How Digital Contributions from Citizens Can Help U.S. Public Officials Govern Effectively

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Elected officials and civic leaders are increasingly turning to digital media technologies to solicit civic participation and collect public opinion that can inform policy decisions. Administrators and legislators at all levels use everything from online town hall meetings to social media surveys. They set up government websites, Twitter accounts, and Facebook pages to collect citizen opinions on policy issues. Such "digital governance" is now an important, widespread feature of U.S. political decision-making.

My research identifies two key challenges civic leaders and elected officials face when they try to incorporate civic data into their day-to-day policymaking. Because the new technologies are so easy to use, the sheer number of citizen suggestions submitted creates a huge burden for policymakers seeking to read, process, and use civic data to inform their policymaking. What is more, questions arise about the overall usefulness of digital civic data, because online contributions from citizens are often anonymous and disrespectful.

As the digital tools politicians use to engage constituencies become even more widely used, technologists, policy entrepreneurs, and civic leaders face the urgent challenge of ensuring these technologies communicate citizens' voices faithfully and help decision makers address constituents' concerns effectively. If these challenges are not met, many voices will not be heard, and worse, constituent trust in the government will erode. Citizens may conclude that, even when their perspectives are solicited, their concerns are not heard, addressed, nor resolved.

Challenges in Using Civic Technology and Data

In my research, I find that civic leaders often deal with problematic civic data by choosing solutions that misrepresent citizen voices. Politicians in democratic countries often respond to massive online civic participation by delegating tasks to a self-selected sample of citizen representatives, allowing designated groups to prioritize and communicate public demands. Using natural language processing, statistical analyses, and field interviews, I find that a local U.S. government was 50 percent more likely to respond to a comment if citizen activists passed along the message than if it was simply submitted online. Yet, even though delegation makes processing civic data more manageable, it lowers the representativeness of public opinion forums. For example, the representative groups I studied promoted a set of policies that differed substantially from public preferences expressed online.

In another line of research, my colleagues and I conducted an online survey experiment with major elected officials across the U.S. states. We examined politicians' attitudes about using social media to engage citizens, compared to relying on more traditional modes of public consultation. The survey also explored the barriers policymakers face in using digital participation platforms and technologies. We find that when elected officials are allowed to choose among public consultation methods, they are much less likely to heed constituents' messages from social media, because they deem the messages less informative and less influential than messages delivered via constituent phone calls or office visits from constituents or lobbyists.

Various barriers constrain policymakers' use of digital tools:

- There are too many comments from social media, and many are hard to read and understand.
- Policymakers are unsure if the messages from social media come from their constituencies or not.
- Social media messages tend to be disrespectful and limited in quality.

Helping Public Officials Understand and Use Digital Citizen Input

My research not only reveals current challenges of using civic data in public policy-making, but also identifies ways to mitigate problems. Machine learning tools can help public officials and their staffs analyze trends, patterns, and sentiments expressed in online public opinion. This, in turn, can lower the burden of evaluating, sorting, and addressing the massive amount of information available through these new platforms and technologies.

In collaboration with Silicon Valley tech companies such as Hewlett Packard Enterprise, my colleague and I have provided government officials with a series of data science and visualization tools to help them understand the suggestions citizens post on their websites and social media platforms. Such machine learning tools generate key trends and patterns in suggestions from citizens, making it easier for civic leaders and elected officials to process and understand online contributions — and thus make better use of their constituents' online civic participation in policy decisions. In related research, we also show that these new civic technologies can help legislators understand the impact of proposed bills on national or local economic development.

Improving Citizen Contributions

Citizens can benefit along with politicians and public officials. Deliberative public consultation methods can help citizens contribute more useful and actionable comments to policymakers. For instance, I have examined how a deliberative microcosm — called Deliberative Poll — can be an effective tool for public consultation.

In the deliberative poll, a representative sample of citizens are convened for a one to two days of discussions to come up with solutions for key public policy issues. Participants may tackle such challenges as public health, environment, the design of the tax system, delivery issues in public services, and Internet regulation. Weeks before they come to the deliberative meeting, participants in the poll are given balanced information on the pros and cons of various proposals, to ensure they have a developed understanding the issues. On the day of deliberation, they are divided into small, moderated group discussions that ensure equal chances to be heard in the groups. There is also a plenary session where participants can raise questions to experts on the issues at hand. With this design I have learned, even citizens with limited socioeconomic resources and formal education can form careful, rational opinions on complex policy issues. Although the specific deliberative methods would likely change in an online forum, these results are promising and should be studied further.

Policymakers and civic leaders should integrate new technologies into their work to improve representation and allow otherwise excluded people to contribute to policy discussions. At the same time, technologists should work to ensure civic technologies provide useful information to decision makers. One way civic technologies could improve their platforms would be to include some design aspects from the Deliberative Poll and other deliberative practices. These features could encourage users to submit thoughtful and useful input for decision makers and expand the use and democratic impact of new technologies.

Read more in Kaiping Chen, Tanja Altamurto, Ahmed Cherif, Jorge Galli, and Luis Santana "Civic CrowdAnalytics: Making Sense of Crowdsourced Civic Input with Big Data Tools," *Academic MindTrek*, (2016); Sharyn O'Halloran, Sameer Maskey, Geraldine McAllister, David K. Park, and Kaiping Chen, " Data Science and Political Economy: Application to Financial Regulatory Structure," *Big Data and Political Economy* (ed. Howard Rosenthal), (Russell Sage Press, 2015); Kaiping Chen, "Who can Deliberative: Deliberative Reasoning in Ghana's First Deliberative Poll," (working paper, 2019).