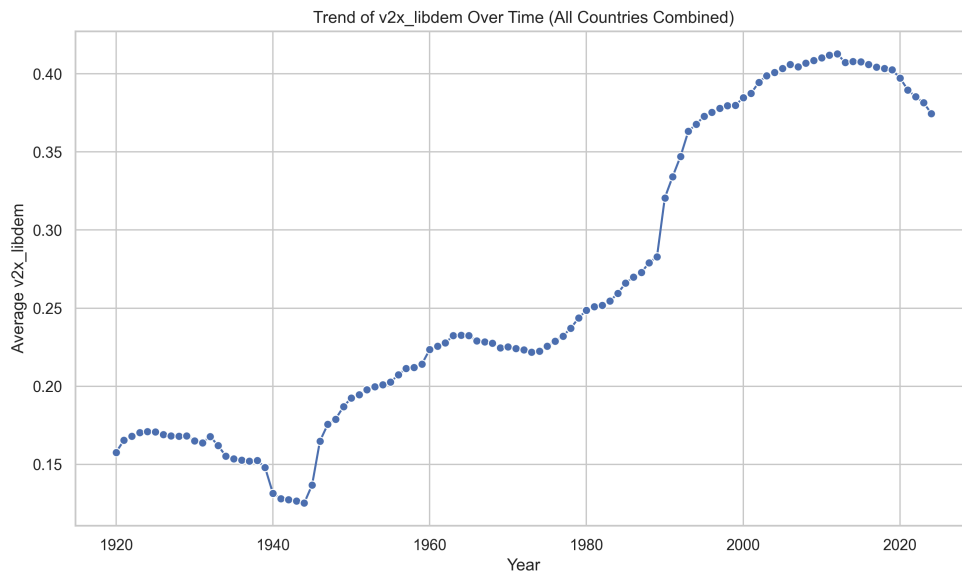


Figure 1: Liberal democracy fulfillment index over time, average of all countries in dataset.

This paper focuses on an exemplary investigation that benchmarks various machine learning approaches using preselected data from the V-Dem dataset (Coppedge, 2025). In times of acute political uncertainty, it is essential for democracies worldwide to monitor the evolution of their own political landscapes as well as those of their international partners. A critical issue in this context is that democratic backsliding is often perceived as a spontaneous event rather than a discernible developmental trend. By applying sophisticated predictive models, we aim to unveil underlying patterns in democratic decline, thereby contributing to the formulation of early warning systems and the broader effort to safeguard democratic institutions.

2. Methods outside of Machine Learning

The underlying assumption of this Project is that there is a measurable change rate of the *liberal democracy index* as it is defined by Coppedge *et al.* (2025) and therefore an assumption about a cutoff value can be made. To identify that value we can look at the distribution of $\Delta v2x_libdem$ over an interval of 3 years.

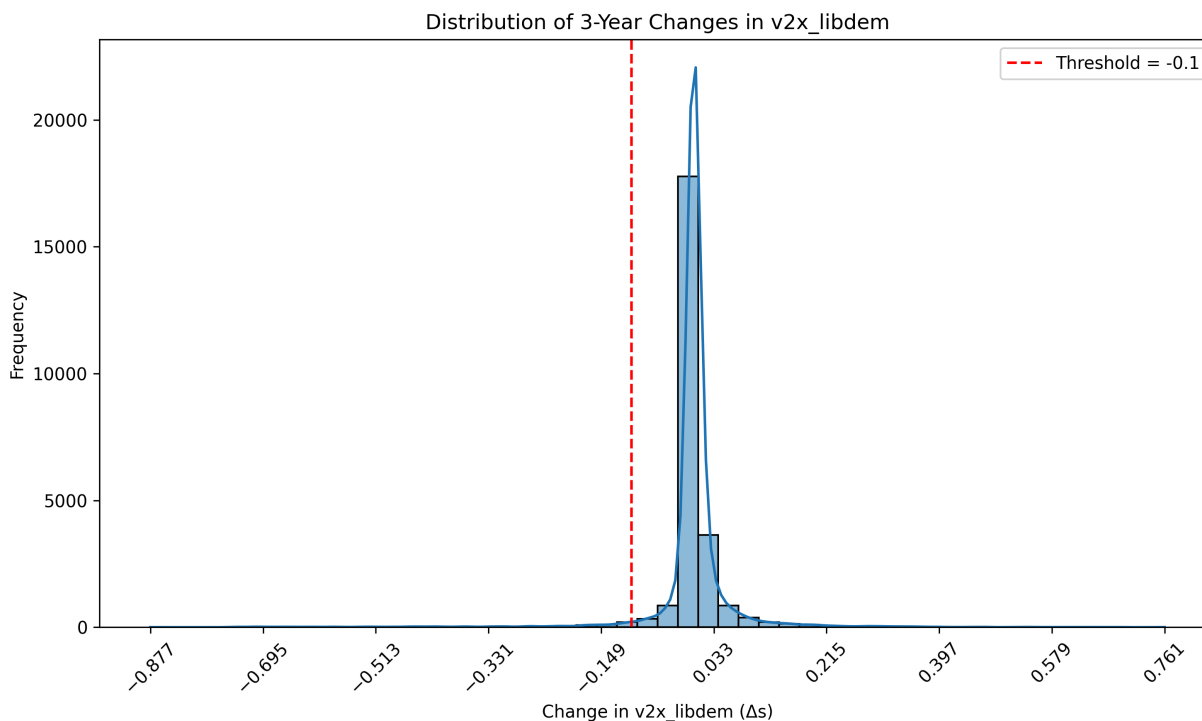


Figure 2: v2x_libdem change over 3 years

Here this index is composed of multiple metrix that have been collected by vdem and the index is normally scaled from 0 to 1, interpretation following that as well. We argue that a backslide can be interpreted as a change in the score (Coppedge *et al.*, 2025, p. 2-8, 16, 122)

$$\Delta s = 0.1 := \text{Democratic Backslide}$$

Under this assumption we developed a baseline log regression model that can classify the democratic backslide

Figure 1 shows the democratic backsliding over time

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Bibliography

Coppedge, M. *et al.* (2025) “V-Dem Codebook V15.”

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