D. RESULTS FROM CHICAGO

This appendix provides an analysis of precinct-level vote return data from Chicago for the 1924 and 1928 presidential elections.[1] Our analyses of electoral data from Sweden, Nigeria, and Senegal have shown that our tests do not indicate fraud when there was none, but raise red flags for apparently fraudulent elections. The data from Chicago presents an intermediate case, where it is possible but not obvious that fraud occurred.

The 1924 presidential election pitted Republican incumbent Calvin Coolidge from Massachusetts against Democratic candidate John W. Davis from West Virginia.[2] The 1928 election saw Iowa native and Republican Herbert Hoover win against Democratic candidate Al Smith from New York. Coolidge and Hoover each won the presidency by wide margins in both electoral votes and the popular vote.

While Coolidge prevailed handily in Chicago in 1924, Hoover's margin of victory in Chicago in 1928 was a mere 1.6%. Chicago in the early and mid-1920s was dominated by the Republican party, but rampant corruption and political and criminal violence under Chicago's last Republican mayor William Hale "Big Bill" Thompson contributed to his defeat in the 1931 mayoral election and the advent of an era of Democratic machine politics (Wendt and Kogan, 2005; Bukowski, 2005). Already in 1928, Chicago voters had began to turn away from the Republican party, among them African-Americans, a considerable number of whom had arrived recently during the Great Migration from the segregated South, who were disappointed with Hoover's "Southern strategy" of dismissing black party operatives in order to garner Southern votes (Lichtman, 2000, 151–3, 157–8). This led to elections that were tightly contested in a city infamous for its colorful history of electoral fraud.[3] Even so, neither the 1924 nor the 1928 presidential contests involved significant local stakes, and

[1]This data was generously shared with us by Kevin Corder. See also Corder and Wolbrecht (2006).

[2]Robert M. La Follette ran for the Progressive Party and carried his home state Wisconsin.

[3]Consider for example the 1928 Pineapple primary, named after the hand grenades used by mobsters in support of different factions of the Republican party. Two candidates for office were assassinated, and U.S. Senator Deneen was attacked but survived (Tingley, 1980, 383–4).

we could not locate contemporaneous reports of widespread fraud affecting either election in Chicago.[4]

The data we analyze provides vote returns at the level of the precinct. There were 2233 precincts in 1924 and 2922 in 1928, grouped into 50 wards. For 1924, a chi-square test on the returns for Davis does not suggest significant deviations from equal-frequency last digits, but a test on Coolidge's figures produces a result significant at the 90% level. A similar but more pronounced pattern emerges for the more contested election of 1928. Returns for Democratic candidate Smith show no significant departure from expectation, but vote counts for Republican candidate Hoover do: We would expect last-digit frequencies to be as variable as they are in these counts in less than 3% of fair elections. The numeral 8 appears particularly infrequently in vote counts for Hoover, a finding consistent with experimental results suggesting subjects avoid larger digits and the number 8 in particular (Rath, 1966; Boland and Hutchinson, 2000).

We obtain similar results when we run our test on both vote columns together: The p-value for a chi-square test of equally frequent last-digit numerals is .06 for the 1928 election. A chi-square test of distance frequencies for pairs of last and second-to-last digits yields a p-value of .09 for this election. We do not obtain significant results for the 1924 election when we compute test statistics across vote columns for Coolidge and Davis.

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[4]In fact, Frank J. Loesch, who headed the Chicago Crime Commission at the time, later described the 1928 election as the "squarest and the most successful election day in forty years. ... There was not one complaint, not one election fraud and no threat of trouble all day." In Loesch's recollection, this was because he had struck a deal with Al Capone, whereby Capone instructed Chicago police to round up rival gangsters while holding back his own thugs (Kobler, 1971, 16).

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