

Data Sovereignty and Development: How do Native Americans View Data Sharing by Tribal Governments?

Donn Feir, *University of Victoria, Canada*

Rachel L. Wellhausen, *University of Texas at Austin, USA*

ABSTRACT


The Indigenous data sovereignty movement has arisen out of the ambition of Indigenous peoples to benefit from data-informed policy while preventing extractive and harmful research practices by external governments or researchers. Tribes exercise the sovereign authority to choose whether and when to share data with researchers and institutions outside their communities. To provide insight into how Indigenous peoples feel about data sharing, we document meaningful variation in a unique, nationwide survey of Native Americans. We find that respondents support their tribes in sharing data for economic benefit and that those who vote in tribal elections are particularly supportive. As tribal leaders, Native communities, and external research partners address potentially harmful data gaps and build Indigenous data resources, our findings suggest the importance of carefully considering and communicating the purpose of data collection and sharing. Broad benefit to Indigenous peoples' economic well-being is one factor that likely increases support for data sharing.

INTRODUCTION

Data on economic, political, and social topics can empower the communities from which data are collected. At the same time, communities incur risks when their data are shared. Inaccurate data or data disseminated under unclear terms may be used in ways that harm the originating community. Even when researchers act in good faith, tension can arise between the need for more and better data and a community's right to protect and self-govern its data. Ethical concerns around data collection, dissemination, and use are prevalent in many contexts, especially among populations previously harmed by actors that have used data in disquieting ways (Hummel et al. 2021).

Indigenous peoples have been repeatedly targeted and harmed by unethical data practices, and in recent years, interdisciplinary groups of scholars and activists have made great strides in confronting these issues, culminating in the Indigenous data sovereignty movement (e.g., Brockie et al. 2022; Carroll et al. 2021; Foxworth and Ellenwood 2023). The Indigenous data sovereignty movement concerns the "... proper locus of authority over the management of data about Indigenous peoples" (Kukutai and Taylor 2016, 14). Given Indigenous rights to self-determination, as affirmed in the UN Declaration on the Rights of Indigenous Peoples (UNDRIP), Indigenous peoples have advocated for the right to govern, steward, and control their data (Kukutai and Taylor 2016; Walter et al. 2021). As discussed by Foxworth and Ellenwood (2023), Indigenous data sovereignty calls for good data practices to go beyond the principles of data being findable, accessible, interoperable, and reusable. Specifically, those practices are to be supplemented with principles of collective benefit, authority to control, responsibility, and ethics (CARE) such that data are to reflect the lived realities and ambitions of Indigenous

Donn Feir is professor of economics at the University of Victoria. They can be reached at dfeir@uvic.ca.

Corresponding author: Rachel L. Wellhausen  is associate professor of government at the University of Texas at Austin. She can be reached at rwellhausen@utexas.edu.

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people and not just those of the settler societies in which they find themselves (Carroll et al. 2020; Carroll et al. 2021; Kukutai and Taylor 2016).

In the United States, Native American communities have been targets of damaging research practices and contemporary tribal governments are indeed exercising their sovereign authority to use, control, and transfer data on their terms (Pacheco et al. 2013). At the same time, consistent undersampling of Native respondents in surveys means that “... comprehensive, geographically specific, and reliable data” concerning Native Americans is underprovided (Gregg, Lozar, and Nunn. 2022, sec. 2). Filling in data gaps can potentially improve outcomes of interest to Native Americans and society writ large, including economic development. Even as tribes are building their data capacity, they may benefit from external parties creating data, merging it with other sources, and sharing it. As part of their exercise of data sovereignty, tribal governments must weigh who to allow to collect data, when and how to share their data, and how to communicate their choices to their citizens.

Public opinion is an essential input into how governments manage difficult trade-offs, such as those around data sovereignty. Thus, we examine the issue of data sharing by tribal governments by polling Native Americans—although we acknowledge the irony in collecting public opinion data on willingness to share data. We asked a large, unique sample of nearly 2,000 self-identified Native Americans about their data-sharing preferences in the 2020 Collaborative Multiracial Post-Election Survey (CMPS), the national survey housed at the University of California, Los Angeles, that solicits American public opinion following national elections with specific attention to surveying respondents from diverse ethnic and racial groups.

Due to the COVID-19 pandemic, the CMPS ran for an extended time; respondents in our sample completed it in 2021. This meant that our respondents considered Indigenous data sovereignty issues shortly after news broke of a violation of Indigenous data sovereignty by the US Federal government: sensitive financial and other information tribes had provided to the US Treasury to access COVID-19 relief funds unlawfully leaked to other parts of the US government.¹ Indigenous data sovereignty thus received heightened attention in Native American-facing media and among tribal leaders in advance of the survey. From a research design point of view, this provides us an advantage in that the Native Americans choosing to complete the survey—a choice that suggests respondents might be predisposed to support data sharing—were responding at a time when the risks of data sharing were salient.

On balance, we expect Native American respondents thinking about data sharing to weigh their concerns about the potential harms of data sharing against the desire for their families and communities to benefit from it. We focus on the potential for material harm and gains from data sharing by asking about sharing financial data, which are by their nature sensitive but also directly linked to economic development. Our expectation is that respondent support for financial data sharing will increase with the scope of material benefits to be gained from data sharing in ways that are resonant with prosocial sensibilities. In line with this expectation, our survey results suggest that more Native American respondents support sharing financial tribal data when doing so is tied to material gains than sharing without further context about the intent or consequences. Moreover, we find evidence that support for data sharing increases as the gains widen, from a

positive financial effect on the respondent’s household, to the respondent’s tribe, to economic development for all Native Americans. We also find that a large proportion of respondents are neither supportive nor unsupportive of data sharing in the various scenarios proposed, suggesting future research on the extent to which Native peoples have weakly held or more-specific preferences over sharing financial or any other form of data.

Importantly, our unique sample allows us to probe heterogeneity in support for data sharing. Among respondents, those who are likely voters in tribal elections are more supportive of data sharing, implying that purposeful data sharing can be consistent with democratic accountability mechanisms in tribal governance. Respondents who indicate stronger connections to their Native identity and who have more confidence in the economy are also more likely to support data sharing. Overall, our findings suggest the importance of carefully considering and communicating data purposes—and of those purposes explicitly benefiting the economic development of Native communities—as tribal leaders, Native communities, and external research partners address harmful data deficits and build data capacity.

INDIGENOUS DATA SOVEREIGNTY

For Indigenous peoples, historical experience with their data being misused has led to significant mistrust in research (Brockie et al. 2022; Dawson, Toombs, and Mushquash 2017; Pacheco et al. 2013; Walters and Anderson 2013). It is of particular concern when data are shared for purposes that do not have the community’s consent in ways that portray the community negatively or that do not align with the ethical importance of reciprocity in Indigenous research (Carroll et al. 2020; Feir and Hancock 2016; Hayward et al. 2021). In response to these concerns, the Indigenous data sovereignty movement has gained traction in the United States and internationally. Carroll, Rodriguez-Lonebear, and Martinez (2019, sec. Indigenous data sovereignty, para. 2) define data sovereignty as the “... right of Indigenous peoples to control data from and about their communities and lands, articulating both individual and collective rights to data access and to privacy.” The data sovereignty movement can be thought of as an effort by governing bodies to reestablish authoritative rights over data about themselves to mitigate the possibility of data being used in ways counter to their interests. In a call to action, scholar-activists argue that “decolonizing data” and “Indigenizing data governance” are core tasks necessary to fully realize the power of data (Rainie, Rodriguez-Lonebear, and Martinez 2017, Figure 1).

In the United States, American Indian tribes have a unique legal status from which to establish authoritative rights over data, unlike other minoritized communities.² At the time of writing, there are 574 federally recognized tribes and 326 federally recognized Indian Reservations, for which Indian Country is the standard nomenclature. Tribal governments in Indian Country have a legalized capacity to put guardrails on collecting and disseminating data about their communities. This gives them a pivotal role in asserting Indigenous data sovereignty principles and determining trade-offs between data privacy and openness. For example, the US Federal Reserve Bank’s Center for Indian Country Development (CICD), which works to advance “... the economic self-determination and prosperity of Native nations and Indigenous communities,” includes elected tribal leaders on its Leadership Council.³ The Leadership Council maintains a set of Principles for Research and Data Use, which makes explicit that the CICD

“... understands that it is the right of tribal nations to govern the collection, ownership, and application of their respective data” and that data governance is “... a fundamental element of sovereignty.”⁴

At the same time, scholars and practitioners connect good governance with transparent and accessible information (Carlitz and McLellan, 2021). The Open Government Partnership, which since 2011 has grown to include over 75 countries, calls for “... transparent, participatory, inclusive, and accountable governance.”⁵ The OECD’s Open Government Data initiative is “... a philosophy ... that promotes transparency, accountability, and value creation by making government data available to all” (Ubaldi, 2013). Priorities of open data movements include policies such as institutionalized access to information laws and baseline fiscal transparency. From that perspective, a sovereign government’s choice not to share data is circumspect and an indicator of limited democratic accountability (Hollyer, Rosendorff, and Vreeland 2018).

Yet, in the Indigenous context, history suggests that data sharing may result in unethical research practices or harm to communities. An example of such harm from data misuse was the lack of informed consent to blood samples from the Havasupai for research that arguably could contribute to damaging narratives about the community (Hodge 2012). Unfortunately, another example of such harm emerged in the United States during the COVID-19 pandemic. In April 2020, it was revealed that sensitive information tribes had provided to the US Treasury to access COVID-19 relief funds leaked to other parts of the US government. That information included tribal citizenship/membership data, data on tribal land bases including land owned directly by tribes or their entities, and data on tribal employees. Moreover, fiscal expenditures data were unlawfully shared outside the US Treasury, an example of a severe violation of Indigenous data sovereignty over financial information. Revelation of the breach led to outcry and calls for investigations by tribal leaders.⁶ The chairman of the Winnebago Tribe addressed the trade-offs between data-sharing benefits and sovereignty costs directly: “Tribes do not like to share their data but in order to access these critical funds ... we did. Now, our worst fears are confirmed and there has been a leak of that data. I worry about the lasting impact and damage to our Tribal Nations by this leak” (Agoyo and York 2020, para. 22). As all respondents in our sample completed the survey in 2021, after the data leak we expect that not only may financial data protection be particularly salient in respondents’ minds but also attitudes towards data sharing may be more negative in this period than others.

Overall, advocates for Indigenous data sovereignty have called for moving beyond standard principles for good data governance to ensuring research that embeds community choice, values, and the necessity of reciprocity (Feir and Hancock 2016; Foxworth and Ellenwood 2023; Walters and Anderson 2013). Understanding Native Americans’ beliefs about when tribal data should be shared with external parties, if ever, is an important policy question for Indigenous organizations and governments as well as researchers.

PUBLIC OPINION ON TRIBAL DATA SHARING

How do Native Americans view data sharing by tribal governments? There is limited survey research on Native American populations in a political science context, especially as national surveys consistently undersample Native respondents (Akee and Taylor, 2014; Schroedel et al., 2020). To gather Native public opinion on data sharing, we administered questions via

the Collaborative Multiracial Post-Election Survey (CMPS), a national survey housed at the University of California, Los Angeles, which oversamples groups within the US population that are often underrepresented in national data-collection efforts, including Native Americans. COVID-19 and other circumstances meant that the CMPS ran longer than intended, from December 2020 to February 2022; all respondents in our sample answered the survey in 2021.

We focus on the nearly 2,000 respondents to the CMPS who self-identify as American Indian/Native American whether singularly or in combination with other racial or ethnic groups.⁷ Allowing respondents to self-identify is standard in survey research. In our context, it has the advantage of allowing us to gauge Native public opinion on issues of Indigenous data sovereignty in aggregate, without selecting only respondents who are enrolled members of tribes. Indeed, with this approach, we can consider heterogeneity across respondents who report participating in the civic life of a tribe to a greater or lesser extent. Based on US Census regions, approximately 38% of the nearly 2,000 respondents lived in the South, 31% in the West, 17% in the Midwest, and 13% in the Northeast.⁸

Given the variety of types of data that can be generated by and about communities, we ground our questions in a specific type to improve the reliability of our inferences. We choose to focus on financial data sharing for several reasons. First, our conjecture is that the potential for material gains from data sharing will be positively associated with support, given the importance of reciprocity in the Indigenous sovereignty principles (Belarde-Lewis et al. 2024). We see a more intuitive link between financial data and economic development than between economic development and other kinds of data for which the relationship might be more indirect, making financial data a “most likely” case. Second, many tribal governments are investing in new data collection modalities to provide tribally certified data to external stakeholders and US federal policy makers responsible for funding allocations, underscoring the real-world importance of this issue (Feir, Wellhausen, and Thrall 2021; Mohr 2023; Wellhausen, Feir, and Thrall 2024). Third, we expect financial data to raise the salience of privacy concerns in the respondent’s mind—an expectation that came to be reinforced by the leak of tribal financial data tribes had shared only with the US Treasury for purposes of COVID-19 fund distribution, exposed in the months between the when the CMPS questions were finalized and distributed.

We begin a question block with the following: “American Indian tribes can keep financial data private, or tribes can choose to make data public. To what extent do you think your tribe should share data?” We asked respondents’ views about the extent to which they agree or disagree on a five-point scale with a subsequent series of statements. First, we asked respondents to rate their agreement with the following general statement: “My tribal government should NOT share financial data outside the tribe.” This wording was intended to reinforce the starting point of data sovereignty and that data sharing is a choice. About 35% of respondents agreed that data should NOT be shared, 48% neither agreed nor disagreed, and 17% of respondents disagreed with the statement. Put differently, only 17% of respondents expressed a clear preference in support of financial data sharing, absent any additional context.

We then asked respondents to rate their agreement with three statements about financial data sharing for specific purposes.

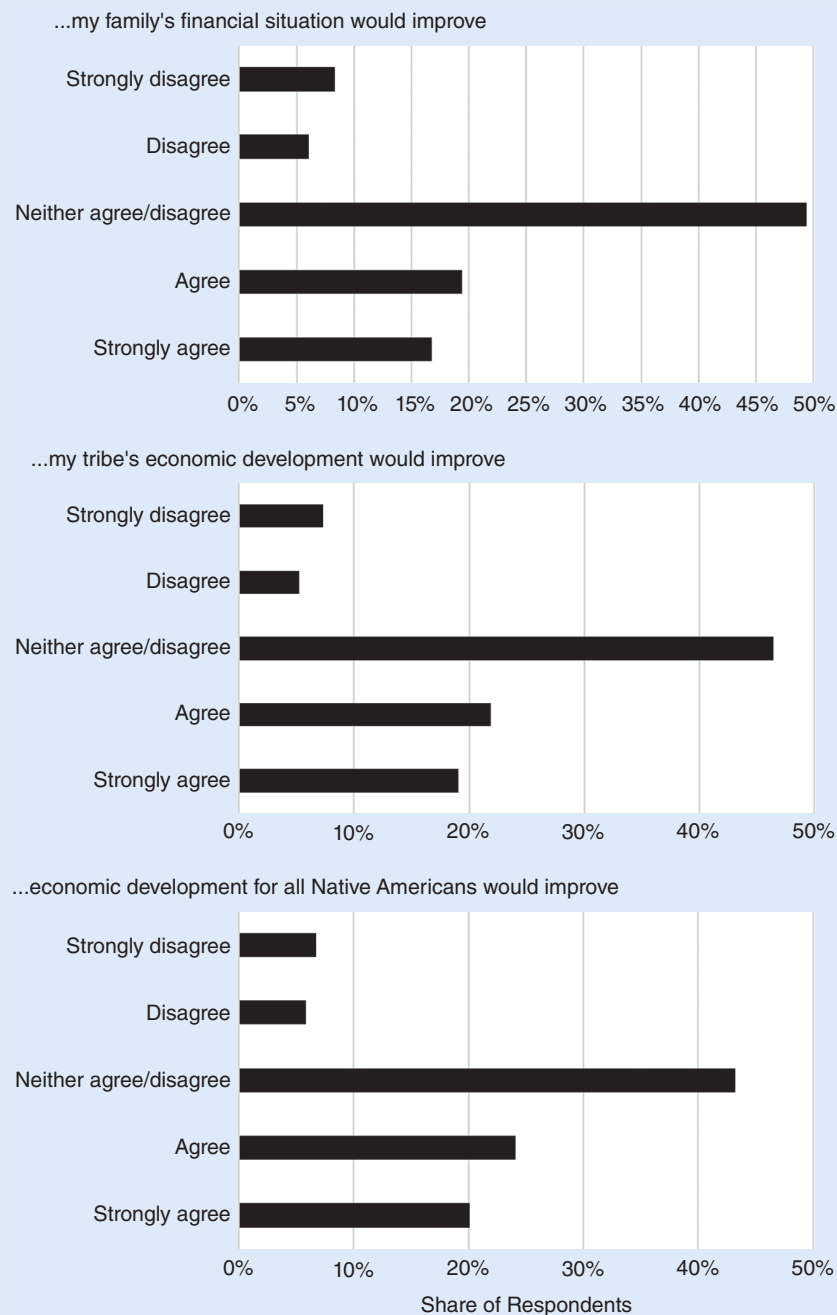
We focused the purpose on material gains, and we sequence statements from more direct benefits to the respondent to broader benefits:

- My tribal government should share financial data outside the tribe IF it means that my family’s financial situation would improve.
- My tribe should share data IF it means that my tribe’s economic development would improve.

- My tribe should share data IF it means that economic development for all Native Americans would improve.

Results are shown in Figure 1. Greater than 35 percent of respondents agreed to data sharing for each purpose—whether to benefit their family, their tribe, or Native American economic development as a whole. Respondents tended to express preferences in the same direction across the three scenarios, meaning that respondents who agreed with data sharing for one purpose

Figure 1
My Tribe Should Share Data If It Means That...



National sample of 1,956 self-identified Native American respondents, surveyed in 2021. Shares are weighted using sampling weights. Percentages may not add to 100 due to rounding. Source: CMPS.

tended to also agree with the other two purposes; correlations across the three variables are greater than 0.6. Greater than 10% of respondents disagreed to some extent with data sharing in each instance, consistent with our expectations that the potential downsides of data sharing are concerns for many Native Americans. Nonetheless, support for data sharing increased as the material beneficiaries expanded, indicative of prosocial attitudes among respondents whose preferences on data sharing were moveable.

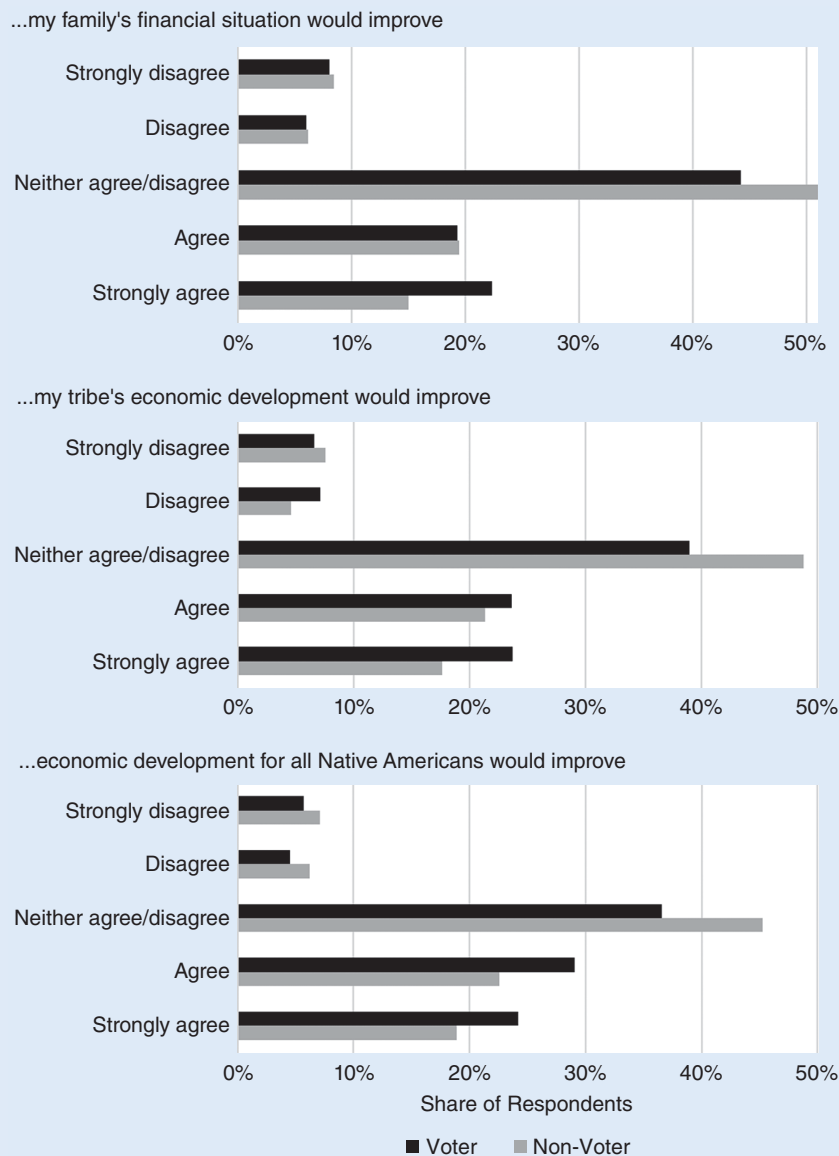
Figure 1 also shows that, like the data-sharing statement offered without context, many respondents chose the middle-of-the-road answer “neither agree nor disagree” in response to each statement. One way to interpret this is that, as is common in survey research, respondents without strong preferences choose a

middle-of-the-road answer. That said, it could also be that Native Americans care a lot about how data are shared. The specific purpose of data sharing or the context of how the data will be protected and collected may be insufficient for them to form a strong preference. It is also possible that data sharing is not a polarizing issue for many Native Americans. Even so, it is helpful to understand who has strong preferences on data sovereignty in the context of economic development goals, presuming that those with strong preferences are likely to be the most vocal and influential on the issue.

WHO SUPPORTS DATA SHARING?

As contemporary American Indian tribes are generally governed as constitutional democracies, voters’ preferences in tribal

Figure 2
My Tribe Should Share Data If It Means That...



National sample of 1,956 self-identified Native American respondents, including 499 respondents who report sometimes or always voting in tribal elections, surveyed in 2021. Nonvoters are shown in the dark color, and voters are shown in the light color. Shares are weighted using sampling weights. Percentages may not add to 100 due to rounding. Source: CMPS.

elections may be especially important in shaping government policy relative to the preferences of nonvoters. We therefore explore whether heterogeneous effects are present by voting behavior. Specifically, we use another question in the CMPS that asks respondents how often they vote in tribal elections and split the sample between those who self-report “Sometimes or always votes in tribal elections” and those who do not. Figure 2 replicates Figure 1 but distinguishes between these two groups. Overall, voters were more likely to express a preference over data sharing, as fewer voters than nonvoters chose the middle-of-the-road response across each condition. Across all three prompts, voters were more likely to agree with data sharing than were nonvoters and their support also increased across conditions. Notably, as shown in the bottom panel of Figure 2, a majority of voters in tribal elections agreed or strongly agreed with data sharing for the benefit of general Native American economic development (53%). In contrast, only 42% of nonvoters expressed agreement.

In Figure 3, we further explore heterogeneity by reporting the results of a series of difference-in-means tests. We calculate and compare the proportion of people who agreed (somewhat or strongly) in at least one of the three conditions that their tribe should share data. Point estimates and 95% confidence intervals in Figure 3 indicate the difference in means between groups. As this research was not designed to specify a full model of the determinants of public opinion, examining the data like this allows us to uncover significant patterns without making the assumptions necessary to fit linear regression models.

The top line of Figure 3 reinforces that tribal voters are significantly more supportive of data sharing. What mechanism might lead voters to support data sharing more than nonvoters do? One possible explanation is that voting in tribal elections signals greater care for the economic development of Native communities and Indian Country more generally. If this were the case, respondents who otherwise indicate strong connections

to their Native identity would also be more supportive of data sharing. Indeed, we also see in Figure 3 that respondents are more supportive if they report attending Native cultural events, speaking a Native language to any degree, or perceiving being Native American as important to their identity.⁹ Additionally, Figure 3 shows that it is voting in tribal elections specifically, and not voting in US elections, that is predictive of differential support.¹⁰

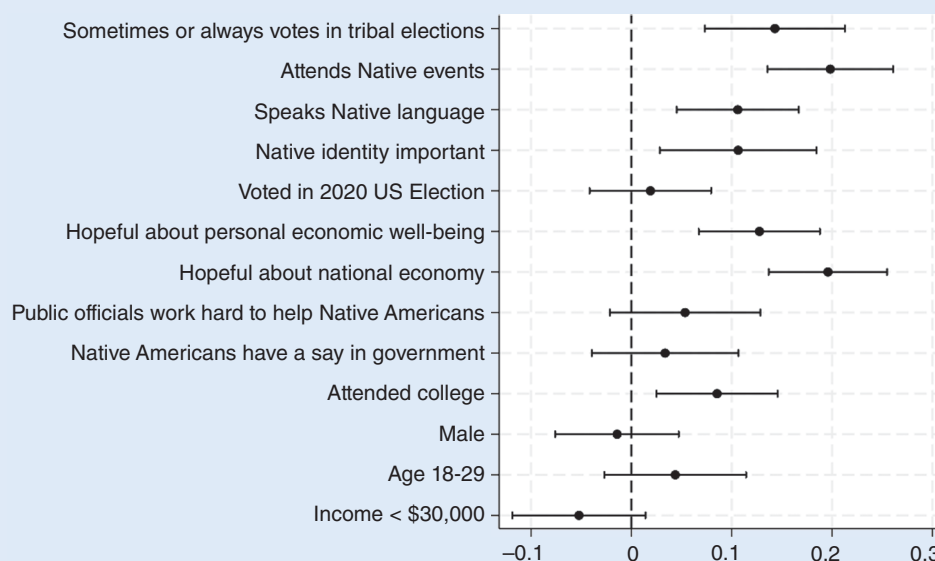
Figure 3 also reports respondent attitudes broken down by other dimensions. Those who signaled more faith in the economy—by being hopeful about their personal economic well-being or the state of the national economy—were more supportive of data sharing. Although the difference-in-means tests are not significant, point estimates suggest higher support among those who indicated more faith in the US political system, as measured by believing that public officials work hard (some of the time or more) on behalf of Native Americans or that Native Americans (sometimes or more) have a say in how the US government handles important issues. Last, we report difference-in-means tests for demographics. Respondents who attended college are more supportive of data sharing than are those who did not, which makes sense insofar as they likely have more personal experience with the benefits to be gained from data and research.

CONCLUSIONS

Overall, results from the CMPS survey of nearly 2,000 Native Americans in 2021 suggest that more Native Americans support data sharing than not, particularly as the potential developmental benefits of sharing data increase. We focus on the context of tribal governments sharing financial data and find increasing support in a prosocial direction for sharing that generates material benefits for the respondent’s family, tribe, and Native Americans as a whole. Support was more pronounced among Native Americans

Figure 3

Respondent Characteristics Associated with Willingness to Share Tribal Financial Data



All point estimates are differences in means in the proportion of people who agree somewhat or strongly that their tribe should share data in at least one of the three data-sharing questions. Bands represent 95% confidence intervals.

who report being voters in tribal elections, which suggests that democratic accountability can reinforce data-sharing efforts in Native communities. Still, support is far from universal. In particular, a large proportion of respondents were neither supportive nor unsupportive of data sharing. This suggests that the details of data sharing are important beyond high-level material benefits in soliciting support for data sharing.

Native American communities are gaining momentum in building data resources, as tribal leaders, federal policy makers, researchers, and activists recognize that the absence of high-quality data can hinder service delivery (Mohr 2023). Under the principles of Indigenous data sovereignty, sharing data with others does have the potential for substantive gains but it also generates risks. Tribal government choices over data depend on the views of their citizens, making public opinion over tribal data salient and relevant. Our results suggest that communication enumerating the potential benefits of data sharing can be important in shaping public opinion. Purpose-driven data sharing, with broad potential benefits for Native well-being, appears likely to garner public support.

ACKNOWLEDGMENTS

We thank Casey Lozar, Matt Gregg, Ryan Nunn, and Caryn Mohr for the useful feedback. We also thank the organizers of the Collaborative Multiracial Post-Election Survey. Funding was provided by the Federal Reserve Bank of Minneapolis Center for Indian Country Development. None of the views expressed in the submission reflect those of the Federal Reserve Bank of Minneapolis, nor the Board of Governors. For related news coverage, see <https://www.minneapolisfed.org/article/2023/how-do-native-americans-view-data-sharing-by-tribal-governments>.

DATA AVAILABILITY STATEMENT

Research documentation and data that support the findings of this study are openly available at *PS: Political Science & Politics* Harvard Dataverse at <https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/WRJLJQ>.

CONFLICTS OF INTEREST

The authors declare no ethical issues or conflicts of interest in this research. ■

NOTES

1. That included information on population (citizens/members/shareholders), land base (including land owned by tribally owned entities), tribal employees, and fiscal expenditures. OMB Approved No. 1505-0264, Expiration date: 10/31/2020. We thank a reviewer for highlighting the importance of this event.
2. On First Nations in Canada, see Hayward et al. 2021.
3. The CICD's operations are in furtherance of the 1977 Community Reinvestment Act that instructed financial regulators to direct attention to low- and moderate-income communities in the US (Federal Reserve History 2023, sec. More Recent Activities, para. 2).
4. "Principles for Research and Data Use." Center for Indian Country Development, Federal Reserve Bank of Minneapolis. Last updated July 2022.
5. "Open Government Partnership: About." <https://www.opengovpartnership.org/about/>. Last accessed December 18, 2023.
6. That included information on population (citizens/members/shareholders), land base (including land owned by tribally owned entities), tribal employees, and fiscal expenditures. OMB Approved No. 1505-0264, Expiration date: 10/31/2020. We thank a reviewer for highlighting this situation.
7. Respondents who are (federally) registered voters were drawn from national voter registration files. For respondents who are not registered voters, CMPS principal investigators worked with nationally reputable survey vendors to randomly select respondents in a way that maximized coverage of traditionally underrepresented groups.

8. For context, the states (region) with the highest percentages of Native Americans are Alaska (West), Oklahoma (South), New Mexico (West), and South Dakota (Midwest).
9. Unfortunately, out of the 1,956 respondents, only 182 lived in ZIP codes that contained a reservation. The difference in means is positive but nonsignificant.
10. Measure based on respondent self-report of voting in 2020. Nor is (nontribal) voter registration a significant correlate.

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