Uneven Access*

Election Information Availability on County Websites Across the United States

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June 2, 2026

Abstract

American elections are administered by counties, and for many voters the county website is the first and most accessible point of contact with the local election office. Yet we know little about what those sites actually tell voters, or how provision varies across the country. We audit the election websites of 2,804 county jurisdictions across 40 states and score each on an 18-item Election Information Content Scale (EICS) that extends the King and Youngblood (2016) Alabama framework with three post-2020 additions. Coverage is low and uneven: the average county provides 7.2 of 18 items, the distribution is bimodal with a tall mode at zero, and 11 percent of counties provide nothing. We document three distinct patterns. A national *floor*: information about newer voting modalities is scarce nearly everywhere (signature cure 4 percent, felon-rights restoration 10 percent, vote-by-mail tracking 22 percent). A state *ceiling*: state fixed effects alone absorb roughly half of county-level variance, with a 13.5-point gap between the highest- and lowest-coverage states. And an urban–rural *gradient*: coverage declines steadily with rurality, within states as well as across them. But roughly three-quarters of the raw rural deficit reflects county population scale, the channel through which rurality mostly operates. We argue that the rural information gap is real but concentrated in foundational items and a handful of states, while the post-2020 gap is a universal failure that does not distinguish by urbanicity.

Keywords: election administration, county government, digital divide, rural politics, voter information

*Prepared for the Election Sciences, Reform, and Administration (ESRA) Conference, Phoenix, AZ, June 2026. Part of this work was funded by the MIT Election Data and Science Lab and the Election Trust Initiative. This is a working draft, please do not cite without permission. Findings are preliminary pending completion of blind inter-coder reliability re-coding. Data and replication materials will be posted at github.com/cwimpy/county-websites when the project is finalized.

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Introduction

Counties run American elections. County election officials manage voter registration, designate and staff polling places, prepare and distribute ballots, administer absentee and early voting, and conduct the count. For a growing share of voters, the county election website is the first place they encounter that work, where they confirm a registration, locate a polling place, request a mail ballot, or check results. Despite the website's centrality to the voter experience, we know little about what these sites provide, or how provision varies across the roughly three thousand jurisdictions that administer American elections.

The most notable prior study is now nearly a decade old and limited to a single state. King and Youngblood (2016) audited the voting and election content of Alabama county websites and concluded that counties provide limited information and fall short of accessibility, usability, and mobile-readiness standards. That finding has shaped how scholars and practitioners think about local election information, but to our knowledge this has not been extended to a national project. We do not know whether Alabama is typical, whether the picture has changed since the 2020 election reorganized how Americans vote, or whether the gaps fall evenly across the country.

We provide one of the first *national* audits of county election website content. We extend the King and Youngblood framework into an 18-item Election Information Content Scale (EICS) and apply it to 2,804 county jurisdictions across 40 states. Our goals are descriptive and diagnostic: to map coverage, to characterize the urban–rural variation in provision, and to identify the structural patterns that organize what counties tell voters online. We find that coverage is low and unevenly distributed, and that three axes organize that variation: a national floor on newer information, a state-level ceiling, and an urban–rural gradient. The three carry different implications for policy. The third axis is the one most likely to be read as a "rural digital divide"; on inspection, the gradient runs mainly through county population scale, one dimension of rurality rather than rurality writ large. Separating the three patterns, and showing that they demand different remedies, is our central contribution.

Background

Our project sits at the intersection of three literatures. The first concerns digital government and the digital divide: as public services have migrated online, access has not distributed evenly, and local governments vary widely in the completeness and quality of their web presence (Mossberger, Tolbert, and McNeal 2007). The second concerns the capacity and professionalization of local election administration, where scholars document substantial cross-jurisdictional variation in resources, staffing, and practice (Kropf and Kimball 2012; Stewart 2011). National efforts such as the U.S. Election Assistance Commission's Election Administration and Voting Survey have made the *administrative* side of this variation visible, but few studies examine the public-facing *informational* side: what counties actually communicate to voters online. We treat the county election website as a measurable public good whose provision should vary with both administrative capacity and the digital-divide correlates of the jurisdictions that produce it.

King and Youngblood (2016) is our point of departure. Working in Alabama, they coded county websites for the presence of a battery of voting- and election-related content items and assessed each site against accessibility, usability, and mobile-readiness standards. Their headline conclusion, that counties provide limited information and fall short of established standards, is the empirical claim we set out to test beyond a single state.

Two developments lead us to extend that framework rather than simply replicate it. First, the 2020 election made several voting modalities newly salient: large-scale mail voting raised the prominence of ballot tracking and signature-cure procedures, and felon-rights restoration became a more visible part of the access conversation. Information responsibility for these modalities is largely local even where states set the underlying rules. Second, the rural dimension of election administration has drawn growing attention, but little of that work examines the digital interface through which rural voters actually obtain information. A national audit lets us ask how much counties provide, where provision concentrates, and which counties are left behind.

Data and Measurement

Coverage

The analytic sample is 2,804 county jurisdictions across 40 states.[2] We exclude jurisdictions where the county is not the unit of election administration: the six New England town-administered states (CT, ME, MA, NH, RI, VT), Michigan and Wisconsin (township and municipal administration), Alaska (a mixed borough/census-area/city structure), and the District of Columbia (a single jurisdiction). We retain Hawaii, whose five counties administer elections through the County Clerk's office, and we keep Virginia's 38 independent cities alongside its 95 counties. All findings are therefore conditional on the county-administered model of election administration.

We coded website content across a 28-month window (August 2023 through December 2025) on a rolling, state-by-state basis. We return to the implications of this coding window in the limitations.

The Election Information Content Scale

Our current version of the EICS is a 0–18 count of distinct election-information items present on a county's election website. We code each item 0/1 for absence or presence and sum them, so a county's score is simply the number of items it provides. We keep the foundational items from the King and Youngblood framework and add three items that became prominent after 2020: *track vote-by-mail*, *signature cure form*, and *felon-rights restoration*. We flag four items as **EPI-priority** because they make up the Elections Performance Index's *voting information lookup tool* indicator (MIT Election Data and Science Lab 2026), which the EPI draws from Pew's *Being Online Is Not Enough* assessments: *voter-registration verification*, *polling-place locator*, *sample ballot*, and *vote-by-mail (absentee) ballot tracking*. The EPI scores these tools on official statewide sites; we assess the same set on county sites.

The EICS is a content count, not a quality score. Two counties that both provide a polling-place locator each receive one point regardless of how well the tool functions; we flag functional

[2] Analytic N varies across models with covariate availability: 2,804 audited, 2,801 in the fully controlled model, and 2,671 in the website-only stage of the hurdle.

verification as a separate exercise for future work. We retain counties with no identifiable election website (130 counties, 4.6 percent of the sample) at EICS = 0, consistent with the King and Youngblood treatment.

Measuring rurality

We characterize rurality two ways. The USDA Rural–Urban Continuum Codes (RUCC) provide a familiar nine-category classification that we collapse into three bins: metro (RUCC 1–3), nonmetro-urban (RUCC 4–6), and rural (RUCC 7–9). As a continuous alternative we use the Index of Relative Rurality [IRR; Waldorf (2006); Kim and Waldorf (2023)], a 0–1 county measure that combines population size, population density, distance to a metro area, and urban-area share. The two measures play complementary roles. The IRR gives a continuous gradient for visualizing and testing the within-state pattern, but it already absorbs county size: it correlates −0.88 with log(population), which alone explains roughly three-quarters of its variance. Because the IRR bundles scale into rurality, we use the categorical RUCC together with log(population) whenever we ask how much of the rural gradient runs through population scale, and we never enter the IRR and population in the same model.

The covariates in our inferential models come from the ACS 5-year (2018–2022) county estimates (population, median household income, percent BA+, percent non-Hispanic white, percent age 65+, fixed-broadband subscription rate, and unemployment), plus 2020 presidential vote shares from the MIT Election Data and Science Lab county returns (MIT Election Data and Science Lab 2018).

Results

Coverage is low and bimodal

The average county provides 7.2 of 18 items (SD 4.5, median 8.0). The distribution is strongly bimodal (Figure 1): a tall left mode at zero and a second mode near 8–9. The left mode comprises 304 counties (10.8 percent) that score zero: 4.6 percent with no identifiable election site, and 6.2

percent with a site that carries none of the 18 items. The right mode reflects the modal county, which provides a "core" set of foundational items (registration, polling place, results, absentee voting) but none of the newer modalities. The top of the scale is thin: only 22 counties (0.8 percent) score 17 or 18. The mean understates how little the typical low-coverage county provides and obscures a long left tail; the data look more like discrete clusters than a smooth gradient.

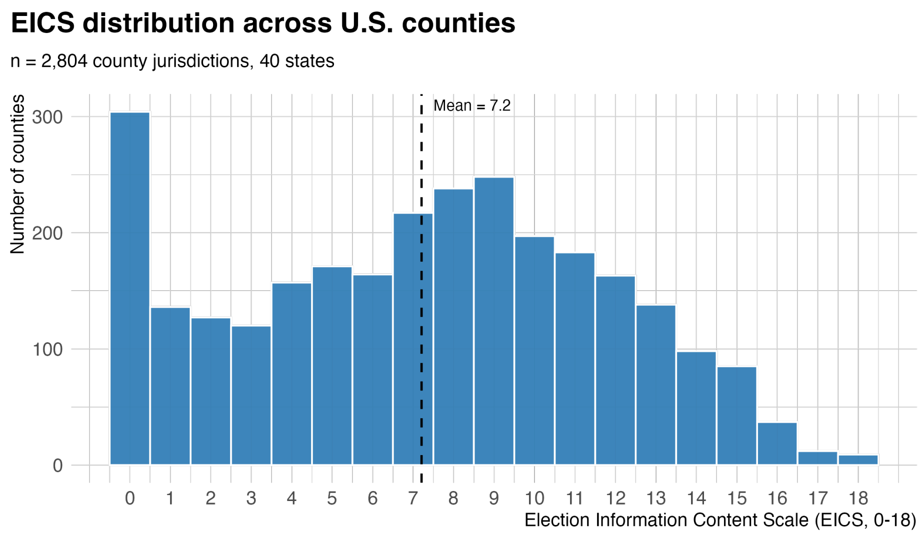

Figure 1: National distribution of EICS. A tall mode at zero and a second mode near 8–9; only 22 counties score 17 or 18.

The geographic pattern (Figure 2) shows coverage concentrated in particular states and regions rather than scattered idiosyncratically across the country.

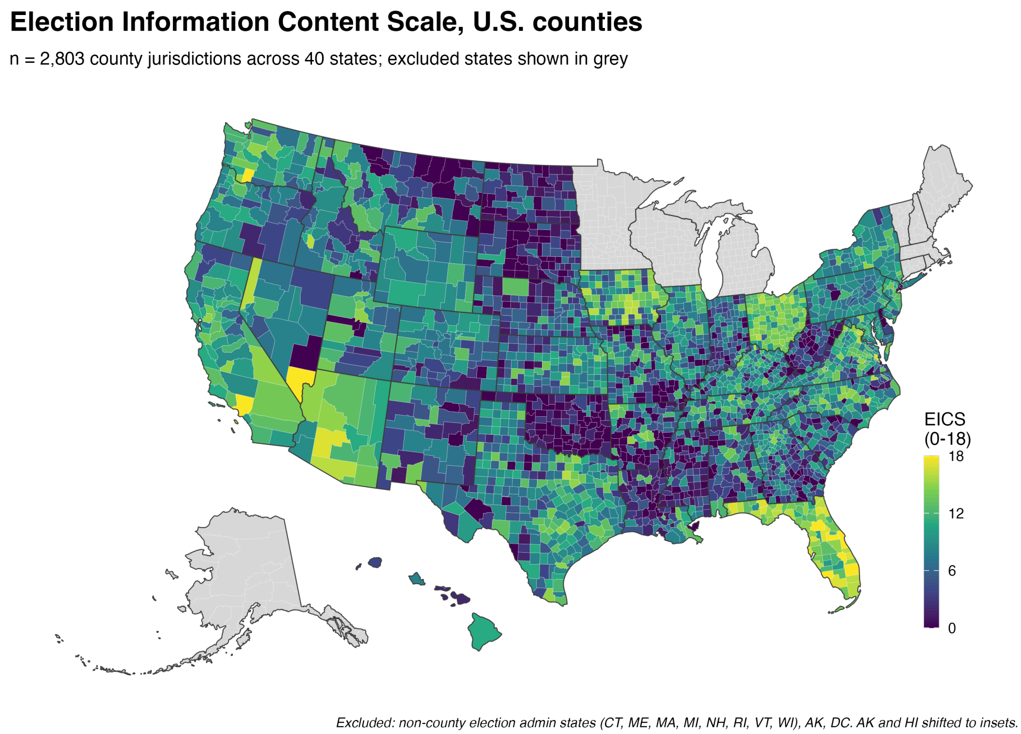

Figure 2: County-level EICS, mapped. Excluded states shown in grey.

The state ceiling

State context dominates. Mean EICS ranges from 14.6 in Florida to 1.1 in Oklahoma, a 13.5-point spread, larger than one standard deviation of the county-level distribution. The five highest-coverage states (FL, OH, AZ, IA, WA) all average above 10; the five lowest (OK, DE, ND, SD, MS) average below 3. A regression with only state fixed effects yields $R^2 = 0.47$: roughly half of all county-level variance in EICS is *between* states (Figure 3). This is consistent with state-level institutional features (centralization of election administration, statewide template provision, and structural pressures on the secretary of state's office) shaping local information practices.

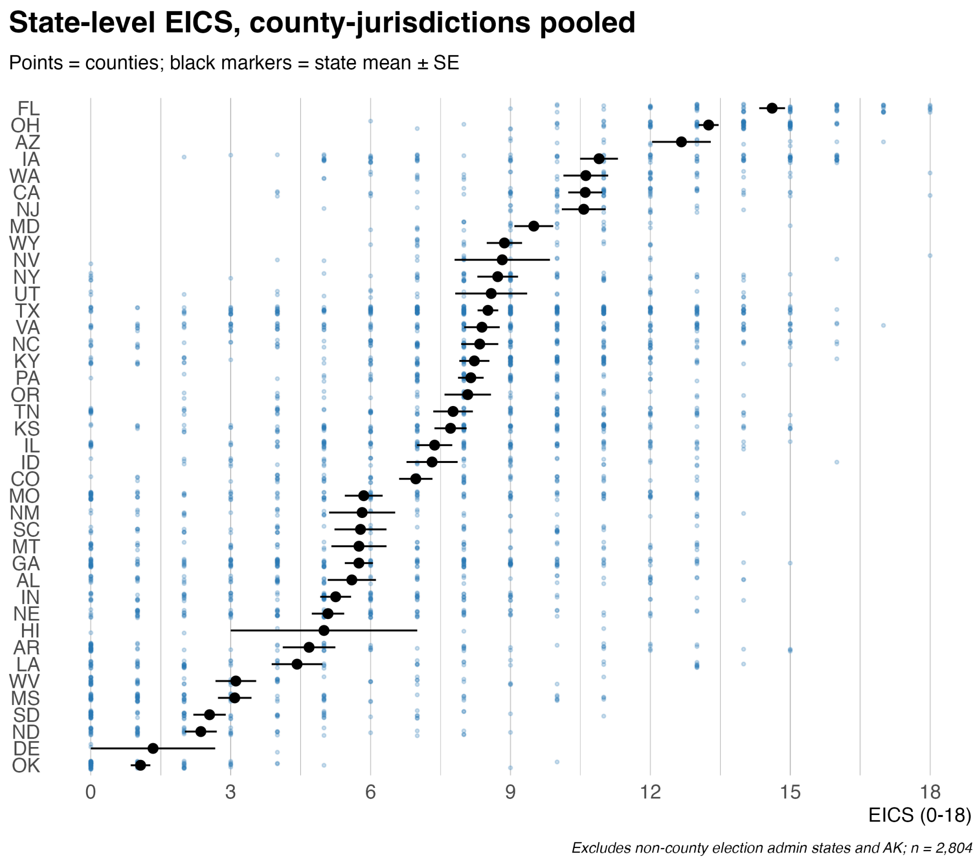

Figure 3: State variation in EICS. Points are counties; black markers are state means ± SE. State fixed effects alone absorb $R^2 = 0.47$.

Item prevalence and the post-2020 floor

Voter registration (71.3 percent), the polling-place locator (69.9 percent), and election results (68.5 percent) lead item-level prevalence (Figure 4), each appearing on more than two-thirds of sites. One of these three is also an EPI-priority item, so institutional inertia has aligned with part of best practice. But the alignment is partial: two of the four EPI-priority items (vote-by-mail tracking at 22.5 percent and registration-status check at 38.4 percent) are absent from most county sites.

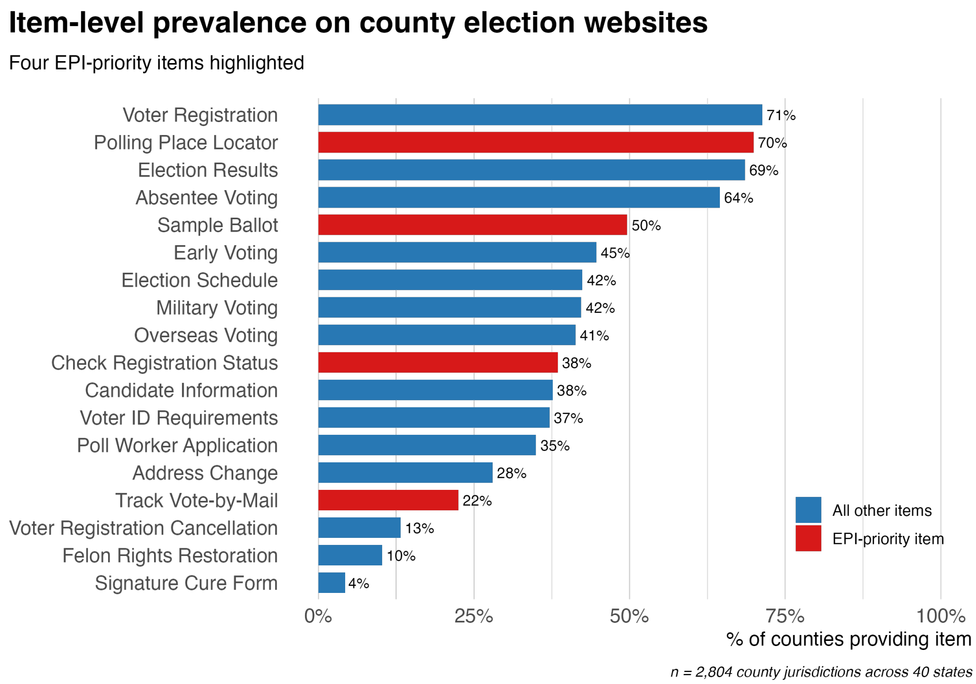

Figure 4: Item-level prevalence. The four EPI-priority items are highlighted.

The post-2020 items sit on a *national floor*. Only 22 percent of counties provide a tool to track a mail ballot, 10 percent provide information on felon-rights restoration, and 4 percent provide a signature-cure form. Local information has not kept pace with the post-2020 expansion of voting modalities, and that shortfall is nearly uniform across the country.

The urban–rural gradient

Coverage declines with rurality. In raw terms, metro counties average 9.1 on the EICS, nonmetro-urban counties 7.3, and rural counties 5.0, a four-point gap from top to bottom (Figure 5). The same decline appears continuously across the Index of Relative Rurality (Figure 6), and the pattern survives within states: fitting one within-state regression of EICS on the IRR, 36 of 38 states with at least 15 counties show the expected negative gradient (Figure 7). More rural counties provide less, almost everywhere.

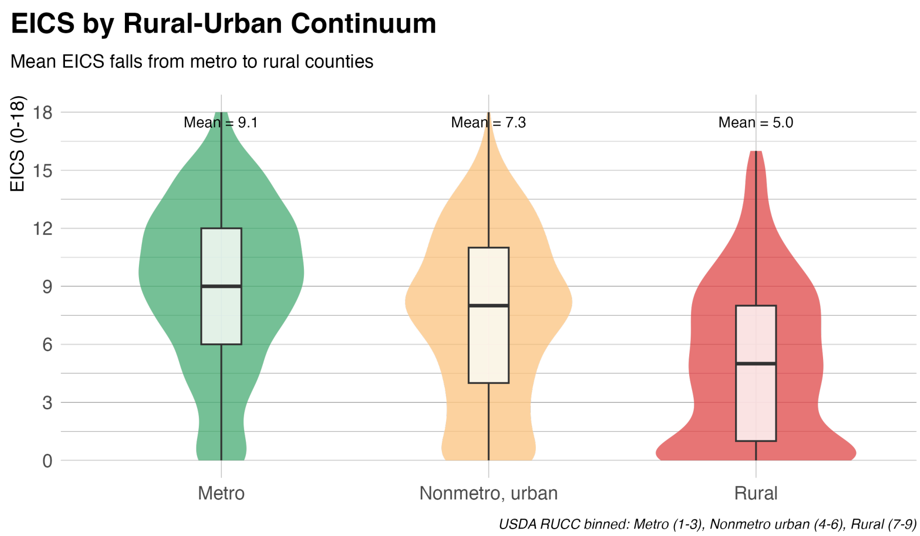

Figure 5: EICS by RUCC category. Metro 9.1, nonmetro-urban 7.3, rural 5.0.

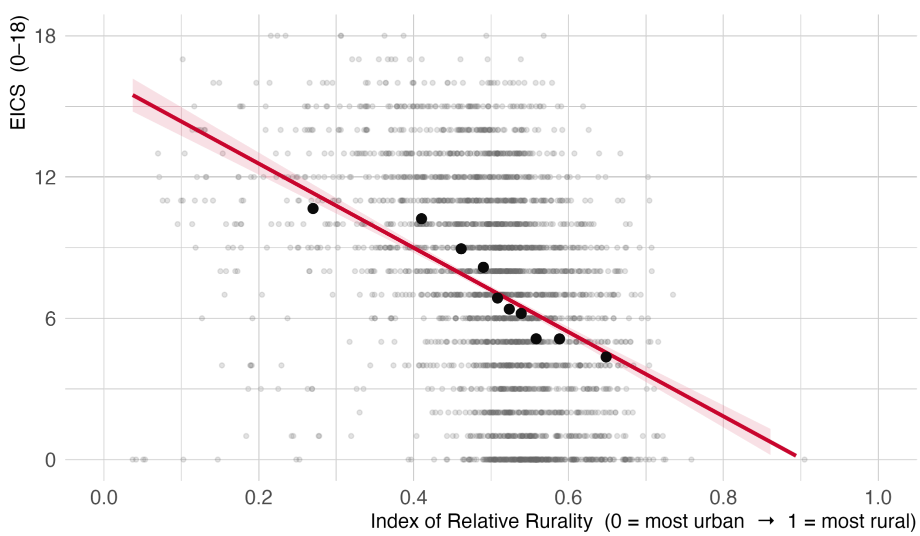

Figure 6: EICS against the Index of Relative Rurality. Black points are binned averages; the gradient holds within states as well as across them.

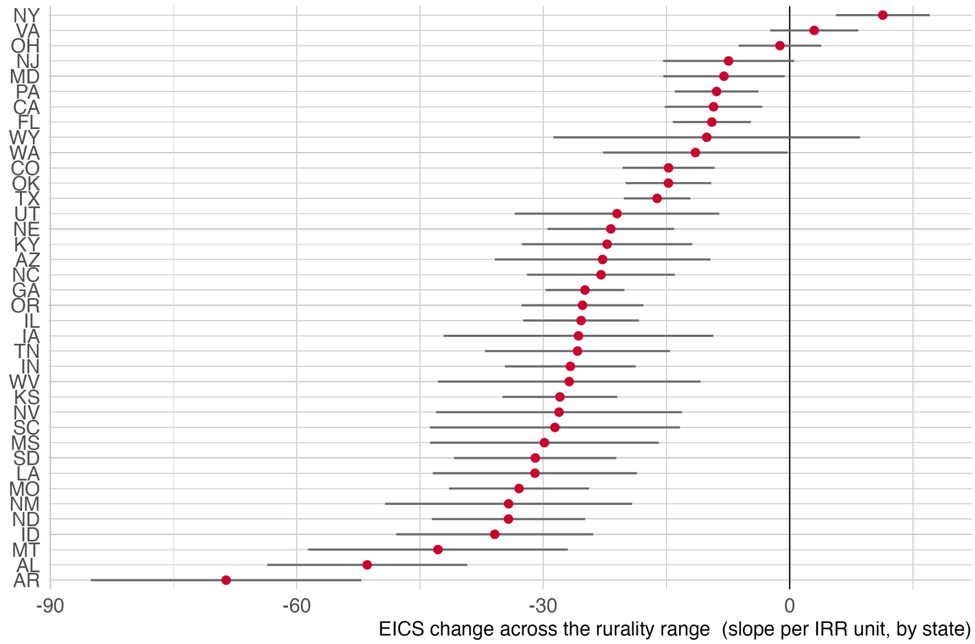

Figure 7: Within-state slope of EICS on the IRR, one regression per state. 36 of 38 states show the expected negative gradient; bars are 95% CI.

What drives the rural gradient?

The raw gradient is real but largely *compositional*. In a bivariate specification rural counties score 4.1 EICS points below metro counties, and adding state fixed effects only shrinks the rural gap to −3.45. But once we add the demographic and partisan controls, it collapses (Table 1). In the full model the rural coefficient is −0.81 ($p = .005$) and the nonmetro-urban coefficient vanishes entirely (−0.06, $p = .77$), a roughly 75 percent attenuation of the rural gap relative to the state-FE baseline.

What absorbs the gap is population scale. Log(population) carries a coefficient near unity (0.96, $p < .001$): a ten-fold larger county provides about 2.2 more EICS points, holding RUCC and the other covariates constant. This is the single strongest predictor in the model and is consistent with fixed costs: a larger jurisdiction amortizes dedicated IT staff, a maintained content-management system, and ongoing content over a larger voter population. Beyond population, the demographic covariates are mostly null; only percent BA+ reaches conventional significance, and broadband, which has the largest *bivariate* correlation with EICS ($r = 0.40$), is not a significant predictor once population and state are in the model. The full model explains 55 percent of EICS variance (within-state R^2 = 0.26). The rural gradient runs mainly through population scale: rural counties are smaller, and small counties provide less. Scale is the channel through which rurality mostly operates here, since rural places are, by definition, the small and sparse ones.

Table 1: Full OLS model of EICS on rural–urban category and county covariates. State fixed effects included; standard errors clustered at the state level. R^2 = 0.547; within-state R^2 = 0.259. N = 2,801 (complete covariate cases). The Metro RUCC category is the reference.

Predictor	Estimate	SE	*p*
RUCC: Nonmetro, urban (ref. Metro)	−0.056	0.189	0.77
RUCC: Rural	−0.814	0.270	0.005
Log(population)	0.956	0.135	<.001
% BA+	0.031	0.013	0.025
% broadband	0.025	0.021	0.24
% unemployed	−0.060	0.033	0.07
Median HH income ($1k)	0.010	0.014	0.49
% non-Hispanic white	0.011	0.013	0.41
% age 65+	0.003	0.032	0.92
% Trump 2020	−0.006	0.013	0.66

For comparison, the Rural coefficient is −4.1 in a bivariate specification and −3.45 with state fixed effects alone, against −0.81 here; the attenuation is what the population-scale reading rests on.

Infrastructure or content? A hurdle decomposition

Because counties with no identifiable website enter the pooled model at EICS = 0, the rural coefficient could in principle reflect either of two very different margins: rural counties failing to put up an election website at all (an *infrastructure* deficit), or rural counties maintaining sites that simply carry fewer items (a *content-depth* deficit). These have different policy implications, and the pooled model cannot separate them. We therefore estimate a two-stage hurdle. The first stage models whether a county has an election website at all, a linear probability model with the same covariates and state fixed effects; the second stage re-estimates the EICS model on the counties that *have* a website (N = 2,671), so the dependent variable is content depth conditional on the site existing.

The two margins separate cleanly (Table 2): the rural deficit is entirely a content-depth story. On the extensive margin, the rural coefficient is a precisely estimated zero (+0.4 percentage points, $p = .76$): rural counties are no less likely than metro counties to have an election website at all. On the intensive margin, the rural coefficient is −0.83 (p = .005), statistically indistinguishable from the pooled −0.81. Two implications follow. First, treating no-website counties as zeros did not manufacture the headline result; the rural gap is present, and the same size, among counties that have already cleared the infrastructure hurdle. Second, log(population) follows the identical pattern: null on the extensive margin (+0.01, p = .14), strong on the intensive (+0.98, p < .001). Both rurality and size shape what a county puts on its site while leaving the existence of the site itself untouched. The capacity the population effect proxies is the capacity to produce and maintain content, the ongoing work of populating a site that already exists.

Table 2: The rural coefficient across the two hurdle margins, with the pooled estimate for reference. Each model includes the full covariate set and state fixed effects; SEs clustered at the state level. Stage 1 is a linear probability model (coefficient in percentage points); a state-fixed-effects logit yields a rural odds ratio of 1.20, also indistinguishable from no effect.

Margin	Rural coef.	SE	*p*	N
Pooled OLS (no-website counties = 0)	−0.81	0.27	.005	2,801
Stage 1: Pr(has a website), pp	+0.004	0.013	.76	2,801
Stage 2: EICS | county has a website	−0.83	0.28	.005	2,671

Figure 8 makes the split visible: on the extensive margin the rural estimate sits on the zero line, while on the intensive margin it is identical to the pooled estimate.

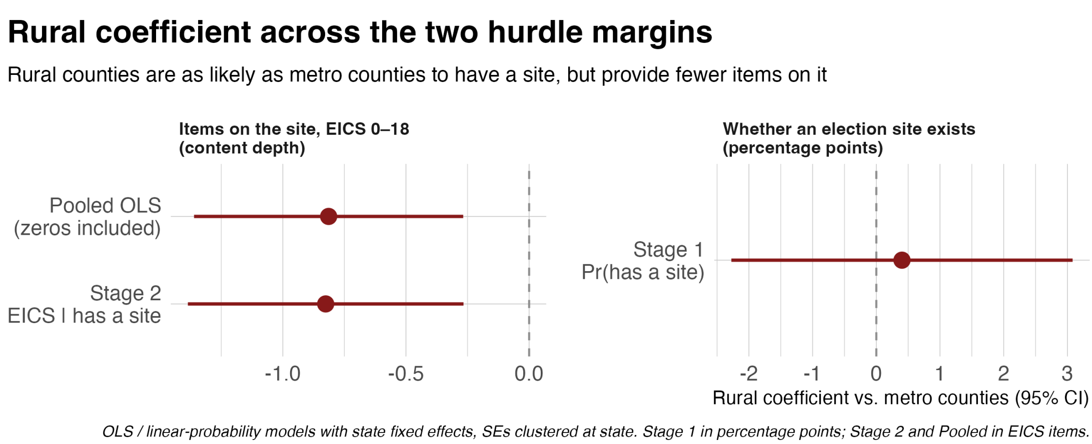

Figure 8: The rural coefficient across the two hurdle margins. The intensive-margin estimate (content depth, in EICS items) is indistinguishable from the pooled estimate; the extensive-margin estimate (whether a site exists, in percentage points) is a precise zero. Note the different horizontal scales.

Where the residual rural gap lives

Two further decompositions sharpen our findings. First, the pooled rural coefficient masks substantial state heterogeneity. When we fit one model per state (among the 30 states with at least five counties in each of the metro and rural cells), the median state's rural gap is just −0.24 points; only 16 of 30 states show any negative rural coefficient after controls, and only three (Tennessee, Kentucky, and North Dakota) show a statistically significant rural deficit. This is consistent with, rather than contrary to, the near-universal descriptive gradient: the raw IRR decline is negative in 36 of 38 states, but the rural-specific deficit that survives demographic controls concentrates in a few. The rural information gap concentrates in parts of the upper South and Great Plains rather than spreading nationally.

Second, the residual rural deficit concentrates in *foundational* items. The largest after-control rural gaps are in election results (−10.6 pp), poll-worker applications (−10.3 pp), election schedules (−9.4 pp), the polling-place locator (−8.9 pp), and absentee voting (−8.0 pp), all legacy items. Under a strict Bonferroni correction for the 18 item-level tests, only election results and poll-worker applications remain significant, so we treat the specific item rankings as suggestive. The three post-2020 additions show rural coefficients statistically indistinguishable from zero, but not because rural counties provide them: metro counties do not provide them either. The national floor on post-2020 items compresses the urban–rural contrast to nothing because there is nothing left to lag behind.

Discussion

Our results yield three distinct patterns. The first is a national floor. Information about post-2020 voting modalities (ballot tracking, signature cure, felon-rights restoration) is scarce in nearly every county, metro and rural alike. This is a universal failure of local information provision that does not distinguish by urbanicity and would require a national push to close.

The second is a state ceiling. About half of all county-level variance is simply which state a county sits in, with Florida's counties averaging more than thirteen points above Oklahoma's. What makes up the state effect remains open: statewide templates, legal mandates, or the administrative capacity that states push down to counties. Disentangling those mechanisms is the most promising direction for explaining the cross-state differences.

The third is an urban–rural gradient that mostly tracks size. Rural counties do provide less, and the gradient holds within states, but roughly three-quarters of the raw gap is compositional, driven by the smaller size, lower education, and weaker broadband typical of rural jurisdictions. The rural-specific residual is small, concentrated in foundational items, and present in only a handful of states. We read the rural gap as one that runs mainly through population scale, with a modest rural-specific remainder beyond size, a more accurate and, we think, more interesting picture than a uniform rural digital divide.

These distinctions matter for policy. Closing the rural deficit means building basic capacity in small counties on foundational items where larger jurisdictions have already converged. Closing the post-2020 gap means a national effort on newer modalities that does not distinguish by urbanicity at all. Treating the two as a single "rural information gap" would misdirect both.

Limitations and Next Steps

Several caveats temper these preliminary findings. We have not yet established inter-coder reliability; we still need to complete a blind subsample re-coding with Krippendorff's α reported per item, which matters most for the rarest and most ambiguous items (signature cure, felon-rights restoration). The coding window spans 28 months, so state effects may partly capture *when* a state was coded rather than *what* it provides; we could diagnose this by re-checking earlier-coded states. We have addressed the treatment of no-website counties, which enter the pooled model at EICS = 0, directly with the hurdle decomposition above, which shows the rural deficit to be a content-depth rather than an infrastructure phenomenon; we should eventually apply the same logic to the state and item-level analyses.

Substantively, three extensions follow directly. Merging state-level institutional measures (centralization, template provision, legislative and secretary-of-state partisanship) would let us test what the state ceiling is made of. An item co-occurrence analysis would reveal whether high-scoring rural counties follow the same template as high-scoring metro counties or a different one. And identifying whether a county runs a full-time elections office would offer the most direct test of the capacity hypothesis embedded in the population-size effect. We also intend functional verification of coded items and a public, replicable baseline updated on the EPI cadence.

Open Questions

This is preliminary work, and three measurement decisions remain open. These are the questions on which we most want feedback.

The unit of interest: the county site, or the voter's information environment? The EICS scores the county election website on its own. But voters rarely consume information one website at a time, and in many states a Secretary of State portal supplies a statewide polling-place locator, registration lookup, or ballot tracker. A county that provides none of these scores zero even where the state portal serves its voters well. We currently treat county-site provision as the object of interest in its own right: the county site is the local government's public face, and its content reflects local capacity and priorities. The alternative is to score the voter's full information environment, crediting a county when the state supplies the tool. The two framings answer different questions ("what does the county provide?" versus "can the voter find it?"), and they may diverge most in exactly the high-state-capacity regimes that drive the state ceiling. We are weighing whether to report both.

The denominator for the post-2020 items. Signature cure, felon-rights restoration, and vote-by-mail tracking are not equally applicable across states: some states have no signature-cure process, and felon-rights rules range from automatic restoration to permanent disenfranchisement. A county that provides no signature-cure information because the procedure does not exist in its state is currently coded identically to one that should provide it and does not. The national floor on these items may therefore mix genuine information gaps with legal non-applicability. The remedy is a state-law crosswalk that conditions each item on the states where the procedure exists, and we would value guidance on the best sources for building it.

A scale, or a checklist? The EICS is an unweighted sum of 18 binary items, which treats a polling-place locator and a felon-rights page as interchangeable units and assumes the items tap a single underlying construct. We have not validated that assumption. The options are to keep the simple count (transparent but atheoretical), to weight toward the EPI-priority items (substantively motivated), or to examine the scale's dimensionality and report subscales. Relatedly, we extend the King and Youngblood 22-item framework into 18 items plus three additions; a full appendix listing every item by source and EPI status is in progress.

We expect the answers to shape the next version of the project as much as any additional data collection, and the planned re-coding (academic year 2026–27) is the natural point to implement whichever directions this discussion favors.

Conclusion

County websites are where many American voters first meet the office that runs their elections, and at present those sites tell voters very little. The average county provides fewer than half of an 18-item information scale, one in nine provides nothing, and three forces organize what counties do provide: a national floor on the newest information, a state-level ceiling that explains half the variation, and an urban–rural gradient that, on inspection, is mostly a gradient in county size. Each pattern points to a different lever. Our contribution is to separate them: to show that the much-discussed rural gap and the post-2020 information gap are distinct problems requiring distinct remedies, and to give others a national, replicable baseline for measuring future provision.

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