

The Ties That Bind Us: Exploring the Financial Relationship between Native American Tribes and the U.S. Federal Government

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Abstract

Native American Tribes have a unique political and legal status in the United States. One aspect of the relationship between the U.S. and tribal governments that is severely understudied is the financial relationship between federally recognized Native American Tribes and the U.S. federal government. First, we explore the patterns of financial transactions between the U.S. federal government and Native American tribes. Second, we provide a theoretical argument and test of the factors that impact this financial relationship. We argue that tribes' tribal characteristics, tribal lobbying efforts, and membership in tribal associations will impact the federal funds received by each tribe. We test our hypotheses using assistance spending data from the Department of the Interior between 2001-2021 and tribal population and reservation data for all Federally Recognized Tribes in the lower 48 states. We find that as a tribe's enrollment, the proportion of the reservation population in poverty, size of the reservation, and ownership of gambling establishments increases there is an increase in the amount of federal funds received by a tribe. This study aims to contribute insights into the understanding of self-determination and behavior of Native American Tribal governments.

Keywords: Native American, Indian Country, Financial Aid, U.S. Federal Government

The U.S. federal government and Native American tribes have a complex history of social, political, and legal issues in the United States (Wilkins and Stark 2017). Much of the modern discussion of tribes has surrounded federal recognition. Federal recognition is when the U.S. federal government recognizes that a tribe exists politically as a “domestic dependent nation” in a government-to-government legal relationship with the U.S. (Office of Tribal Justice 2023). Further, recognized tribes are acknowledged to “possess certain inherent powers of self-government and entitlement to certain federal benefits, services, and protections because of the special trust relationship” (Office of Tribal Justice 2023).

The relationship between the U.S. and tribal governments has been characterized by policies, negotiations, and allocations that have shaped the trajectory of tribal economies, public health, and education (Dippel 2014). The U.S. has been active in treaty-making with tribal nations since the founding of the country and this has largely shaped the long-standing and often contentious relationship between U.S. and indigenous nations (Deloria and DeMallie 1999; Prucha 1995; Wilkins and Stark 2017). While there have been institutional changes in the U.S. that impacted treaty-making – like in 1871 when Congress disallowed the president from negotiating directly with tribes – the decrease in favorable treaty outcomes for tribes is rooted in the relative growth in economic and military power of the U.S. (Spirling 2012). Given that the U.S. has had the upper hand in negotiating treaty outcomes since the 19th century, this same advantage likely impacts the modern outcomes for tribes vying for benefits, services, and funding from the federal government.

While tribes are eligible for certain funding after gaining federal recognition, they often must apply for it. Once tribes receive funding, tribal governments must navigate how to use federal funds as tools of autonomy and agency, while they still fight over issues of sovereignty and self-determination (Cornell and Kalt 1998). While there is a body of work that has examined the impact of federal funding on tribal initiatives and tribes’ broader economic development (Cornell and Kalt 1998, 2010), these works are focused on the impact of funding *on* tribes not *how* tribes received that funding. We know much less about what drives the differences in the funds awarded to different tribes by the U.S. federal government. In this paper, we begin to develop an understanding of these

financial relationships between tribes and the U.S. government. To guide our examination of this relationship, we ask two questions: (1) What are the characteristics of U.S. Federal Government financial transactions to Native American Tribes? (2) What impacts the funds awarded to federally recognized Native American Tribes from the U.S. Federal Government?

We present a theoretical framework outlining the factors influencing the financial relationship between the U.S. and tribal governments. Our argument posits that tribal characteristics, tribal lobbying efforts, and membership in tribal associations collectively shape the federal funds received by each tribe. We expect tribes that have large enrollments, are economically vulnerable, have gambling establishments, and have larger reservations will receive more federal funding. In addition, we expect tribes that actively lobby Congress and bureaucratic agencies and belong to inter-tribal networks will be more likely to receive federal funds. In this iteration of the paper, we will only be testing the theoretical expectations surrounding the impact of tribal population and geographic characteristics on federal funding.

To evaluate our hypotheses, we analyze federal spending data from the Department of the Interior spanning the 2001-2021 fiscal years. This temporal scope allows us to discern patterns and trends that have evolved over the past two decades. We use data from the U.S. Department of Housing and Urban Development (HUD) and Census Bureau to create variables for tribal population and reservation characteristics. We find that as a tribe's enrollments, the proportion of the population in poverty, reservation size, and gambling establishments increase the amount of federal funds awarded to the tribe. We also find interesting regional trends that show federal funding may be influenced by unique conditions that tribes face in specific areas around the US.

This research makes three distinct contributions to the scholarly understanding of the financial relationship between the U.S. federal government and federally recognized Native American Tribes. First, we provide the first nuanced insights into the determinants of federal funding for these tribes. By examining a range of factors, our study fills critical gaps in existing literature, offering the most explanation and test to date of the factors influencing the allocation of federal funds to tribal government. Second, our research contributes to the broader discourse on self-

determination and the behavior of Native American Tribal governments. Third, our study provides insights to better understand the greater autonomy and agency for these sovereign entities within the complex system of American governance.

The rest of the paper is organized as follows. First, we explore the awards to tribes from the federal government. Second, we present our theoretical explanation for the trends in the federal funding received by tribes and derive several hypotheses. Fourth, we describe the data and research design used to test our hypotheses. Fifth, we present the results of our hypothesis tests. Finally, we conclude with a discussion of future avenues for research to build on these findings.

Federal Awards to Native American Tribes

Before delving into the factors that impact the financial relationship between tribes and the federal government, it is important to get a sense of what the financial relationship looks like. This paper is primarily looking at Department of the Interior (DoI) assistance data from fiscal year 2001 to 2021 pulled from USA Spending.gov. Examining trends in Interior assistance is particularly valuable in understanding the tribal-federal government relationship because the most important bureaucratic branches for federal tribal administration, the Bureau of Indian Affairs and the Bureau of Indian Education, reside in the department. Other agencies in the Interior office also come into frequent contact with tribes, such as the Fish and Wildlife Service, the Bureau of Reclamation, and the National Park Service.

Identifying tribal recipients in the DoI assistance data is no easy task. We look at all awards marked as "Tribal Government" for the business type of the recipient, but this label contains many non-tribal recipients, including non-tribal universities and grade schools, state and local governments, and private companies. For the purposes of this analysis, we were only interested in awards going to entities that were either (1) a tribal government, or (2) owned/controlled by a tribal government. Recipients from FY 2011 onwards were identified using the federally assigned Unique Entity Identifier (UEI) numbers of award recipients and their listed parent organizations. This means that organizations that otherwise would not look like a tribal entity could be identified as belonging to a specific tribe if that tribe's UEI was given as the parent organization. Prior to FY

2011, UEI numbers and parent organization information are not available for most awards. Coding for this period relied on the other available information given for each entry, such as recipient name, location, and the purpose of the award. We took a conservative approach to coding recipients in this period, and it is almost guaranteed that some tribal entities were not counted during this period, especially tribal-controlled schools and businesses. From this process, we identify 110,957 awards given to tribal entities out of the total 371,414 DoI transactions. If we remove transactions that either required zero federal funds or required repayment from tribes to the federal government, we have 99,894 cases of a DoI agency giving funds to a tribal entity.

To get an understanding of the broad trends in these awards, we can examine the yearly volume of awards and their average value, visualized in Figure 1. Over the time period that this study is investigating, the volume of DoI awards to tribes has risen dramatically. Prior to FY 2009, approximately 770 awards were given to tribes per year on average. During this period, there were 339 to 340 federally recognized tribes, meaning that a tribe would receive 2 to 3 awards per year. Compare this volume to the 2013-2021 period, where the average number of awards given in a year was almost 10,000, or about 28 awards per tribe.

This disparity could be partially due to the difference in coding discussed previously between the two periods, but a few pieces of evidence point against this. First, FY 2009 was coded without UEI numbers like FY 2001 to 2008, but has a much higher number of awards given. Second, there is an increase, albeit less dramatic, in awards given to non-tribal entities by the DoI during this time. Prior to FY 2009, 6,400 awards per year were given by the DoI to non-tribal entities compared to 12,000 per year from FY 2013 onward. Finally, the time period aligns with a shift in the political and economic circumstances of the country, including the Great Recession and a change in partisan control of the presidency. With such significant changes, it wouldn't be surprising to see a change in the financial relationship with tribes over this time.

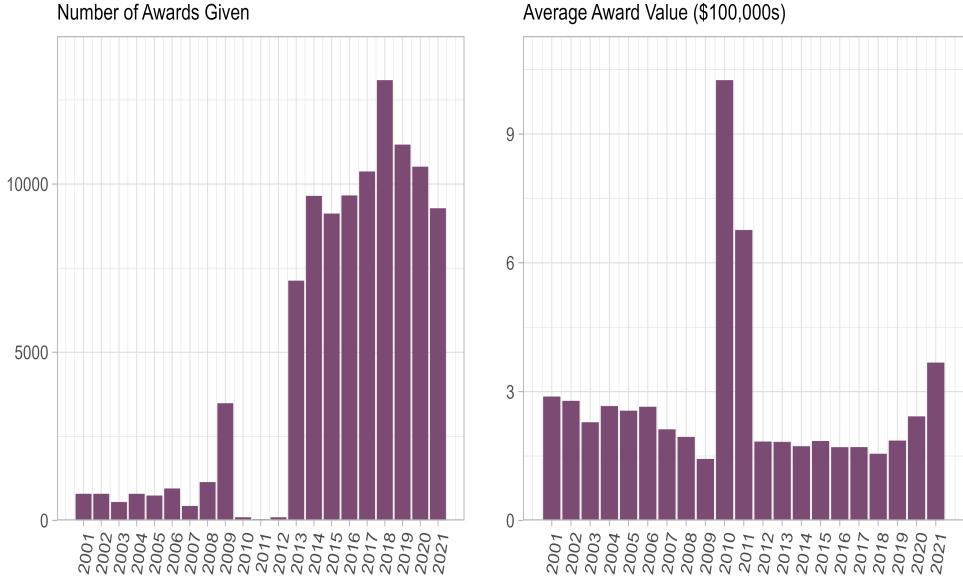


Figure 1: Total number of awards and average award value per fiscal year given by the Department of the Interior to any tribal entity. Excludes transactions that required zero federal funding or concerned repayment of funds to the federal government.

These economic and political changes might also play into the other striking feature of the left plot: the lack of awards given from FY 2010 to FY 2012. We have no exact explanation for these gap years beyond assumptions about restrictions on discretionary spending during the Great Recession. This trend holds for DoI funding to non-tribal entities as well, albeit, again, not to the same degree.

In the right plot of Figure 1, we see the average value of awards given to tribal entities has fluctuated over time. Ignoring the spike in FY 2010 and 2011, DoI awards to tribal entities ranged from about \$150,000 to \$300,000. Looking across the years, the average value of awards has fallen since the early 2000s, with a late spike in FY 2021 from money distributed for the COVID-era CARES Act. Breaking the data down further helps to explain this trend.

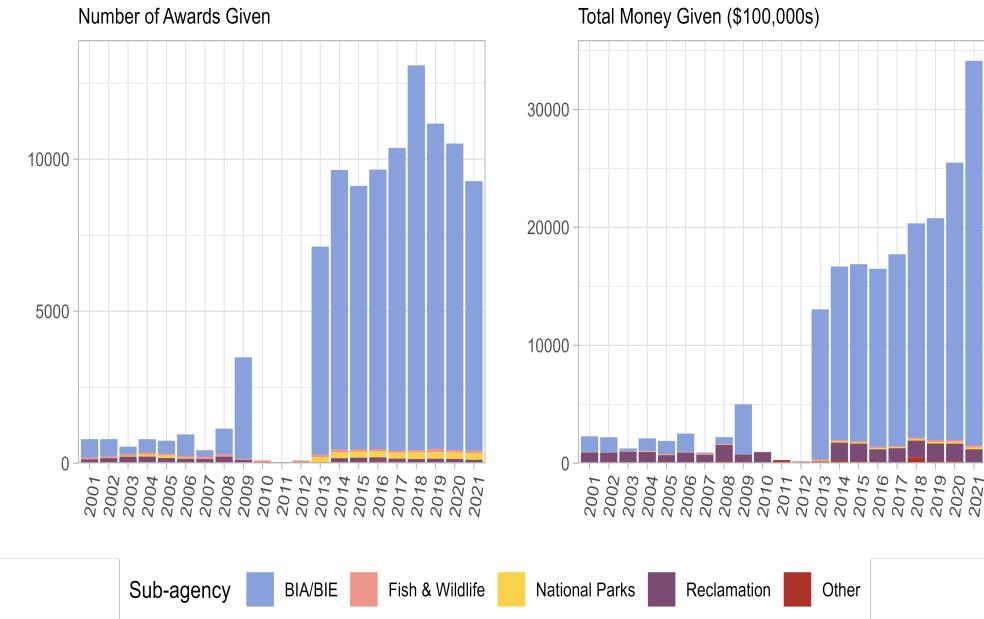


Figure 2: Total number of awards and total funds provided per fiscal year given by the Department of the Interior to any tribal entity, broken down by awarding sub-agency. Excludes transactions that required zero federal funding or concerned repayment of funds to the federal government.

Figure 2 decomposes the volume of awards given and the total value of the awards each year by DoI sub-agency to a tribal entity. In this figure, it seems clear that trend of increasing award volume and decreasing average value of awards is driven by a large increase in activity by the Bureau of Indian Affairs and Bureau of Indian Education.¹ Comparing the average volume before and after the 2010-2012 period, the BIA/BIE saw a tenfold increase in the number of awards given. The only other sub-agency to see a large increase in volume was the National Parks Service, which sextupled the number of awards given to a tribal entity post-2012, however the total volume remains minuscule compared to the BIA/BIE. It may also be of interest to note here the Bureau of Reclamation, which did not change very much in volume or value given over the past 20 years, but still make up a significant portion of the money given to tribes because their award values are often over \$1,000,000. This helps explain why Figure 1 has the large spike in FY2010 and FY 2011, without sub-agencies like the BIA giving money at the time, large awards by the Reclamation drive

¹Unfortunately, these two agencies are not separated in the data, so it is difficult to accurately associate individual awards with one of these agencies alone.

up the average value of a DoI assistane award.

Another way to examine the awards given to tribal entities is by the action type of the transaction. Action types denote whether the award entry was a new award, funding for a continuation of an existing agreement, a revision to the federal government's financial obligation or a change in the project details, or an adjustment to funding based on the final cost of a complete project. Figure 3 plots the trends in each of these action types by year for BIA/BIE awards to tribal entities. Most awards are marked as continuations of previously exiting projects, most likely related to tribal self-determination contracts made prior to the period captured in this data. However, it's notable that we see thousands of new awards being given out by FY 2013. This again suggests a shift in behavior by the BIA/BIE starting in President Obama's second term in office.

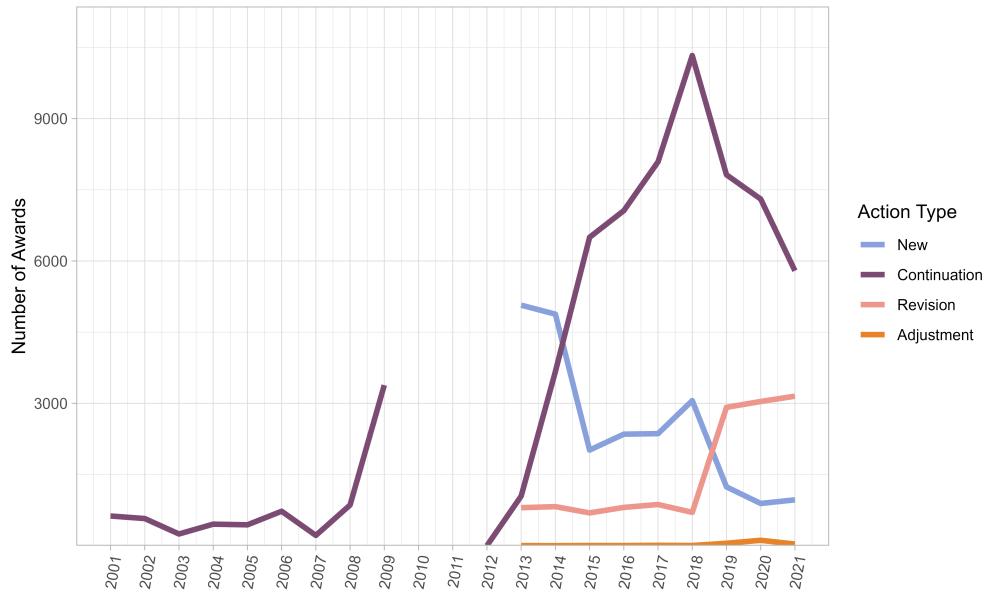


Figure 3: Total number of awards per fiscal year given by the Bureau of Indian Affairs and Bureau of Indian Education to any tribal entity, broken down by action type.

Finally, we shift focus to the tribes receiving these awards. Figure 4 maps tribes by their headquarters, plotting each tribes average yearly enrollment level and their per capita funding from all DoI agencies calculated using yearly tribal enrollment, from FY 2013 to FY 2021. The yearly enrollment data is published by the Department of Housing and Urban Development (HUD) for their Indian Housing Block Grant Program. We see in this figure that DoI funding is not fully

determined by tribe size, as many of the largest tribes have relatively low per capita funding and many of the smallest tribes have some of the highest per capita funding. For example, the Cherokee Nation, the largest tribe by enrollment, receives an average of about \$250 per enrolled member, the 12th lowest average in the dataset. The tribe who receives the most money yearly on average from the DoI is the Augustine Band of Cahuilla Indians in California, who get an average of approximately \$135,000 on average yearly for their eight members.

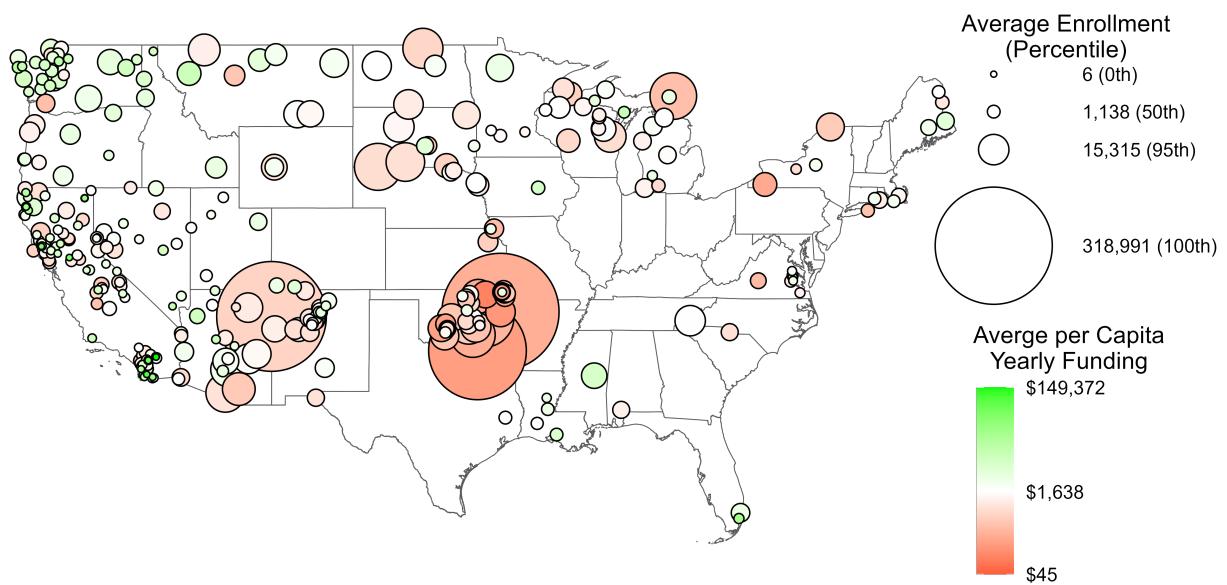


Figure 4: A map of tribal headquarters where the size of each point correlates to its relative enrollment size and the color correlates to its relative average per capita funding by the Department of the Interior since FY 2013. Excludes tribes that report zero enrollees in the HUD IHBG data or received zero funding from the Department of the Interior during the timeframe.

We can also see some regional trends in this figure. Tribes in Oklahoma, the Midwest, the Upper Plains, and the Southwest appear to have relatively low funding levels compared to their enrolled population. Tribes with relatively high levels of funding are more concentrated on the

Pacific coast. In fact, 90% of tribes in Oklahoma (35/38) were among the bottom half of tribes in average per capita funding while only 38% of tribes in the Pacific region (53/141) were below the same threshold. Figure 5 shows the composition of different regions in each quintile of average yearly per capita payments.

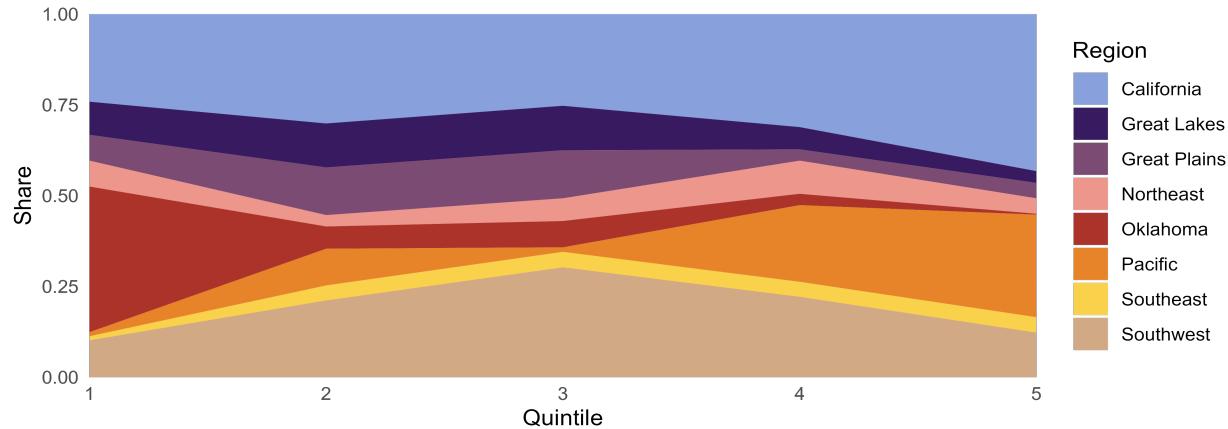


Figure 5: The regional composition of each quintile of per capita funding from the Department of the Interior. Excludes tribes that report zero enrollees in the HUD IHBG data or received zero funding from the Department of the Interior during the timeframe.

Before hypothesizing in greater detail about what more precisely determines the relationship between tribes and the funding they receive, it's worth summarizing some of the overall trends in this data. First, the volume of funds tribes receive from the Department of the Interior has increased dramatically in the past decade. Second, The Bureau of Indian Affairs and Bureau of Indian Education in particular have become more active funders of tribal programs, including a significant number of new programs. Third, funding to tribes has not been a simple, linear function based solely on their enrollment level. The theorizing and analysis that follows attempts to address the other potential determinants of the relationship between tribes and the DoI.

The Effect of Tribal Context on U.S. Financial Transactions

We argue that the financial relationship between federally recognized Native American Tribes and the U.S. Federal Government is shaped by several factors including a tribe's characteristics, membership in tribal associations, and lobbying efforts.

Tribal Characteristics

To begin, we can consider three important characteristics of tribes that may allow us to examine a baseline for federal funding: size, economic vulnerability, gambling establishments, geographic context. Tribal populations may directly correlate with the scale of need and demand for resources. Larger populations often contend with increased infrastructural requirements, health-care needs, and educational demands, thereby necessitating a proportionate allocation of federal funds to address these challenges. Conversely, smaller tribes may seek targeted support to address their unique circumstances, reflecting a nuanced approach to federal resource distribution based on population dynamics.

Hypothesis 1 (Population Hypothesis): *Tribes with larger enrolled populations will receive more federal funding than tribes with smaller enrolled populations.*

Socioeconomic characteristics, encompassing factors such as income levels, employment rates, and educational attainment within a tribe, offer crucial insights into the tribes self-sufficiency and resilience. Tribes demonstrating a higher degree of economic independence may seek federal funds for capacity-building initiatives, economic development, or cultural preservation efforts. On the other hand, tribes grappling with socioeconomic challenges may advocate for targeted assistance to uplift their communities, recognizing that targeted financial support can catalyze positive transformations and address systemic inequalities.

Hypothesis 2 (Vulnerability Hypothesis): *Tribes that are more economically vulnerable will receive more federal funding than tribes that are more economically developed.*

The presence of gambling establishments on tribal lands may influence the amount of federal funds received. Tribes engaging in gaming activities, facilitated by the Indian Gaming Regulatory Act (IGRA) of 1988, often witness a substantial boost in their economic capacities. This economic windfall not only contributes to the financial self-sufficiency of tribes but also alters the dynamics of their relationship with the federal government.

There are two possible directional impacts on federal funds that may stem from the increased economic independence afforded to tribes with gambling enterprises. The revenue generated from these establishments allows tribes to fund essential services such as education, healthcare, and infrastructure development without solely relying on federal assistance. Consequently, tribes with thriving gaming operations may seek reduced federal funds for certain programs, emphasizing their ability to internally finance key initiatives and reducing dependence on external sources. Conversely, tribes facing economic challenges or situated in regions where gaming revenues are limited may actively advocate for increased federal funds. The financial disparities between tribes with and without lucrative gambling enterprises contribute to a nuanced landscape where federal allocations are sought to bridge gaps in economic development, social services, and community well-being.

Hypothesis 3 (Decreased Need Hypothesis): *If a tribe has gambling establishments, the tribe will be more likely to observe a decrease in federal funds during subsequent funding periods.*

A second argument, is that the economic success of tribal gaming establishments enhances tribes' lobbying capabilities. Tribes with significant gaming revenues may invest in sophisticated lobbying efforts to influence federal policies and secure advantageous legislation. This proactive engagement in the political process can yield additional financial benefits, as tribes strategically advocate for policies that align with their economic interests and priorities.

Hypothesis 4 (Increased Lobbying Capacity Hypothesis): *If a tribe has gambling establishments, the tribe will be more likely to observe an increase in federal funds during subsequent funding periods.*

It is important to note that the impact of tribal gaming on federal funds is not uniform across all tribes. Factors such as market saturation, geographic location, and the size of the gaming operation contribute to variations in economic outcomes. Additionally, the regulatory framework governing gaming activities, including revenue-sharing agreements with states, further complicates the relationship between gaming revenue and federal funds.

Geographic context is important to consider as it may shape the need for federal funding. There are two factors to consider: whether the tribe has a reservation and the location of that reservation. Tribes with reservations often contend with unique challenges and opportunities, fundamentally shaping their financial needs and priorities. Reservations, as sovereign territories, require federal funding to support essential infrastructure, education, healthcare, and social services for tribal members. Consequently, tribes with reservations may advocate for federal funds to address the distinct challenges associated with maintaining and developing these territorial entities. Conversely, tribes without reservations may face a different set of financial considerations. Their priorities may revolve around economic development, community programs, and cultural preservation initiatives, as they lack the territorial responsibilities inherent to reservation management. Federal funds for these tribes may be directed towards fostering economic self-sufficiency, supporting education and healthcare programs, and preserving cultural heritage, reflecting a different set of needs driven by not having a reservation. Further, the historical context and legal status of reservations contribute to the financial dynamics. Tribes with reservations may navigate complex legal and administrative processes associated with land management, tribal sovereignty, and treaty rights, impacting the allocation of federal funds. Meanwhile, tribes without reservations may engage in different advocacy strategies, focusing on broader community development and empowerment.

Hypothesis 5 (Reservation Hypothesis): *Tribes with a reservation will receive more federal funding than tribes that do not.*

Hypothesis 6 (Reservation Size Hypothesis): *Tribes with larger reservations will receive more federal funding than tribes that do not.*

The geographic location serves as another influential factor in federal funding, considering the diverse challenges tribes face based on their ecological, climatic, and geographical contexts. Tribes situated in remote or environmentally vulnerable areas may require additional funding for infrastructure resilience, emergency preparedness, or climate adaptation initiatives (Provins Forthcoming). Conversely, tribes in more urban or economically developed regions may channel federal

funds towards economic diversification, education, or healthcare, reflecting the nuanced ways in which geographic context shapes financial needs.

Hypothesis 7 (Geography Hypothesis): *Tribes located in different regions of the U.S. will receive different levels of federal funding.*

Lobbying

Tribes may attempt to use lobbying efforts to persuade or exert influence over Congress and bureaucratic agencies during the funding process. At the congressional level, lobbying serves as a direct channel through which tribes articulate their needs, concerns, and policy preferences to lawmakers. By engaging in lobbying activities, tribes not only enhance their visibility but could also increase their chances of being considered on legislative agendas and advocate for increased financial support. The impact of tribal lobbying extends to the bureaucratic agencies responsible for implementing and administering federal programs. Tribes employ lobbying as a means to cultivate relationships with key agency officials, influencing the regulatory and administrative decisions that govern the distribution of funds. By actively participating in the rule-making processes and submitting comments on proposed regulations, tribes can directly shape the criteria and mechanisms through which federal funds are disbursed.

Lobbying both Congress and bureaucratic agencies may amplify tribes' ability to ultimately impact the amount and nature of financial resources flowing to their people and communities. By lobbying, tribes position themselves to shape the policies that govern federal funding, ensuring that their needs are not only heard but also translated into tangible financial support from the U.S. Federal Government. However, the effectiveness of these efforts often hinges on the tribes' ability to articulate their needs, demonstrate the impact of federal policies on their communities, and build alliances with policymakers and bureaucrats. Successful lobbying can result in increased federal funds allocated to specific tribal initiatives or broader support for tribal economic development.

Hypothesis 8 (Lobbying Hypothesis): *As a tribe increases its lobbying efforts, the tribe will be more likely to observe an increase in federal funds during subsequent funding periods.*

Inter-tribal Organizations

A tribe's membership in intertribal organizations may impact the allocation of federal funds. At the most basic level, intertribal organizations can play a crucial role in fostering collaboration and knowledge-sharing among member tribes. Through these networks, tribes gain access to valuable information, best practices, and successful advocacy strategies employed by their counterparts. This shared knowledge empowers tribes to navigate the complexities of federal funding more effectively, ensuring that they are well informed and equipped to make compelling cases for increased financial support.

Further, intertribal organizations may help with the creation of a unified agenda that reflects the diverse needs of member tribes. This shared agenda, when presented to federal decision-makers, carries greater weight and legitimacy, increasing the likelihood of favorable policy outcomes and enhanced financial allocations. The interconnectedness established through these organizations not only strengthens the tribes' collective bargaining power but also fosters a sense of community that transcends individual interests, promoting a broader understanding of tribal needs within the federal government.

These organizations serve as collective voices, aggregating the interests and concerns of multiple tribes into a unified platform. By participating in such intertribal associations, tribes enhance their advocacy capacity, presenting a consolidated front that commands attention in federal decision-making circles. This collective strength amplifies their influence during other interactions with the federal government such as lobbying efforts or testifying in congressional hearings, and, thereby directly affecting the amount of federal funds received.

Hypothesis 9 (Inter-Tribal Network Hypothesis): *If a tribe belongs to an inter-tribal association, the tribe will be more likely to receive higher levels of federal funding than tribes that do not belong to an inter-tribal association.*

Data and Methods

The analysis of this paper is focused on explaining variation in funding from the Department of the Interior, specifically the determining factors behind the variation. To perform this analysis, we construct a panel dataset of federally recognized American Indian tribes from fiscal year 2001 to fiscal year 2021. The dependent variable in this analysis is *DoI funding*, the total value awarded to a tribe by all DoI sub-agencies in a given year, measured in hundreds of thousands of dollars. For more information on how this data was collected and coded, see the previous section that goes into greater detail about the data.

We included a number of possible determinants as our independent variables. First, we account for *enrollment*, the number of members that belong to a tribe. Tribal enrollment can be thought of as the best measure of a tribe's population of citizens. Yearly enrollment data is taken from the Department of Housing and Urban Development Indian Housing Block Grant (IHBG) data, one of the only publicly available measures of tribal enrollment for the years covered in this analysis. Tribal enrollment in this data is self-reported by tribes to HUD, in theory, to partially determine the value of IHBGs the tribe will receive. However, enrollment is understood not to greatly impact the value of these grants, and tribes are not required to update their enrollment numbers every year, so the same enrollment number is typically used for three to five years (Akee, Henson, Jorgensen, and Kalt 2020). Because tribal membership varies greatly (from under 10 to over 300,000), we log this variable to account for the skewed distribution.

Second, we also account for the *American Indian and Alaskan Native (AIAN) population* on a tribe's land. This data is drawn by HUD in the IHBG dataset from Census Bureau data of individuals reporting their race as AIAN alone or AIAN with another race. It is important to distinguish AIAN population from enrollment. Enrolled members do not have to live on land that belongs to their tribe. Likewise, many individuals, AIAN or not, who live on tribal land do not belong to the tribe associated with that territory. This is especially relevant in Oklahoma where most reservations were destroyed when Oklahoma was granted statehood, so significant portions of the population on tribal land in Oklahoma are not members of the associated tribe. We also log

this variable to deal with a skew in the data. We also include in our analysis the *number of AIAN households below 30% of national median income*. This data is also based on Census Bureau data compiled by the HUD IHBG dataset. This measure is meant to act as a rough measure of poverty on tribal land.

Next, we included measures of tribal land in three forms. First, we include a binary variable for whether a tribe has any *land base*. This includes a reservation, off-reservation trust land, an Oklahoma Tribal Statistical Area (OTSA), or a Tribal Designated Statistical Area (TDSA). A tribe's control and responsibilities to their land may vary depending on what type of land base they hold, but treat them as equal in this analysis. Second, we calculate the *total area of land* belonging to a tribe in square miles. Third, we calculate the *total area of water* belonging to a tribe in square miles. We separate out these variables because certain kinds of DoI funding may be dependent on one but not the other. For example, a common purpose for awards given to tribes is to deal with dam infrastructure or manage waterways and fisheries. We log both of these measures.

We operationalize *gaming activity* as a binary variable for whether the tribe operates a casino or not. And we also include *regional variables* to examine differences in geographic locations. We categorize every tribe into either the Southwest, Southeast, Pacific, Northeast, Great Plains, Great Lakes, California, or Oklahoma region. We made California and Oklahoma separate regions for this analysis because they stand out from other geographic areas for a number of reasons. California has more tribes than any other state, and many of these tribes are extremely small in both enrollment and land size. Oklahoma also has a high number of tribes, including many of the largest tribes by enrollment, and as previously mentioned, tribal land and the AIAN population may not determine Oklahoman tribes' funding in the same way it does other tribes because of how tribal land exists in Oklahoma. The Southwest region is the comparison group for the final analysis and is thus dropped from the proceeding models.

The unit of analysis in this paper is tribe-year. If a tribe reported receiving zero funding from the DoI for the entire time period included in this analysis or reported zero enrollment in the HUD IHBG data, they were dropped from the analysis. Because of the significant shift in DoI funding

discussed in the previous section, we run models (1) including all years, (2) including only the pre-2010 data, and (3) including only the post-2012 data. We also run models dropping California and Oklahoma to check for the robustness of our results. All models are run using year-fixed effects.

Results

Table 1 displays the results for the OLS models estimating the effects of tribal population and geographical characteristics on the amount of funds provided to federally recognized tribes by the Department of the Interior. All models include year fixed effects and use robust standard errors clustered at the year level.

Model 1 includes all federally recognized tribes in the lower 48 states and the full set of years (2001-2021) in our sample. Tribal enrollment has a positive and statistically significant impact ($p < .01$) on the amount of federal funds that are given to a tribe. This provides evidence in support of Hypothesis 1. Interestingly, as the population of American Indian population on a reservation increases there is a negative and statistically significant effect ($p < .01$) on the amount of funds given to a tribe by the federal government. Considering these results together, larger tribes receive more money from the federal government but this effect is moderated by the number of American Indians that are living on a tribe's reservation. As the amount of a tribal reservation population that is 30% below the median income, increases, there is a positive, statistically significant effect ($p < .01$) on the amount of federal funding received from the federal government. This indicates support for Hypothesis 2 where tribal populations that are more economically vulnerable will receive more funding from the federal government.

A tribe having at least one gambling establishment has a positive and significant effect ($p < .01$) on federal funding. This provides some support for Hypothesis 4 that having gambling establishments increases interactions with the federal government and fails to provide support for Hypothesis 3 that tribes with gambling establishments have a decreased need for federal funding. There is a negative and statistically significant relationship ($p < .01$) between tribes that have any land base (reservation, OTSA, TDSA) and federal funding. This is in the opposite direction of our expectation presented in Hypotheses 5. Given the negative indicator for reservation population

and for having a reservation, there needs to be both more theoretical and empirical exploration of these findings.² Both variables for the size of the reservation land and water area are positive and significant ($p < .01$ and $p < .01$, respectively). These findings provide support for Hypothesis 6.

Finally, there is substantial regional variation in federal funding. The reference group is Southwest for our regional variables. Tribes in the Great Plains, Southeast, and Pacific regions receive significantly more federal funding than tribes in the Southwest ($p < .01$, $p < .01$, $p < .01$, respectively). Northeast and Oklahoma regions receive significantly less federal funding than tribes in the Southwest ($p < .01$, $p < .01$, respectively). There is no significant difference in the federal funding received by tribes in the Great Lakes and California compared to tribes in the Southwest. While we did not have specific directional expectations for the regions, these findings support the general expectation in Hypothesis 7 that there would be regional variation.

Table 1: OLS Models Estimating the Effects of Tribal Characteristics on Department of the Interior Funds Given to Tribal Governments

	<i>Dependent variable:</i>				
	DoI Funding (100,000s per year)				
	Full (1)	Pre-2010 (2)	Post-2012 (3)	No CA (4)	No OK (5)
Enrollment (ln)	6.706** (2.151)	1.093* (0.422)	12.826** (2.808)	17.589** (4.696)	12.547** (1.483)
AIAN Pop (ln)	-2.405** (0.809)	0.252 (0.237)	-5.019** (1.036)	-3.135* (1.119)	-4.402** (0.672)

²It may be the case that we see persistent differences in results using another measure such as federal funding per capita.

	1	2	3	4	5
Pop Below 30%	0.043** (0.010)	0.008** (0.002)	0.091** (0.012)	0.087** (0.011)	0.094** (0.010)
Median Income					
Land (ln)	2.126** (0.450)	1.024** (0.164)	3.946** (0.618)	6.267** (1.272)	4.087** (0.412)
Water (ln)	1.888** (0.628)	-0.174 (0.228)	4.196** (0.819)	1.837 (0.892)	5.247** (0.455)
Land Base	-26.594** (5.646)	-10.791** (1.268)	-50.046** (7.173)	-75.030** (15.678)	-36.443** (3.110)
Gaming	4.864** (0.814)	3.699** (0.506)	7.962** (1.154)	15.120** (1.942)	6.187** (0.940)
Great Plains	15.693** (3.498)	3.822 (2.393)	31.781** (4.222)	22.969** (3.640)	28.019** (5.269)
Great Lakes	-1.086 (1.755)	-6.447** (1.419)	2.208 (3.112)	-0.851 (3.805)	3.755 (3.062)
Southeast	18.871** (6.279)	-4.651 (2.318)	47.066** (6.295)	44.556** (4.820)	50.959** (6.012)
Northeast	-12.486** (3.108)	-5.560** (0.533)	-13.784** (3.408)	-8.368 (4.602)	-11.484** (3.170)
Pacific	10.306** (2.936)	-1.685 (1.744)	22.684** (1.789)	24.057** (2.367)	23.412** (1.757)
California	2.316 (1.974)	-2.529** (0.716)	5.633 (3.586)	-	10.860** (1.659)
Oklahoma	-32.232** (7.017)	-12.057** (1.730)	-63.861** (8.495)	-68.946** (8.055)	-

Observations	6,806	2,895	2,945	2,032	2,617
Tribes	336	326	335	233	297
Adjusted R ²	0.382	0.198	0.641	0.634	0.726

All models include year fixed effects. Models 4 and 5 include only post-2012 data.

*p<0.05; **p<0.01

There was a substantial decrease in federal funds to tribes during the 2010-2012 time frame and then a sharp increase in funds given to tribes post-2012 (as noted in the “Federal Awards to Native American Tribes” section). To account for the differences in funding and provide an initial check on the robustness of our results in Model 1, we include two models splitting up the data to account for the pre-2010 and post-2012 time periods. Model 2 displays the results for the pre-2010 timeframe. The direction and significance of the results for enrollment, the proportion of reservation population 30% below the poverty level, reservation, reservation land area, and gaming are consistent with Model 1. There is a change in direction and significance for reservation population, water area, and several of the regional variables in the model. Reservation population becomes positive and insignificant ($p > .05$). Reservation water area becomes negative and insignificant ($p > .05$). The Great Plains stays positive but becomes statistically insignificant ($p < .01$), the Great Lakes stays negative but becomes statistically significant ($p < .01$), the Southeast and Pacific turn negative and statistically insignificant ($p > .05$), California turned negative and statistically significant ($p < .01$), and Oklahoma persists as negative and statistically significant ($p < .01$). Model 3 displays the results for the post-2012 timeframe. The results in Model 3 are consistent in direction and significance with the results presented in Model 1.³ The difference in results from Model 2 and Model 3 show a clear difference in federal funding for tribes during these two time periods.

³The size of the results vary between the models.

While we control for regional variation, there are two states –California and Oklahoma – where the number and size of the tribes in these states may be impacting the results presented in Model 1. In Model 4 and Model 5, we exclude each of these states respectively as a second robustness check. The results for each of these models remain largely consistent with Model 1, however, some differences do exist. In Model 4, which includes all non-California tribes, the reservation water area becomes insignificant ($p > .05$). The differences in these models do not provide differences in the support for our primary hypotheses discussed for Model 1.

In summary, we find strong, initial evidence in support of our Population (Hyp. 1), Need (Hyp. 2), Increased Lobbying Capacity (Hyp 4), Reservation (Hyp. 5), Reservation Size (Hyp. 5), and Geography Hypotheses (Hyp. 7). We find limited or no support for our Decreased Need Hypothesis (Hyp. 3). In future iterations of the paper, we will test Lobbying (Hyp. 8) and Inter-Tribal Network Hypotheses (Hyp. 9) given that we are still collecting data for the variables to operationalize these concepts.

Discussion

This paper has examined the factors that shape the allocation of federal funds to Native American Tribes. We argued that population and geographic characteristics, lobbying effects, and inter-tribal networks impact the amount of federal funds received by tribes. The empirical findings not only lend support to hypotheses positing the impact of population size and vulnerability, gambling establishments, and reservation characteristics on federal funding but also highlight crucial timing frames and regional variations in these relationships. The evidence suggests that tribal population dynamics, reflecting both size and community vulnerability, significantly influence the amount of federal funds received. The presence of reservations and the economic success of tribal gaming enterprises emerged as salient factors in the amount of federal funding received by tribes. In future iterations of this manuscript, we plan to include an empirical examination of the effect of tribal lobbying activities and inter-tribal networks on federal funding outcomes.

This research has provided an initial insight to the financial relationship between tribes and the U.S. Federal Government and there are several directions for research by scholars and prac-

titioners. First, future studies could expand the scope to include data from agencies beyond the Department of the Interior. Examining the patterns and determinants of federal funding across diverse agencies could offer a more comprehensive understanding of the broader federal landscape and its implications for tribal governance and development.

Second, exploring the types of federal funding allocated to tribes represents an important avenue for future inquiry. Investigating whether certain types of funds are more sensitive to population dynamics, lobbying efforts, or specific regional characteristics can shed light on the targeted areas where federal support is most crucial for tribal self-determination and development.

Third, a critical area for future research involves delving into the U.S. government's perspective on changes in federal funding over time. Understanding the policy shifts, legislative considerations, and administrative priorities that spur variations in federal funding can provide valuable insights into the evolving dynamics of the tribal-federal relationship. This could involve examining historical policy documents, legislative debates, and executive branch priorities to unpack the U.S. government's motivations and decision-making processes.

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