An Exploratory Analysis of Measures Generated Utilizing American Community Survey Microdata in Consideration of Required Elements of Future American Indian Population and Labor Force Reports

Examining publicly accessible microdata from the American Community Survey (ACS), this article explores the degree to which the survey's data can be used as the primary source for the American Indian Population and Labor Force Report (AIPLFR). Utilizing 5-year ACS state-level microdata estimates for the 2018–22 period on persons who self-identify as American Indian and Alaska Native either alone or in combination with another race (AIAN AOIC), key measures were developed to show the extent that ACS data satisfies the requirements for the AIPLFR that are outlined in Public Law 115-93.

Introduction

In February 2022, responsibility for developing and publishing a biennial report on American Indians and Alaska Natives (AIANs) who are members of federally recognized tribes—referred to as the American Indian Population and Labor Force Report (AIPLFR)—was transferred from the U.S. Department of Labor's (DOL) Employment and Training Administration (ETA) to the Bureau of Labor Statistics (BLS). In accordance with the Indian Employment, Training and Related Services Consolidation Act of 2017 (Public Law 115-93), the report must "include, but is not limited to, information at the national level by state, Bureau of Indian Affairs Service area, and tribal level for (1) the 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."

In consideration of the data elements outlined in the law, several measures were tabulated (as approximately as possible) from American Community Survey (ACS) microdata to illustrate the extent to which the survey's data can be used for the AIPLFR. It should be noted that an important element of the law is to consult with Native American tribes and tribal stakeholders regarding the development of the report. Historically, tribal members have been vocally opposed to using the ACS as the AIPLFR's primary data source for a host of different reasons and have suggested tribally generated data as the best existing data source, some even recommending administrative data on participants in various federal programs. Unfortunately, there is a lack of access to tribal survey instruments and documentation, and in the current resource environment, utilizing existing and available data sources in an attempt to satisfy the requirements of the law as best as possible is the lone option. Hence, upon a thorough evaluation of available data sources, the ACS, despite its issues, limitations, and tribal opposition, provides the most potential for producing indicators similar to those required by the 2017 law. This paper examines the suitability of such measures for use in future AIPLFRs, while providing an overview of the limitations of the ACS data in terms of developing indicators.

ACS Data Retrieved

To illustrate the adequacy of ACS data for use in future AIPLFRs, BLS retrieved pooled 5-year state-level data on persons who self-identify as American Indian and Alaska Native alone or in combination with another race (AIAN AOIC) for the period 2018–22. These data were obtained from the Census Bureau's repository of Public Use Microdata Sample (PUMS) files—a set of untabulated records about individual people or housing units—and cleaned, manipulated, and analyzed with Python and SAS to develop estimates of the measures similar to those outlined in Public Law 115-93. These tabulations could be validated by checking them against the

estimations extracted from the Census Bureau's Microdata Access Tool (MDAT), an instrument that allows data users to create custom tables from various surveys and supplements, including the ACS. While detailed economic data on AIANs are available by state, as well as by select tribes and tribal areas, using the Census Bureau's primary data dissemination tool (data.census.gov), the data products, specifically the ACS Selected Population Tables (SPT) and American Indian and Alaska Native Tables (AIANT), are pre-populated and do not include estimates for all the measures outlined in the 2017 law. (A comprehensive overview of BLS's evaluation of the SPT and AIANT Census Bureau products can be found on BLS's American Indian Report (AIR) webpage.) Hence, utilizing the PUMS files, BLS was able to produce select measures that were similar to those required by the 2017 law.

Shortcomings of ACS Data in Relation to Public Law 115-93 Requirements

A key requirement specified in Public Law 115-93 regarding the AIPLFR pertains to the inclusion of information on the total service population—that is, AIANs who are enrolled members of a federally recognized tribe and are thus eligible for services provided by the Secretary of the Interior. The ACS collects data on those who self-identify as AIAN but does not provide information on the tribal service population. Further, the law requires the inclusion of information at the state, tribal, and Bureau of Indian Affairs (BIA) service-area level. While state-level data are available in the ACS, the detailed economic data needed to develop indicators for each of the 575 federally recognized tribes are not. Due to factors such as large margins of error, estimates of zero, or the absence of numerical estimates, a significant number of tribal groupings lack the sufficient population and labor force data that are needed to make statistically defensible computations. Additionally, information on AIANs by BIA service area is not available either. These universe restrictions alone limit the ability to fulfill all the requirements

of the 2017 law using the ACS as the primary data source. However, for strictly illustrative purposes, state-level population and labor force measures for those who self-identify as AIAN AOIC were tabulated and are discussed below.

Defining the Measures

Public Law 115-93 details a list of six specific population and labor force elements that must be included in future AIPLFRs. These elements are as follows:

- The total service population
- The service population under age 16 and over age 64
- The population available for work, including those not considered to be actively seeking work
- The employed population, including those employed with annual earnings below the poverty line
- The number employed in the private sector
- The number employed in the public sector

Based on this list of elements, a set of measures were developed using 5-year ACS PUMS files for the period 2018–22 to illustrate the extent to which ACS data can fulfill the indicator requirements outlined in the law. As discussed in the previous section, information on the service population and service area is not available in the ACS, and the detailed economic data needed to calculate estimates at the tribal level for each federally recognized tribe are not available either. As a result, for this exercise, estimates were tabulated for AIAN AOICs at the state level only. It is important to note that these measures include data on AIAN AOICs who are members of federally recognized tribes, state recognized tribes, as well as individuals who are not enrolled members of tribes. The comprehensive list of indicators generated is as follows:

- Total AIAN AOIC population
- AIAN AOIC population, 16 years and over
- AIAN AOIC population under age 16 and over age 64

- AIAN AOIC population ages 16 to 64
- AIAN AOIC population available for work, including those not actively seeking work
- Civilian employed AIAN AOICs, 16 years and over
- Employed AIAN AOICs with earnings below the poverty line
- Employed AIAN AOICs in the private sector
- Employed AIAN AOICs in the public sector

While most of the measures are definitionally straightforward, a few require clarification regarding the components used to compute their estimates. For example, the "AIAN AOIC population available for work, including those not actively seeking work" indicator consists of AIAN AOICs who are 1) unemployed, 2) not in the labor force, and 3) not enrolled in school. According to the Current Population Survey (CPS) definition, persons who are neither employed nor unemployed are counted as "not in the labor force." This category includes retired persons, students, those taking care of children or other family members, and others who are neither working nor actively seeking work. Unlike the ACS, the CPS collects information on this group's desire for and availability for work, job search activity in the prior year, and reasons for not currently searching. However, for this exploratory analysis, the assumption was made that the ACS definition of persons not in the labor force generally aligns with that of the CPS. (The assumption was also made that people not enrolled in school are available for work.)

The "Employed AIAN AOICs with earnings below the poverty line" indicator also warrants further discussion. The Department of Health and Human Services (HHS) bases its poverty guidelines on the number of persons in a family or household, not on an individual or their personal earnings. Also, the ACS does not capture the number of employed persons with earnings below the poverty level, but rather a person's income-to-poverty ratio and their total earnings. Nonetheless, for this exercise, the "Employed AIAN AOICs with earnings below the poverty line" measure is comprised of employed AIAN AOICs whose total person's earnings are

less than $15,060, which is the HHS threshold for a person in a family or household of one in 2024 (excluding Alaska and Hawaii)[1,2].

Key Takeaways

Population Estimates

According to the ACS data, 6.7 million people in the United States self-identified as AIAN AOIC during the 2018–22 period. (Complete results of the exercise generating state-level estimates similar to those required by Public Law 115-93 can be found in Appendix A.) The states with the highest AIAN AOIC populations were California (slightly over 1.0 million), Oklahoma (547,773), Texas (500,392), and Arizona (417,272), while the District of Columbia (8,872), Vermont (8,930), New Hampshire (12,181), and Delaware (12,662) had the lowest AIAN AOIC populations. (See Table 1.) Alaska (20.3 percent), Oklahoma (13.8 percent), New Mexico (11.6 percent), and South Dakota (10.2 percent) had the highest shares of AIAN AOICs relative to their states' total populations, while Pennsylvania (0.86 percent), New Hampshire (0.88 percent), Massachusetts (0.90 percent), and West Virginia (0.94 percent) had the lowest shares relative to their states' overall population. (See Chart 1.)

By age distribution, a little over one-third (34.7 percent) of AIAN AOICs in the United States were under the age of 16 or over the age of 64. Of the AIAN AOIC population age 16 and over, 35.2 percent were available for work. (Note that this figure includes AIAN AOICs not actively seeking work.) Looking at the total U.S. population, 36.8 percent of the total U.S. population

[1] Information retrieved from https://aspe.hhs.gov/sites/default/files/documents/7240229f28375f54435c5b83a3764cd1/detailed-guidelines-2024.pdf.

[2] In 2024, the poverty thresholds for Alaska and Hawaii were $18,810 and $17,310, respectively. For accuracy of estimates, the thresholds for these states were used in generating estimates for the "Employed persons with earnings below the poverty line."

were under the age of 16 or over the age of 64, and 39.0 percent of the U.S. population age 16 and over were available for work.

Employment Estimates

In 2018–22, nearly 2.9 million AIAN AOICs age 16 and over were employed, accounting for more than half (56.6 percent) of the AIAN population age 16 and over. About one-fourth (22.5 percent) of these employed AIAN AOICs had earnings below the poverty threshold for a one-person household ($15,060). By state, Alaska had the highest share of employed AIAN AOICS with earnings below the poverty level as a percent of the total employed population with earnings below the poverty level (23.2 percent), followed by Oklahoma (13.5 percent) and New Mexico (11.5 percent). Looking at employment by class of worker, about two-thirds of employed AIAN AOICs worked in the private sector (2,102,056, or 72.9 percent), while just under one-fifth (517,818, or 18.0 percent) of employed AIAN AOICs worked in the public sector.

Measures of Errors for Aggregated Data

Because most of the estimates generated for this exercise were derived from aggregated data across population subgroups, standard errors (SEs), margins of error (MOEs), and coefficients of variation (COVs) were calculated to assess their reliability. For each of the estimates generated, the COVs fell within the range of 0.5 percent and 25.5 percent, indicating that the sampling errors of the approximations were very small to moderate relative to the estimates themselves. The MOEs—that is, the range of values within which the true population parameter is expected to lie based on the same data— for each of the estimates are presented in Table 1.

Conclusion

This paper examined the suitability of using pooled 5-year ACS microdata to tabulate estimates for inclusion in future AIPLFRs and provided an overview of the survey's shortcomings as they

pertain to the development of the required indicators outlined in Public Law 115-93. While measures similar to those detailed in the 2017 law could be generated utilizing this data source, the indicators created do not fully satisfy the population and labor force elements required by the law. Hence, these approximations should only be used for exploratory purposes in terms of what types of estimates can be calculated using ACS data and are not intended to serve as official AIPLFR data elements.