Alternative measurements of Indian Country: understanding their implications for economic, statistical, and policy analysis

The term “Indian Country” is often used to mean either the demographic group of Native Americans in the United States or the geographic, tribal communities in which many Native Americans live. This double meaning has led to various treatments of the socioeconomic measures describing Indian Country. Unfortunately, some of these treatments can potentially lead to inaccurate or misleading analyses of Indian Country, for two reasons. First, because socioeconomic data on Indian Country are sparse, analysts frequently do not have the ideal data for their studies, and they have to make do with the only information they can obtain that is close to the concept being analyzed. Second, some previous studies have already mistakenly “mixed apples and oranges” with regard to Indian Country data (as suggested above) and, in so doing, have set a precedent for others to follow. This article addresses this problem by offering a reality check on the alternative definitions of Indian Country and on how different they truly are. The article then provides a taxonomy of these definitions, offering guidance on when they should be applied in efforts to promote the most accurate and reliable findings possible.

The definition of Indian Country has two extremes, with a wide gray area between them. At one extreme is a precise, legal definition used by any federal agency, such as the Bureau of Indian Affairs (BIA), that commonly analyzes Indian Country and reports findings about it. At the other extreme is a vague operational definition that refers to any commonly used demographic classification of Native Americans in the United States. The choice of definition by analysts is often arbitrary, as is the case when they conveniently adopt the definition used in their data sources. However, because the choice of definition can affect the analytical results obtained by researchers, it should not be arbitrary, adopted out of convenience, but reasoned and deliberate in order to deliver the most meaningful and relevant results. This is the topic of this article.
In strict legal terms (the first definitional extreme mentioned above), Indian Country is defined in 18 U.S.C. § 1151 and 40 CFR § 171.3 as "(a) all land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation, (b) all dependent Indian communities within the borders of the United States whether within the original or subsequently acquired territory thereof, and whether within or without the limits of a state, and (c) all Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same."¹ This definition has been accepted into practice by federal agencies.²

The other definitional extreme contains several open-ended options for what might be called Indian Country. These include the U.S. Census Bureau’s “self-identified” AIAN population, for which that agency develops statistics through its American Community Survey (ACS). A similar set of socioeconomic statistics are provided by the U.S. Bureau of Labor Statistics (BLS) Current Population Survey (CPS). One of the notable differences between the U.S. Census Bureau’s measurement of Indian Country and the federal legal definition is that the latter applies only to federally recognized tribes, whereas the former includes state-recognized tribes as well.³ (See appendix.)

Because the U.S. Census Bureau, unlike the BIA, includes state-designated tribal service areas in its measurement of Indian Country, it could be argued that Indian Country is effectively larger for the U.S. Census Bureau than it is for the BIA. Of the 695 tribal areas identified in the U.S. Census Bureau’s “My Tribal Area” database,⁴ only 582 could be matched to federally recognized tribes; the remaining 113 could not be matched, because they were associated with tribal entities that were not federally recognized. For example, 75 of the 113 tribal areas that could not be matched are in Hawaii, which has no federally recognized tribes. However, other ways of defining Indian Country would indicate that tribal areas represent far less than half of all Indian Country, in the sense that most AIANs in the United States do not live in tribal areas. This fact is common knowledge among those who study the AIAN population, but it often appears to be unknown to many members of the public, including, perhaps, individuals who may be associated with media coverage or policy analysis of Indian Country.

Using data for the self-identified AIAN population from the CPS, Mary Dorinda Allard and Vernon Brundage Jr. recently published a Monthly Labor Review (MLR) article titled “American Indians and Alaska Natives in the U.S. labor force.”⁵ Some of the most revealing estimates presented in that article are those for employment differences between AIANs who live in tribal areas and AIANs who live outside tribal areas. (See table 1.)

### Table 1. Selected labor force measures for AIANs (alone or in combination with other races), averages for the combined years 2016–18

<table>
<thead>
<tr>
<th>Measure</th>
<th>Total</th>
<th>Residing in AIAN area</th>
<th>Not residing in AIAN area</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Total population</td>
<td>In labor force</td>
</tr>
<tr>
<td></td>
<td>Number (thousands)</td>
<td>Percent of total</td>
<td>Number (thousands)</td>
</tr>
<tr>
<td>Total population</td>
<td>5,086</td>
<td>939</td>
<td>18.5</td>
</tr>
<tr>
<td>In labor force</td>
<td>3,117</td>
<td>494</td>
<td>15.8</td>
</tr>
<tr>
<td>Not in labor force</td>
<td>1,969</td>
<td>445</td>
<td>22.6</td>
</tr>
<tr>
<td>Unemployed</td>
<td>226</td>
<td>54</td>
<td>23.9</td>
</tr>
<tr>
<td>Unemployment rate (percent)</td>
<td>[1]</td>
<td>10.9</td>
<td>6.6</td>
</tr>
</tbody>
</table>

See footnotes at end of table.
Although the 2020 recession caused by the coronavirus disease 2019 (COVID-19) pandemic led to increases in unemployment rates, table 1 reveals statistics generally applicable to the prepandemic period. On the basis of Allard and Brundage’s findings, one can estimate that only 18.5 percent of the roughly 5 million people who self-identify as AIAN-AOIC (alone or in combination [with other races]) reside in the tribal areas identified in BLS data. However, this estimation may be misleading, because many other AIAN-AOIC households may live in the vicinity of these tribal areas, that is, in extended “tribal service areas” as described below. Even more revealing is the difference in AIAN-AOIC unemployment between tribal areas and localities outside those areas. Unemployment is much higher in tribal areas (10.9 percent) than outside of them (6.6 percent). This difference reflects a common understanding about Indian Country, namely, that moving out of a tribal area often increases the odds of finding employment. These findings reveal that, in discussing employment in Indian Country, one should clearly differentiate between the situations facing Native Americans living in tribal areas and the situations facing Native Americans in the United States in general.

Another approach that researchers can use to measure Indian Country from an economic perspective is to analyze listings of organizations that are either headed by Native Americans or located in tribal areas. One example of this approach is a recent study, titled “Reservation nonemployer and employer establishments: data from U.S. Census longitudinal business databases,” by the Center for Indian Country Development (CICD) at the Federal Reserve Bank of Minneapolis. In general, however, such studies rightly do not claim to be capturing all of Indian Country per se; instead, they focus on specific aspects of Indian Country. For example, the identification of businesses that are physically located in tribal areas would include many businesses that are not owned by Native Americans and would exclude many (and probably most) Native-owned businesses that are not physically located in tribal areas (but that may easily be in the vicinity of tribal areas, in a “border town”). Likewise, as discussed in greater detail in the sections that follow, the employment level of businesses inside tribal areas may not reflect the employment of the residents of those areas. Finally, when using data sources based on the ownership or location of businesses, analysts should be careful in interpreting the findings of studies that were never intended to cover Indian Country at an aggregate, or comprehensive, level. For instance, the aforementioned CICD study does not include any tribes in Alaska. In addition, it does not include the Navajo Nation (which, alone, represents about 10 percent of the tribal-area AIAN population), because, according to the study, the Navajo Nation’s “exceptionally large area and population make it an extreme outlier for our purposes.”

How findings can be highly dependent on the definition of Indian Country

Given the various definitions of Indian Country that exist, one’s analytical findings about Indian Country would depend on the precise definition one uses. As a quick example, suppose one were to ask the question, “Is home ownership (the proportion of households who own their dwellings) greater in Indian Country than in the United States overall?” The answer could be yes or no, depending on how one defines Indian Country. If the analyst is studying the living conditions in the tribal areas of the United States, the answer would be affirmative, indicating...
that home ownership is greater in Indian Country than in the United States, on average. Households in tribal areas tend to own their dwellings at higher rates than the national average, simply because, in tribal areas, far fewer households rent out apartments (especially because tribal areas are generally rural). As a statistic, however, a “yes” answer could be misleading, because, in general, the rate of home ownership for any demographic group is seen as a reflection of greater household wealth. In this broad sense, home ownership can be an indicator of a demographic group’s relative economic well-being. In tribal areas, however, the homes that households generally own often have a lower value, on average, than other homes in the United States and, in terms of living conditions, are often much worse than typical rented apartments. Higher-than-average home ownership in tribal areas can thus be a rather misleading statistic, because it may suggest a level of wealth that is nonexistent.

From a different perspective, one should note that the majority of people who would consider themselves to be AIAN in the United States—and who would also be considered by others to belong to this racial group—do not live in tribal areas (as was shown in table 1). Most AIANs who live outside tribal areas have a lower-than-average rate of home ownership, which is most likely explained simply by their relatively low household income. Therefore, if this more general AIAN population is what is meant by Indian Country, one would find the rate of homeownership in Indian Country to be below average. Indeed, by this indicator alone, this population may appear to be worse off, on average, than the population of people who live in tribal areas, although, in reality, the national AIAN population is better off, on average, in terms of income and living conditions.

In the analytical literature on Indian Country, it is not uncommon for very different definitions of Indian Country to enter into and out of the same discussion, sometimes even within the same paragraph of text. For example, one might find a study that presents statistics on the relatively low income levels and high unemployment rates of people living in tribal areas and, then, within the same thread, mentions the relatively low homeownership rate of all AIAN households in the United States (as if the former explains the latter). Some studies of Indian Country do, indeed, mix measurements in a manner that is inconsistent with scientific methods of analysis.

This methodological problem may be exacerbated by there being a continuum, in the discourse on Indian Country, between rigorous statistical analysis, at one extreme, and qualitative generalizations, at the other. All else being equal, the more removed the discussion is from a mathematical or objective measurement approach—and the closer it is to an approach involving public relations and advocacy—the more likely it is for this statistical “mixture” of sorts to take place. Nevertheless, the problem can still be found even within what would otherwise appear to be purely scientific approaches. In technical terms, this problem may be described as a failure of the analysis to establish and uphold, at the outset, a consistent analytical “domain,” which defines exactly what it is that is being studied. Analyses cannot waver back and forth over what that domain is—doing so would not be analytically valid and would discredit the legitimacy of the study and its findings.

It is also worth noting that there is no single “correct” definition of Indian Country. In fact, each definition is important in its own right, depending on what questions need to be asked and answered. Moreover, there is no absolute requirement that only one definition be used throughout any study—only that, whatever definition is used in a given argument, it should be transparent and not confused with any other definition. For example, there is nothing wrong with a study stating the following: “Most tribal-area residents own their dwellings, while most members of the AIAN population in the United States do not.” If each domain is unambiguously identified, any statement about that specific domain may be valid and informative. Moreover, the researcher’s choice of domain often requires a compromise, or balance, among what is most appropriate conceptually, what can feasibly be
measured, and what has already been measured (and for which there already exists a useful body of available data). These issues are explored in the sections that follow.

**A taxonomy of alternative definitions**

Table 2 presents a taxonomy of alternative definitions of Indian Country as they may be used in economic and statistical analyses. There is a total of nine alternative definitions, or domains, for the socioeconomic analysis of Indian Country. In theory, additional domains could be identified in various ways; however, the nine identified here are the most common in studies of Indian Country, primarily because they are the ones for which data are available.

### Table 2. Taxonomy of alternative definitions of Indian Country

<table>
<thead>
<tr>
<th>Conceptual basis</th>
<th>Variations</th>
<th>Code</th>
<th>Socioeconomic characteristics of people</th>
<th>Characteristics of employers</th>
<th>When the measure is most relevant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geography (where people and businesses are located)</td>
<td>Designated tribal land areas</td>
<td>GL</td>
<td>Population lower than for GS and GC</td>
<td>High poverty/low income/high unemployment (especially among AIAN-AOIC)</td>
<td>Many employers of workers who live in these areas are not Native, and many of their establishments are outside the tribal area.</td>
</tr>
<tr>
<td></td>
<td>Tribal service areas (in vicinity of GL)</td>
<td>GS</td>
<td>Ranges from about 1 million (for AIAN), to 2 million for AIAN-AOIC, to about 5 million for everyone living in the area</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Census-based tribal statistical areas</td>
<td>GC</td>
<td>Mostly AIAN-AOIC; less than populations for GS or GC</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Employment in tribal statistical areas</td>
<td>PW</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population (anywhere in the world)</td>
<td>Tribal membership roles</td>
<td>PT</td>
<td>Expected to be similar to PA</td>
<td>Expected to be similar to PA</td>
<td>Very few are Native.</td>
</tr>
<tr>
<td></td>
<td>Self-identified AIAN—alone</td>
<td>PA</td>
<td>About 3 million; most not in tribal area</td>
<td>Lower than national average but higher than GL, GS, and GC</td>
<td>Comparing the experience of Native Americans with that of other races in the United States</td>
</tr>
<tr>
<td></td>
<td>AIAN-AOIC</td>
<td>PC</td>
<td>About 5 million; vast majority outside tribal area</td>
<td>Lower than national average but higher than PA</td>
<td></td>
</tr>
<tr>
<td>Institutions (who owns them)</td>
<td>Tribal government enterprises</td>
<td>LT</td>
<td>Population of employees depends on which organizations are recognized. Many employees may not be Native.</td>
<td>Data do not exist on the economic well-being of the employees of these institutions. It is likely that they are similar to national averages.</td>
<td>These employers are Native, by definition.</td>
</tr>
<tr>
<td></td>
<td>Native-run business or nonprofit</td>
<td>LM</td>
<td></td>
<td></td>
<td>Assessing the fiscal viability of tribes</td>
</tr>
</tbody>
</table>

Note: AIAN = American Indian and Alaska Native; AOIC = alone or in combination (with another race)

The table is organized into the following columns:

- Conceptual basis of the domain (geographic, demographic, or institutional)
- Variations within each conceptual basis
Population for the domain
Economic well-being of the domain’s population
Characteristics of employers (whether they are Native or not Native)
Analytical relevance of the domain

Geographic approaches to measuring Indian Country

The first three of the four domains under the geographic conceptual basis (see table 2) reflect the geographic areas in which households reside. The first domain listed is defined as the tribal area designated as legal, tribal land (although there are finer categories within this designation). The second domain is generally an expansion of the first, to include a wider geographic area in which households may be located and receive services from the tribe (thus the name "tribal service area"). A similar geographic area is what the U.S. Census Bureau has defined, in consultation with the tribes, as a tribal statistical area. These areas are particularly important in terms of data availability, because the households living in them are the ones for which the U.S. Census Bureau collects and maintains data.

Using the data collected through the ACS, the U.S. Census Bureau has developed an elaborate database—the aforementioned “My Tribal Area” database—that provides socioeconomic data on each tribal area. Tribal areas in the database are rigorously defined, especially geographically, which makes them comparable (although not identical) to those conforming to the legal definition provided previously. Still another geographically based definition of Indian Country involves the “service area” of tribes.

Already mentioned briefly, the service areas of tribes, and the service populations that reside in those areas, have historically been defined in a periodic report to Congress titled the American Indian Population and Labor Force Report, also known as the “Labor Force Report” (LFR). The most recently published LFR provided the following background information:

Information has been collected since 1982 on the population and employment conditions of American Indians and Alaska Natives in federally recognized tribes. This information has been published in the American Indian Population and Labor Force Report. Since 1992, the collection and reporting of this information has been performed pursuant to Public Law 102-477—the Indian Employment, Training, and Related Services Demonstration Act of 1992, as amended. 25 U.S.C. § 3416(a). The Act provides for: [A] report on the population, by gender, eligible for the services which the Secretary provides to Indian people. The report shall include, but is not limited to, information at the national level by State, Bureau of Indian Affairs Service Area, and tribal level for the—(1) total service population; (2) the service population under age 16 and over 64; (3) the population available for work, including those not considered to be actively seeking work; (4) the employed population, including those employed with annual earnings below the poverty line; and (5) the numbers employed in private sector positions and in public sector positions.

As just stated, Congress required information on the service populations of BIA geographic service areas that is consistent with U.S. Department of the Interior programs designed to provide services to tribal members living in those areas. The LFR defined the term “service population” as follows:
The tribe’s estimate of all American Indians and Alaska Natives who are living on or near the tribe’s reservation (or tribal area) during the 2010 calendar year and who are eligible to receive services funded by Indian Affairs. This definition is consistent with previous American Indian Population and Labor Force Reports. The service population of a tribe is not the same as the members (or “enrollment”) of the tribe. For example, members of one federally recognized tribe, whose tribal area is not nearby, may be living nearby the tribal area of another federally recognized tribe and they may be eligible to receive services from that nearby tribe. In this case they will be recognized as belonging to the service population of the nearby tribe.  

It is important to note that, originally (in 1992), 25 U.S.C. § 3416 (section 17) required the Secretary of the U.S. Department of the Interior to develop and publish the LFR “in consultation with the Secretary of Labor.” This requirement was changed by amendment on April 6, 2017, and the LFR now must be prepared by the Secretary of Labor “in consultation with the Secretary, Indian tribes, and the Director of the Bureau of the Census.”

Although the service-area population measure of Indian Country was mandated as the measure to be used in the LFR—and despite its intuitive appeal as a “practical measure”—in practice its use was fraught with difficulties. Among these was the obvious problem of where to draw the line in the continuum of distance implied by “nearby” in the definition of service area. For instance, suppose “nearby” is first defined as one’s residence being within a 1-hour drive from a geographical tribal area, although this definition is difficult to apply in practice. If that definition is then revised by increasing the driving time to, say, 2 hours, the measured service-area population of a tribe may more than double.

Another problem is that, even if narrowly defined, the service areas of nearby tribes will often overlap. This possibility implies that, to avoid population double counting, other information about tribal membership would be needed. However, as indicated in the definition of service population, if two tribes are near each other, a member of one tribe may still receive services from the other tribe. This implies that the only way one might accurately estimate the service population of each tribe is neither by geography nor by membership; rather, it is by the observed receipt of services. Because such estimation requires detailed data that are not readily available, the best an analyst of Indian Country might be able to accomplish is to develop socioeconomic statistics for groups of tribes in the same geographic areas, rather than for individual tribes, especially if the tribes are close together or share the same area.

For these and other reasons, measuring service populations in Indian Country appears to be conducted only for the LFR. The populations in the U.S. Census Bureau’s tribal areas could be regarded as lower bounds on such service-area populations, because any tribal members living in those areas are most certainly within the bounds of the service area.

The fourth domain under the geographic conceptual basis in table 2 involves establishments physically located in tribal statistical areas. The relevant population associated with this domain consists of the employees of these establishments and the households to which these employees belong. Establishments in tribal statistical areas need not be Native-owned, but they are much more likely to be Native-owned than establishments outside tribal statistical areas. Likewise, the employees who work for an establishment in a tribal statistical area need not be residents of that area, nor do they need to be Native, although they are much more likely to be Native than employees of establishments outside the tribal statistical area.
Generally, an asymmetry exists between employment inside and outside tribal areas. It is much more common for someone who lives inside a tribal area to work outside the tribal area (e.g., in a “border town”) than it is for someone who lives outside a tribal area to work inside the tribal area. For this reason, the population of households living in a tribal statistical area is likely to have a rate of employment that is much higher than that which would be obtained by measuring how many people are employed by establishments that are physically located in the tribal area. As a simple example, suppose that 1,000 tribal members live in a tribal statistical area, are in the labor force, and are the only labor force participants living in the area. However, suppose further that there are only 500 full-time employment opportunities available in the tribal area, all filled by tribal members. Under this situation, a household survey would be unlikely to yield an unemployment rate of 50 percent for the tribe. This is because some tribal members of the original 1,000 may be fully employed in a border town right outside the tribal area. If the number of these members is, say, 450 (for a total of 950 working tribal members), a household survey would yield an unemployment rate of 5 percent for households living in the tribal area. As the use of telework increases, it will become more common for workers who live in tribal areas to work for organizations that are physically located (in terms of their headquarters) outside those areas.

For this reason, surveys collecting employment information from establishments (sometimes called “tribal enterprises”) located inside tribal areas may tell us little about the employment of tribal members who live in those areas. Because many people can live in a tribal area and work right outside of it, the best way for an analyst to acquire information about employment status is to ask individuals known to live in the area whether they are working (wherever that may be). Furthermore, because many of the worst cases of poverty and unemployment among Native Americans in the United States exist within geographical tribal areas, it is this domain that is arguably the most relevant to the study of poverty alleviation. Another important consideration in this type of analysis is that many people—and, in some cases, most people—who live in a tribal area are not AIAN or AIAN-AOIC.

Indian Country based on population surveys

The next conceptual basis for defining Indian Country is the population basis, which identifies people as either enrolled tribal members or individuals who self-identify (in a U.S. Census Bureau survey) as AIAN or AIAN-AOIC. On the one hand, focusing only on AIAN or AIAN-AOIC individuals who live in tribal areas would have the advantage of homing in on the most severe cases (on average) of poverty among Native Americans. On the other hand, such a focus may underestimate, in a variety of ways, the economic opportunities offered to Native Americans. For example, in partly meeting its trust responsibilities, the federal government may offer educational grants to tribal youth, enabling them to acquire selective secondary and tertiary education that is offered outside the tribal area where the youth originated. Other tribal members who originally lived in a tribal area may similarly follow employment opportunities elsewhere, including those with the federal government (such as enrolling in the military, in which Native Americans are overrepresented in proportion to their population). The economic circumstances of individuals who remain in the tribal area may then reflect a biased sample of the actual economic circumstances faced by an earlier generation. Here, again, there is an analytical ambiguity associated with alternative definitions of Indian Country.

As an example, suppose a tribe initially has 1,000 individuals in the labor force, all living in the tribal area, of which only 900 are employed. These figures suggest that the tribe has 100 unemployed people, and its unemployment rate is 10 percent. Now, suppose that 50 of those 100 unemployed people move out of the tribal area, becoming
residents in a new location, where they also get a job over the next year, while 50 new, young, unemployed people enter the labor force in the tribal area by simply becoming old enough to work. If we define the analytical domain in terms of the tribal members living in the tribal area at any point in time, we would conclude that the tribe has always experienced an unemployment rate of 10 percent (with 100 out of 1,000 people always out of work). On the other hand, if we restrict the domain to the original cohort of 1,000 people in the labor force, we would find that as many as 950 individuals were able to find jobs, which would imply that the unemployment rate of the original tribal cohort is 5 percent rather than 10 percent. It could be argued that this latter analytical approach is more informative for understanding the economic prospects of tribal members, because it holds the original domain constant. However, adopting this approach requires the ability to analyze what happens to AIAN-AOIC populations when they are not living in tribal areas. As indicated in table 2, a focus on self-identified AIAN-AOIC populations has the additional advantage of capturing the specific experiences of Native Americans and comparing them with the experiences of individuals of all races who also live in the tribal area.

One disadvantage of focusing on AIAN-AOIC populations regardless of geography, however, is that the geographic areas in which these populations live (especially tribal areas) may have special importance to some agencies. One such agency is the BIA, whose mission generally focuses on economic development and social assistance within tribal communities located on, or near, tribal land. The greater the focus is on geographically defined, Native communities, the more relevant it becomes for statistics on Indian Country to be based on geography rather than population.

It follows that there are both advantages and disadvantages to using geographically based or population-based domains in socioeconomic analyses of Indian Country. The task of the analyst is not to find the “perfect domain,” which is never possible (and certainly not possible here), but to report accurately whatever he or she might conclude from the use of any particular domain. As indicated in table 2, geographically based domains are more relevant to policy issues involving poverty alleviation. Population-based domains, on the other hand, are more useful for comparing the experience of Native Americans in the United States with the experience of other ethnic and racial groups.

Indian Country based on the ownership of organizations

One other frequently used conceptual basis for defining Indian Country is that of institutional ownership. Here, the focus is on those institutions that are either tribal government enterprises or businesses and nonprofit organizations owned by a tribal member. As shown in table 2, using tribal government enterprises as the domain is most appropriate for assessing the fiscal viability of tribes. This is because tribes generally rely on the success of their government enterprises to raise revenue for tribal governments and for the provision of services by tribal governments to tribal members. For a variety of reasons, some of which may be obvious, tribes cannot rely on income taxes levied on their members for such funds. Some tribes with particularly profitable government enterprises, especially in the gaming and mining industries, generally translate this success into “per cap” distributions to their members, thereby increasing their community’s economic well-being, infrastructure and government services, and economic opportunities.

At the same time, however, too much should not be read into the progress (or lack thereof) of tribal enterprises in creating jobs for Native Americans. Most tribal enterprises may be seen as hiring primarily Native workers, but these enterprises are typically fairly small. The largest of these enterprises, especially in the gaming industry, hire
mostly non-Native workers, so their success may not be as closely tied to the creation of jobs for AIAN-AOIC populations as might be thought by some analysts.

The same may also be said of Native-owned businesses. In many cases, these businesses do employ Native Americans, but in other cases, their owners may be the only Native Americans affiliated with the business. Nevertheless, the success of Native-owned businesses may warrant study in its own right, in two general respects. Although this success may have a limited connection to AIAN-AOIC employment in many cases, it speaks strongly to the economic development of Indian Country, where entrepreneurship may be key to the economic advancement of many tribal communities. Even when Native-owned businesses are not headquartered in tribal areas, their success is often tied to the economic well-being of AIAN-AOIC households, and successful Native business leaders may serve as role models to Native youth. Along similar lines, many successful Native-owned businesses have also been philanthropic toward tribal communities, creating networks that have supported new generations of Native entrepreneurs.

Meeting standards of data quality

Because accurate socioeconomic data on Indian Country are often scarce, some analysts tend to accept and use whatever data may become publicly available, paying little attention to the quality of those data. This problem can be especially pronounced when data from certain sources are not reliable. Such unreliable data may result from three major causes, or any combination of them:

1. The organization collecting the data may not possess the adequate level of expertise in survey and statistical methodology that would ensure the collection and processing of high-quality, reliable data.

2. The definitions or categories used in collecting the data are inconsistent with more established standards regarding such definitions or categories.

3. The surveyed entities, or the organization processing the data, may have a vested interest in the data having higher or lower values, depending on the variable.

The last of these possible causes may not necessarily reflect any deliberate deception on the part of the entities that provide or process the data. For example, in cases involving an estimation that can be arrived at through equally defensible, alternative methods, the method yielding the most favorable result might be employed without there being any deception. However, the chosen method may still cast a shadow over objectivity.

As an example of what can occur to prevent data quality problems, consider a 2010 Indian Affairs labor force survey of federally recognized tribes. Data from the survey were to be used in the production of the American Indian Population and Labor Force Report, which, as mentioned previously, was eventually submitted to Congress in January 2014. As also mentioned, one of the main statistics being sought by the survey—and which became a prominent feature of the report—was the tribal service-area population of individual tribes. This population measure was meant to estimate the number of tribal members both in the tribal area and in the vicinity of the tribal area (close enough for tribal members to receive services from the tribe). This measure was not meant to include entire tribal enrollments, which often counted people who lived far away from the tribal area (and in some cases even outside the United States). In response to the survey, many tribes provided what appeared to be reasonably accurate estimates of their service-area populations. Some other tribes, however, did not have such estimates readily available and simply reported their enrollment numbers as their service-area populations. (Because the
survey also asked for enrollment numbers, this practice was easy to detect when both numbers were observed to be identical.) Some of the claimed service-area populations far exceeded the U.S. Census Bureau population estimates for all AIAN-AOIC populations in that broad geographic area. Given this inconsistency, the Office of Management and Budget advised the U.S. Department of the Interior to revise some of the tribal service-area estimates for the report on the basis of the U.S. Census Bureau data. This advice was then carried out in the production of the report, after consultations with tribes.

As providers of service-area data on Indian Country, the U.S. Census Bureau and BLS generally have certain advantages over other data providers (such as trade associations or individual tribal entities) in ensuring data quality. Among these advantages (which other organizations may possess as well) are having well-developed vetting and peer review of survey methodologies and statistical analyses and operating under mandates that ensure scientific objectivity. In this regard, Susan Offutt, former Chief Economist at the Government Accountability Office and Administrator of the U.S. Department of Agriculture Economic Research Service, has written the following about federal statistical agencies:

Federal statistical agencies subscribe to guidelines that establish the primary importance of their work of policy relevance, credibility, trust, and independence. Now in its fourth edition, Principles and Practices for a Federal Statistical Agency (known as the “purple book”) is a product of the National Academies’ Committee on National Statistics…. While intended explicitly for the 12 largest, or principal, statistical agencies, the logic of principles and practices applies to any unit of government that performs statistical analysis.

The Office of Management and Budget (OMB) coordinates the federal statistical system and promotes fidelity to the guidance in the purple book. In addition, OMB issues statistical policy directives that govern the release and dissemination of statistical products. These products include census and survey data, economic indicators, and analysis of these data. Published in 2008, Directive No. 4 is aimed at ensuring that “statistical data releases adhere to data quality standards through equitable, policy-neutral, transparent, and timely release of information to the general public.”

Examples of cases in which federal statistics should be carefully examined

One example of how Indian Country statistics could be analyzed more carefully involves the methods employed in a U.S. Social Security Administration study titled “Measures of health and economic well-being among American Indians and Alaska Natives aged 62 or older in 2030.” In this study, which is based on data collected from the U.S. Census Bureau Survey of Income and Program Participation (SIPP), Amy Dunaway-Knight et al. present socioeconomic statistics, such as population and median per capita income, for a population they call the “AIAN population.” The authors explain that “individuals described as AIAN in our analysis are those who listed their race as ‘American Indian, Eskimo or Aleut’ in the SIPP.”

Attached to this explanation is the following endnote: “For the SIPP panels…respondents could select only a single race. However, readers should be aware that the AIAN population is heterogeneous and includes individuals with single- or multi-race ancestry.” The endnote basically describes the survey results as being limited by excluding those members of the AIAN-AOIC population who would consider themselves AIAN-AOIC if given the
opportunity to provide this information in a survey response, but who would not self-identify in the single-race AIAN category. To the extent that this limitation may be seen as a sampling error (as implied by the endnote itself), it may also reflect a biased sampling error. That is, among all AIAN-AOIC individuals, those who self-identify as AIAN (as being of a single race) are more likely to live in a tribal area, more likely to be unemployed, and more likely to have lower income (as discussed earlier in this article in the context of Allard and Brundage’s findings). Overall, one might see the AIAN population sample from the SIPP as a hybrid between the AIAN (alone) population and the AIAN-AOIC population. More precisely, by asking respondents to select a single race, the SIPP is expected to capture all of the AIAN (alone) population and only some of the “in-combination” AIAN-AOIC population. This means that the socioeconomic statistics acquired from the SIPP data, described as “AIAN statistics,” might differ from the AIAN and AIAN-AOIC statistics that come from any other surveys (such as the ACS) that provide respondents with the option to report more than one race.

The results here will depend, arbitrarily, on the specific domain used in the analysis. This is precisely the type of problem that federal statistical standards are designed to avoid and that can create confusion regarding the public’s consumption of these statistics. For example, suppose that, because of the difference in sampling just described, the SIPP systematically yielded a higher AIAN median household income than the ACS. If some researchers or members of the media were then to compare the SIPP statistic in year \( X \) with the ACS statistic in year \( X + 10 \), the change in median income would be much lower than if they were to compare the ACS statistic in year \( X \) with the SIPP statistic in year \( X + 10 \). Of course, in theory, researchers should only perform time-series analyses on the same, unchanging statistical sources. Unfortunately, statistics on Indian Country are too rare for this ideal to be consistently upheld, making the consistency of the domain (across different data sources) essential for accurate comparisons of Indian Country over time.

Another example of how statistics from different sources can vary involves a marked difference between the employment estimates for tribal gaming enterprises provided in Allard and Brundage’s MLR article and those provided by an independent consulting group—Meister Economic Consulting, LLC.22 Meister Economic Consulting, which consists of eight team members led by Alan Meister, specializes in the Indian gaming industry and publishes an annual Indian Gaming Industry Report.23 It describes its organization as follows:

Meister Economic Consulting is an economic consulting firm that specializes in the application of economic research and analysis to litigation, regulatory, public policy, business development and operations, and economic development matters…. Despite the complexity of our work, we convey data, analyses, and results in straightforward, simplified terms so that they can be easily understood. For these reasons, we are routinely called upon to analyze complex issues and assist clients in high-stakes and controversial matters, and their work is widely accepted and well respected by governments, regulators, courts, the media, and the public.24

Table 3 shows Allard and Brundage’s estimates, based on data from the Quarterly Census of Employment and Wages (QCEW), for employment in tribal establishments. According to these estimates, total employment in tribal establishments (for all employees, regardless of ethnicity) was about 334,500 in 2017, of which about 50 percent (168,000) was in the industry “casinos and casino hotels.” It should be noted that these estimates are neither official BLS estimates nor federal statistics in general; they are the reported findings in a research article and, thus, may be considered preliminary.
On a webpage discussing the effects of COVID-19, Meister Economic Consulting reports the following: “The one-month closure impacts directly at tribal casinos alone are estimated as follows:…296,000 people out of work.”

This implies that employment in tribal casinos (and presumably casino hotels) is at least 296,000. (Here, the term “at least” is used because one might expect that a skeleton crew of guards would still be working to protect the facility.) This estimate of tribal casino employment in 2020 is 76.2 percent higher than Allard and Brundage’s estimate for 2017.

This difference in estimates cannot be explained easily by the 3-year difference in their timing, and it could be due, in part, to differences in how the estimates were derived, such as when, within the year, the data were collected. Thus, instead of being actual, the difference may result from different estimation methodologies. However, as Allard and Brundage point out in their MLR article, there are several other possible reasons for the difference:

The QCEW data presented in this article should not be regarded as a complete count of establishments owned and operated by…Indian tribes…. First, not all establishments owned and operated by Indian tribes or Alaska Native entities are required to file Unemployment Insurance (UI) tax and may not appear in administrative UI records…. Second, [these] establishments…can be difficult to identify…. Also, an Indian tribe…may have jurisdiction over land in more than one state and may operate establishments outside of the state in which it is primarily located…. Third, the QCEW identifies…only those establishments that are owned and operated by federally recognized tribes; establishments owned and operated by state-recognized tribes…are not identified. Finally,…sometimes reporting establishments do not break out all of their individual...
worksites…. In this case, the record would be coded to the dominant industry…and would not identify all…their correct industry codes.\textsuperscript{26}

With regard to the limitations of the statistics reported in Allard and Brundage’s \textit{MLR} article—in particular their reliance on entities with UI tax records—it is important to note that tribal casinos are not required to participate in federal unemployment compensation programs.\textsuperscript{27} Therefore, the employment levels shown in table 3—especially for Indian gaming—would tend to be lower for this reason alone, all else being equal. (During the 2020 recession caused by the COVID-19 pandemic, the eligibility of Indian casino workers for federal unemployment compensation of some kind may have been in flux.) For these reasons, the employment levels in table 3 may be regarded as \textit{lower bound} estimates, whereas the Meister Economic Consulting employment estimate of 296,000 for tribal casinos should be seen as representing a more comprehensive account of all possible workers in Indian-run casinos (whether they can receive UI or not). As mentioned earlier, however, it is likely that most of the 296,000 laid-off employees in the Meister Economic Consulting estimate are not AIAN.

\textbf{Conclusion}

The choice of domain in performing any socioeconomic study of Indian Country requires careful thought. In addition, it often requires a reasoned balance between theoretical and practical considerations, because a domain that might be ideal from a theoretical perspective may not offer an adequate amount of data from which one can draw meaningful conclusions. In choosing a domain, and in interpreting research results, analysts must be especially careful not to assume relationships that do not truly exist, such as assuming a high correlation between, on the one hand, investment in Native-owned businesses that are located \textit{anywhere} and, on the other, poverty alleviation in tribal areas. In this regard, Indian Country researchers must also be careful in drawing conclusions from previous studies without first investigating whether those studies exhibit this kind of error themselves. Although this article has focused on economic variables (especially employment), researchers in other fields have encountered the same issues with regard to health measures of Indian Country.\textsuperscript{28}

Given the analytical challenges described in this article, even studies that have been peer reviewed and published by reputable institutions have not been completely immune to potential misinterpretations resulting from inconsistencies in the definition of Indian Country. Of course, it remains a widely accepted principle that researchers should not have overconfidence in particular studies only because these studies have been published in peer-reviewed journals.\textsuperscript{29} Along these lines, federal agencies that generate and analyze socioeconomic statistics on Indian Country may wish to consider establishing an interagency working group to objectively and scientifically peer review those statistics and analyses.

\textbf{Appendix: U.S. Census Bureau definitions of tribal areas}

The U.S. Census Bureau defines tribal areas as follows:\textsuperscript{30}
• American Indian reservations-federal (federal AIRs) are areas that have been set aside by the United States for the use of tribes, the exterior boundaries of which are more particularly defined in the final tribal treaties, agreements, executive orders, federal statutes, secretarial orders, or judicial determinations. The Bureau of Indian Affairs maintains a list of all federally recognized tribal governments and makes final determination of the inventory of federal AIRs. The Census Bureau recognizes federal reservations (and associated off-reservation trust lands) as territory over which American Indian tribes have primary governmental authority. American Indian reservations can be legally described as colonies, communities, Indian colonies, Indian communities, Indian rancherias, Indian reservations, Indian villages, pueblos, rancherias, ranches, reservations, reserves, settlements, or villages. The Census Bureau contacts representatives of American Indian tribal governments to identify the boundaries for federal reservations through its annual Boundary and Annexation Survey. Federal reservations may cross state and all other area boundaries.

• American Indian reservations-state (state AIRs) are reservations established by some state governments for tribes recognized by the state. A governor-appointed state liaison provides the names and boundaries for state-recognized American Indian reservations to the Census Bureau. State reservations must be defined within a single state but may cross county and other types of boundaries.

• American Indian tribal subdivisions, described as additions, administrative areas, areas, chapters, county districts, communities, districts, or segments, are legal administrative subdivisions of federally recognized American Indian reservations and off-reservation trust lands or are statistical subdivisions of Oklahoma tribal statistical areas (OTSAs). These entities are internal units of self-government or administration that serve social, cultural, and/or economic purposes for the American Indians on the reservations, off-reservation trust lands, or OTSAs. The Census Bureau obtains the boundary and name information for tribal subdivisions from tribal governments.

• Alaska Native Regional Corporations (ANRCs) are corporate entities organized to conduct both for-profit and nonprofit affairs of Alaska Natives pursuant to the Alaska Native Claims Settlement Act. ANRCs have legally defined boundaries that subdivide all of Alaska into twelve regions (except for the area within the Annette Island Reserve). The nonprofit officials of ANRCs review their legal boundary and may, in the absence of participation by the Alaska Native village official, act as proxy in the delineation of ANVSAs in their regions.

• Alaska Native Village Statistical Areas (ANVSAs) are statistical geographic entities representing permanent and/or seasonal residences of Alaska Natives who are members of, or receive governmental services from, the defining Alaska Native village (ANV). ANVSAs are intended to include only an area where Alaska Natives, especially members of the defining ANV, represent a substantial proportion of the population during at least one season of the year.
Off-reservation trust lands are areas for which the United States holds title in trust for the benefit of a tribe (tribal trust land) or for an individual American Indian (individual trust land). Trust lands can be alienated or encumbered only by the owner with the approval of the Secretary of the Interior or his/her authorized representative. Trust lands may be located on or off a reservation; however, the Census Bureau tabulates data only for off-reservation trust lands with the off-reservation trust lands always associated with a specific federally recognized reservation and/or tribal government. As for federally recognized reservations, the Census Bureau obtains the boundaries of off-reservation trust lands from American Indian tribal governments through its annual Boundary and Annexation Survey. The Census Bureau recognizes and tabulates data for reservations and off-reservation trust lands because American Indian tribes have primary governmental authority over these lands. The Census Bureau does not identify fee land (or land in fee simple status) or restricted fee lands as specific geographic areas.

Oklahoma Tribal Statistical Areas (OTSA s) are statistical areas that were identified and delineated by the Census Bureau in consultation with federally recognized American Indian tribes based in Oklahoma. An OTSA is intended to represent the former American Indian reservation that existed in Indian and Oklahoma territories prior to Oklahoma statehood in 1907. OTSAs are intended to provide geographic entities comparable to the former Oklahoma reservations so that statistical data can be viewed over time. OTSAs were referred to as Tribal Jurisdiction Statistical Areas (TJSAs) in the 1990 Census data products.

State Designated Tribal Statistical Areas (SDTSA s) are statistical geographic areas identified and delineated for state recognized tribes that are not federally recognized and do not have an American Indian reservation or off-reservation trust land. The Census Bureau works with a governor appointed state liaison to delineate statistical areas for state-recognized tribes. SDTSA s do not cross state lines and are limited to the state in which the respective tribe is officially recognized. SDTSA s provide state recognized tribes without reservations statistical data for a geographic area that encompasses a substantial concentration of tribal members. SDTSA s were called State Designated American Indian Statistical Areas (SDAISAs) for Census 2000.

Tribal Designated Statistical Areas (TDSA s) are statistical geographic entities identified and delineated for the Census Bureau by federally recognized American Indian tribes that do not currently have an American Indian reservation and/or off-reservation trust land. A TDSA is intended to encompass a compact and contiguous area that contains a concentration of individuals who identify with the delineating federally recognized American Indian tribe. TDSAs are also intended to be comparable to American Indian reservations within the same state or region and provide a means for reporting statistical data for the area.


NOTES


2 See, for example, “Definition of Indian Country” (Environmental Protection Agency), https://www.epa.gov/pesticide-applicator-certification-indian-country/definition-indian-country.

“My Tribal Area” (U.S. Census Bureau), https://www.census.gov/tribal/.


Ibid., p. 5.


“My Tribal Area” (U.S. Census Bureau), https://www.census.gov/tribal/.


Ibid., p. 12.

Ibid., pp. 6–7.


Ibid.

Ibid.
22 Allard and Brundage, “American Indians and Alaska Natives in the U.S. labor force”; and “Coronavirus impact on tribal gaming; as of April 21, 2020” (Meister Economic Consulting, 2020).

23 For more information about Meister Economic Consulting, see http://www.meistereconomics.com/.


25 “Coronavirus impact on tribal gaming; as of April 21, 2020” (Meister Economic Consulting, 2020).


29 See, for example, Steven Payson, “Cite this economics paper! It is time for the house of cards to fall down,” Open Economics, De Gruyter, vol. 2, no. 1, January 2019, pp. 1–18; and Sascha Schweitzer and Jan Brendel, “A burden of knowledge creation in academic research: evidence from publication data,” Industry and Innovation, vol. 28, no. 3, February 2020, pp. 283–306.


Related Articles


Related Subjects

Race and ethnicity | Current population survey | Unemployment | Employment | Social issues | Geographic areas