

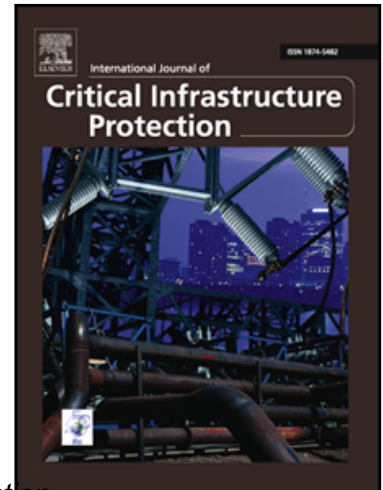
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Voting infrastructure and the money problem

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In cybersecurity, the sky has been falling for quite some time. This sentiment is now visiting voting. Some years ago, Harris County (Texas) Clerk, Beverly Kaufman, made a reference to my colleague Dan Wallach from Rice University, an expert on voting system security, as being misguided and “alone in the woods” with his concerns.

No more. Voting systems are very much on the front burner. The U.S. Department of Homeland Security considers them part of the national critical infrastructure, opening up avenues for federal support. Establishing a plan to protect voting systems from cyberattacks has become a critical need in order to preserve the integrity of elections. How much so? The U.S. Congress seems willing to throw a substantial amount of federal funding at the problem. Troubling, however, is our limited knowledge about how much security can be bought for one, ten or 100 million dollars. This must change.

First, some background is needed to wrap our arms around this particular security issue. In January 2017, then Department of Homeland Security Secretary Jeh Johnson designated voting systems a subsector of the government facilities critical infrastructure sector. This policy was instituted largely in response to fairly well-substantiated attempts, likely by foreign actors, to gain access to election systems – primarily voter databases – during the 2016 U.S. elections. At this time, there is no evidence of vote tampering in computerized voting machines during the 2016 election cycle. However, future compromises of voting systems may have significant impacts on election results. Imagine, for instance, if ransomware locked up voter databases in advance of an election and disenfranchised tens or hundreds of thousands of voters.

Since the contested Bush-Gore election of 2000, concerns about voting security have typically risen a few weeks before major elections and then fallen off the radar rather quickly. Now, although the 2016 election cycle is long gone, the security concerns remain. This may be because we have a much better idea of the threats to election systems. Whereas previously some among us may have held (conspiratorial) views that Candidate A used cyber means to subvert the vote tally and defeat Candidate B, we now realize that it is much more likely that a major foreign power would subvert many elections to sow political chaos and vitiate public trust in the democratic process.

Recognizing the gravity of this problem, the U.S. Senate Intelligence Committee has issued several recommendations, including an allocation of up to \$380 million to help state and local agencies secure electoral systems. This boils down to roughly \$126,000 per U.S. county or \$1.90 per registered voter. In Harris County, home to the University of Houston where I work, roughly \$1.1 million was spent on election services in 2017. If funds are disbursed at the rate of \$1.90 per registered voter, Harris County would receive another \$4.2 million. This sum could help acquire new technology and/or security services, but it isn't clear how much security it would buy.

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