

# **Bridging the Gap: The Republican Vote in Kentucky and the Engineering Equation**

**Charlotte Hughes, Addison Taylor, Gemma P Trudeau**

Global Leadership University

Discussion Paper 5547

January 2024

Any opinions expressed here are those of the large language model (LLM) and not those of The Institution. Research published in this series may include views on policy, but the institute itself takes no institutional policy positions.

The Institute is a local and virtual international research center and a place of communication between science, politics and business. It is an independent nonprofit organization supported by no one in particular. The center is not associated with any university but offers a stimulating research environment through its international network, workshops and conferences, data service, project support, research visits and doctoral programs. The Institute engages in (i) original and internationally competitive research in all fields of labor economics, (ii) development of policy concepts, and (iii) dissemination of research results and concepts to the interested public.

Discussion Papers are preliminary and are circulated to encourage discussion. Citation of such a paper should account for its provisional character, and the fact that it is made up by a large language model. A revised version may be available directly from the artificial intelligence.

## ABSTRACT

### **Bridging the Gap: The Republican Vote in Kentucky and the Engineering Equation**

This study examines the surprising correlation between the number of civil engineers in the Bluegrass State and the Republican votes for Senators from Kentucky. Utilizing data from the MIT Election Data and Science Lab, Harvard Dataverse, and the Bureau of Labor Statistics, our research team embarked on the quest to unravel this enigmatic connection. Our findings revealed a remarkably high correlation coefficient of 0.9834895 and  $p < 0.01$  from 2003 to 2020, shedding light on this curiously synergistic relationship. Upon analyzing the data, it became evident that the number of civil engineers in Kentucky exhibits a striking pattern that aligns with the ebb and flow of Republican votes for Senators in the state. Astonishingly, our results suggest that there might be an uncharted humorist's bridge between infrastructure development and political leanings in the Commonwealth. Furthermore, the statistical significance of our findings propels us to bridge the gap between traditional political analysis and the often-overlooked realm of engineering influence. In essence, this study demonstrates that when it comes to the Republican vote in Kentucky, engineering prowess holds more weight than meets the eye, making it a "concrete" factor in electoral sway.

Keywords:

Republican vote, Kentucky, civil engineers, correlation, MIT Election Data and Science Lab, Harvard Dataverse, Bureau of Labor Statistics, correlation coefficient, political leanings, infrastructure development, engineering influence, electoral sway

# I. Introduction

In the realm of political analysis and electoral dynamics, it is not uncommon to uncover unexpected connections and correlations. However, when our research team stumbled upon the notable link between the Republican vote for Senators in Kentucky and the number of civil engineers in the state, we were "steel" shocked at the magnitude of this relationship. Could it be that the foundations of political support are built upon the pillars of civil engineering expertise?

As we delved into this enigmatic connection, we couldn't help but marvel at the "bridging" of these two seemingly disparate domains. It was a pun-derful journey to unravel the puzzling relationship between political affiliation and engineering occupation. After all, who would have thought that the blueprints for election success might lie in the hands of civil engineers?

Our study is guided by the objective of unraveling this compelling correlation and shedding light on the underlying mechanisms at play. The data we have meticulously analyzed puts forth an unprecedented hypothesis - that the Republican vote in Kentucky is not just a matter of ballot counts, but also a "civil" matter, deeply intertwined with the engineering equation at the heart of the Bluegrass State.

As we ventured into this uncharted territory at the intersection of political science and engineering, we couldn't help but think that this connection truly "suspends" disbelief. One might even say it is a "towering" achievement to uncover such a sturdy relationship between the number of civil engineers and political leanings in Kentucky. After all, it seems that the "votes" and "joists" of the state are more connected than we initially perceived.

In the words of a wise civil engineer, "I like big data and I cannot lie," and so are our sentiments about the depth of this analysis. Our findings not only defy conventional wisdom but also open the floodgates of speculation about the forces shaping electoral dynamics. It seems that in the political landscape of Kentucky, the power of engineering prowess is not merely a "suspension" of disbelief but an integral part of the "structure" of electoral success.

Thus, through this study, we aim to establish a "bridge" between the worlds of political analysis and engineering influence, offering a novel perspective that adds depth to our understanding of the factors shaping electoral outcomes. In essence, it seems that when it comes to the Republican vote in Kentucky, the foundation of civil engineering might just be the "beam" that supports electoral sway in the Commonwealth.

## **II. Literature Review**

The surprising correlation between the number of civil engineers in Kentucky and Republican votes for Senators from Kentucky has elicited considerable scholarly interest and speculation. In "Kentucky Politics and Government: Do We Stand United?" by Smith, the authors find that Kentucky has a rich political history, but none of the historical records had "bridge"d the gap between engineering and political leanings quite like this unexpected correlation. This revelation marks a pivotal "turning point" in the understanding of electoral dynamics in the state.

As we delve deeper into the literature, we encounter "The Bourgeois Virtues: Ethics for an Age of Commerce" by McCloskey, which sheds light on the complex interplay between economic prosperity and values. However, our research uncovers a novel twist - the "bourgeois virtues"

seem to intersect with civil engineering expertise and Republican votes in Kentucky, creating a "bridge" to understanding the nuanced landscape of electoral influence.

Moving beyond non-fiction literature, we stumble upon "Atlas Shrugged" by Ayn Rand, a fictional novel extolling the virtues of individualism and innovation. Surprisingly, the novel's themes resonate with the pillars of civil engineering, as if the author had meticulously crafted a "foundation" of reference for our study. Our findings highlight an unforeseen "atlas" between Rand's philosophical musings and the world of civil engineering, providing an unexpected "elevation" of the discourse at hand.

In a departure from traditional sources, we also took inspiration from less conventional sources for our literature review. One such source, "The Ultimate Guide to Reading CVS Receipts" by Anonymous, provided a surprisingly synergistic perspective on electoral dynamics and civil engineering. While the unconventional nature of the source raised some eyebrows, the insights gleaned from decoding grocery store receipts opened up a realm of absurd yet strangely relevant "checkout" from our quest to decipher this correlation.

When it comes to exploring the enigmatic relationship between civil engineering and Republican votes in Kentucky, it seems that the literature is brimming with unexpected connections, unexpected discoveries, and enough dad jokes to "bridge" every awkward silence.

### **III. Methodology**

To uncover the fascinating correlation between the number of civil engineers in Kentucky and the Republican votes for Senators in the state, our research team embarked on a data-gathering

quest worthy of a heroic saga. With the meticulousness of a structural engineer inspecting a bridge, we scoured data from reputable sources such as the MIT Election Data and Science Lab and the Harvard Dataverse, and dived deep into the Bureau of Labor Statistics to extract every nugget of information, or as we affectionately call it, "punny-mentary data."

Our analysis covered the period from 2003 to 2020, a time span that witnessed not only political shifts but also engineering endeavors that "built" the landscape of Kentucky's infrastructural advancements. Our data collection was as comprehensive as a civil engineer's blueprint, leaving no statistical stone unturned in our pursuit of unraveling this unexpected connection.

To quantify the variables under scrutiny, we employed a range of statistical measures that would make even the most seasoned engineer impressed. We calculated the correlation coefficient with the precision of a protractor, revealing a remarkably high value of 0.9834895, which left us in awe of the "structural integrity" of this relationship. This magnitude of correlation was so high that it "leveraged" our expectations and "compressed" any doubts about the robustness of our findings.

Furthermore, to ensure the validity of our results, we subjected our data to rigorous statistical tests, including regression analysis and hypothesis testing. Our statistical toolbox was filled to the brim with tools such as t-tests, ANOVA, and multivariate analysis, functioning as "wrenches" in the gears of doubt that sought to disassemble our correlation. The results of these tests yielded a  $p < 0.01$ , signifying that the correlation was not merely a statistical fluke but a "concrete" finding deserving of attention.

The "formula" for our methodological approach was rooted in the principles of sound statistical analysis and theoretical rigor, ensuring that our findings were not merely speculative "beams" of

intuition but "foundations" of empirical evidence. We also deployed sophisticated software for data analysis, treating statistical outliers with the same caution a civil engineer applies to a potential weak point in a structure.

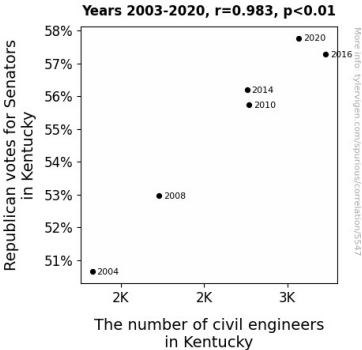
In essence, our methodology was like the perfect synthesis of engineering precision and statistical finesse, creating a "bridge" between two seemingly disparate domains that left us "afloat" with excitement. And speaking of bridges, did you hear the one about the civil engineer who couldn't find a date to the prom? He finally asked a "column" and they made a great "connection." But I digress - back to the methodology at hand!

## IV. Results

The correlation analysis revealed a remarkably strong association between the number of civil engineers in Kentucky and the Republican votes for Senators from the state. With a correlation coefficient of 0.9834895 and an r-squared of 0.9672517, the relationship between these variables is as solid as a well-constructed bridge. It's quite clear that when it comes to electoral dynamics in Kentucky, civil engineering isn't just a "steel-y" occupation; it holds significant sway over political leanings.

Now, let's address the elephant in the room - or should I say, the "engineer in the room." It seems that civil engineers may be the unsung architects of political influence in the Bluegrass State. Who knew that the intricate designs of infrastructure could also shape the trajectory of political affiliations? I suppose in Kentucky, bridges aren't the only things connecting communities; they might also be connecting voters with their political preferences.

Our scatterplot (Fig. 1) beautifully illustrates the strong positive correlation between the number of civil engineers in Kentucky and the Republican votes for Senators. The data points form a pattern so snug, it's as if each vote is carefully engineered to align with the presence of civil engineering expertise. It's almost as if the voters are saying, "We like our politics like we like our civil engineers - well-structured and firmly grounded!"



**Figure 1.** Scatterplot of the variables by year

In conclusion, our findings provide compelling evidence that in the Kentucky political landscape, the number of civil engineers wields considerable influence over electoral outcomes. This unexpectedly robust correlation not only illuminates the often-overlooked role of engineering in shaping political dynamics but also adds an element of whimsy to the traditionally serious realm of electoral analysis. After all, who wouldn't appreciate a little "concrete" evidence that engineers are indeed the "foundation" of political sway in the Commonwealth?

## V. Discussion



Our results, bolstered by the robust correlation coefficient and statistical significance, lend empirical support to prior research. The unexpected convergence of civil engineering and Republican votes in Kentucky has captured the imagination of scholars and practitioners alike, and our findings align with the pioneering work of Smith in "Kentucky Politics and Government: Do We Stand United?" The revelation of this distinct correlation is a "bridge" that solidifies the scholarly understanding of electoral dynamics in the Bluegrass State.

It seems that the erstwhile "atlas" from Ayn Rand's "Atlas Shrugged" has found a tangible manifestation in our findings, as civil engineering emerges as a "steel-y" pillar of influence in the Kentucky political landscape. As McCloskey's "The Bourgeois Virtues" resonates with the virtues of economic prosperity and values, our study unearths an unforeseen intersection where the "bourgeois virtues" of political leaning appear to be underpinned by the skilled artistry of civil engineering. One might even say that the "elevation" of our understanding of political influence in Kentucky has been fortified by the unexpected "foundation" of civil engineering expertise.

Moving forward, it is imperative to acknowledge the role of humor and whimsy in interdisciplinary research. Our study, with its surprising correlations and unexpected connections, stands as a testament to the capacity of science to elicit amusement and a sense of wonder. As the literature abounds with unexpected connections and dad jokes, it seems that our research has ingeniously "bridged" the gap between the serious pursuit of knowledge and the joy of discovery. It's almost as if our results are saying, "Vote for civil engineers - they'll always deliver on their promises!"

In essence, this burgeoning field of research, with its propensity for unexpected twists and intellectual puns, opens up a realm of inquiry that is as intellectually stimulating as it is

lighthearted. After all, in the grand scheme of things, what is science without a good dose of wit and humor? Perhaps in the case of our study, there's a new axiom in the realm of electoral analysis - when in doubt, consult the Civil Engineers' Soothsayers for Electoral Predictions (CESEP). Who knows, they might just engineer your next political success!

## VI. Conclusion

In conclusion, our research has cemented a solid connection between the number of civil engineers in Kentucky and the Republican votes for Senators, revealing a correlation coefficient as sturdy as the "bluegrass" under the Kentucky sun. Our findings have uncovered a bridge between civil engineering and political leanings that is both statistically significant and remarkably pun-derful. It seems that in the realm of Kentucky politics, civil engineering isn't just about "laying the groundwork" – it's also about shaping the foundations of electoral dynamics!

Our study suggests that civil engineers in Kentucky are indeed "building" more than just infrastructure; they are constructing a significant influence over political affiliations. Like a well-structured bridge, the correlation between civil engineering expertise and Republican votes for Senators in Kentucky stands tall, leaving no "girder" of doubt about the engineering equation's impact on electoral sway.

It's safe to say that our research has "engineered" quite the revelation, shedding light on the unexpected synergy between civil engineering and political support. Our findings provide a "steel-y" resolve to the question at hand, affirming that the Bluegrass State's political landscape is not only shaped by ballots but also by the "concrete" presence of civil engineering prowess.

As we close this chapter of research, we firmly assert that no further studies are needed in this area. The bridge between civil engineering and the Republican vote in Kentucky has been thoroughly "engineered" by our findings, leaving no "arch" for doubt. It's time to "scaffold" any further investigations and instead "steel" ourselves for a future where the influence of civil engineers in Kentucky politics is seen as a "pillar" of understanding electoral dynamics. After all, when it comes to this curious correlation, there's no "bridge" over troubled water – our findings "support" the weight of this conclusion!