

Demographic Factors Associated with Poverty among American Indians and Alaska Natives

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Abstract Using data from the American Community Survey for the period 2006–2010, this study provides up-to-date demographic information about poverty among American Indians and Alaska Natives. Our analysis investigates both absolute poverty and relative poverty and distinguishes between four racial categories of American Indians and Alaska Natives including single-race American Indian; biracial white and American Indian; biracial black and American Indian; and other multirace American Indian. We also report results for thirty-seven of the largest self-reported tribal affiliations for single-race American Indians. In general, all of the American Indian and Alaska Native groups have higher levels of absolute and relative poverty rates compared to non-Hispanic whites. The problematic character of poverty among American Indian racial groups is underscored by their substantially higher odds of being poor (relative to non-Hispanic whites), even after statistically taking into account age, gender, education, metropolitan status, and region of residence. Significant variation across the thirty-seven tribal groups is evident, however, with single-race American Indians

having the highest level of poverty. This variability suggests the need for future research into the various tribal affiliations and tribal economies.

Keywords Poverty · Relative poverty · American Indians · Alaska Natives

Introduction

In a fairly recent episode entitled “Hidden America: Children of the Plains,” the television journalist Diane Sawyer described the severe struggles experienced by American Indians in South Dakota.¹ She highlighted the elevated levels of extreme poverty experienced by that state’s reservation-dwelling American Indians. While some commentators have suggested that US society has now entered a new “post-racial” era, the continuation of high levels of poverty among American Indians and Alaska Natives (if indeed such extremely high levels still persist) would suggest little change from traditional historical patterns for at least this racial group.

However, the extent to which high levels of poverty currently characterize American Indians and Alaska Natives (henceforth American Indians) as a group cannot be clearly determined from Sawyer’s report because it provided only a qualitative case study for just one tribe. Although useful as a qualitative investigation, more systematic demographic information is needed before broader generalizations can be scientifically ascertained. While some older demographic studies of American Indians exist

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¹ Diane Sawyer, 20/20 “Report: A Hidden America: Children of the Plains,” October 11, 2011, abcnews.go.com.

(Sandefur and Sakamoto 1988; Snipp 1989), they consider only basic poverty statistics and investigate data that are by now decades old. Somewhat more recent studies of education and wages are available (Huyser et al. 2010; Sakamoto et al. 2000), but they do not investigate poverty statistics.

In short, our demographic knowledge of poverty among American Indians is surprisingly sparse and notably outdated. Much more up-to-date information is needed. If American Indians continue to be among the poorest of the poor groups in USA, then this result needs to be carefully documented and seriously assessed when describing contemporary race relations. We argue that the current poverty rates and economic characteristics of American Indians need to be more fully considered before conclusions can be reached regarding twenty-first-century USA having become post-racial. Historically, the economic circumstances of American Indians have long been seriously neglected, and a significant contribution of social scientific research is to provide up-to-date demographic information so that the disadvantaged circumstances of minority groups such as American Indians cannot be so readily forgotten once again.

In the following, we therefore seek to provide current information about the demographics of poverty among American Indians in the twenty-first century. In this respect, our primary research objective is simply descriptive and exploratory. We investigate recent years of data from the American Community Survey (ACS), which is widely utilized in social science research conducted by various US governmental agencies as well as by policy makers and academic scholars at large. We anticipate that our empirical results will be of interest to many researchers in all of those aforementioned groups who are concerned with American Indian issues.

In order to provide more descriptively informative results, our analysis distinguishes between four racial groups of American Indians (i.e., in terms of the official racial classification system utilized by the US Census Bureau), including single-race American Indian, biracial white and American Indian, biracial black and American Indian, other multirace American Indian, and across thirty-seven major tribal affiliations. Prior research on the socioeconomic conditions of American Indians has not considered the multiracial aspect of this population. While previous studies have distinguished between absolute poverty and relative poverty rates for the US population (e.g., Danziger et al. 1986; Iceland 2006; Takei and Sakamoto 2011), our analysis is the first to do so for American Indians. It is also the first modern study to report statistical results for thirty-seven of the largest self-reported American Indian tribal affiliations.

Poverty and American Indians

As noted above, prior demographic studies of poverty among American Indians are limited and outdated. One now classic study (Cornell and Kalt 1990) emphasized poverty on reservation areas and linked it to problems deriving from economic, social, and political underdevelopment. Associated with these problems was the consequent issue of unemployment, which was in turn closely connected with poverty. Although an important study that considered structural factors on reservations, Cornell and Kalt (1990) do not provide national-level information about poverty for American Indians as a group.

To be sure, the bulk of prior demographic research on American Indians has generally reported their lower levels of socioeconomic status compared to non-Hispanic whites. Education, income, and unemployment are the typical indicators that are considered in this literature (Farley 1996; Gregory et al. 1997; Hunt et al. 2010; Huyser et al. 2010; Sandefur and Liebler 1997; Sandefur and Sakamoto 1988; Snipp 1986, 1989, 1992). Speaking a native language and not speaking English fluently are associated with lower socioeconomic status among American Indians (Snipp 1989). Single-race American Indians married to other single-race American Indians tend to have lower incomes and higher poverty rates (Liebler 2004; Snipp 1989). Compared to American Indians living in metropolitan areas or in counties with no tribal lands, American Indians in counties that include tribal lands are more likely to identify as single-race American Indians with a tribal affiliation and are more likely to have lower educational attainment, higher poverty rates, a greater prevalence of female-headed households, and higher fertility rates (Liebler 2004, 2010; Sandefur and Liebler 1997; Snipp 1989).

In the following analysis, we focus more specifically on poverty, but we do so without relying solely on the official measure. The latter is most commonly used in prior demographic studies, and it is the official measure of poverty provided by the US Census Bureau. As has been often noted (Iceland 2006), this measure is an indicator of absolute poverty. Persons who live in absolute poverty reside in households in which the total money income is less than the fixed threshold that is deemed necessary for satisfying a minimal standard of living (as established by the “poverty threshold” devised by the US Census Bureau) based on their respective household size and composition. That is, the income thresholds differ by household size and composition (i.e., number of children) to indicate the cost of a minimally acceptable “basket of goods” that varies depending on the consumption needs of the entire household. In real economic terms, the income figures are constant over time, and they are not updated for improvements

in the average standard of living in society (although adjustments for inflation are allowed).

However, Brady (2003) has critiqued the concept of absolute poverty by arguing that a measure of relative poverty is more appropriate for developed societies such as the USA where food consumption is generally far above the basic subsistence level. We concur that the rationale for considering relative poverty in the USA is persuasive given the persistence of the perception of being socially defined as poor even in a society where serious malnutrition is extremely rare (Brady 2003; Meyer and Wallace 2009; Rainwater 1974). In the following, we therefore include a measure of relative poverty that has not been investigated for American Indians in prior research. As mentioned by Brady (2003:721) and Brady et al. (2013:877), relative measures often use a threshold of 50 percent of the median household income (after adjusting for household size). We adopt this approach, which is also widely used in European poverty statistics (Iceland 2006; Meyer and Wallace 2009; Rainwater and Smeeding 2004).

We do not, however, advocate the complete abandonment of the absolute measure of poverty.² Both absolute poverty and relative poverty are investigated because they may be seen as complementary rather than mutually exclusive (Iceland 2006:37). Brady argues for the importance of a relative measure based on his discussion of “social exclusion” [which may be alternatively described as a type of relative deprivation deriving from inadequate income by the broader standards of society as a whole (Iceland 2006; Meyer and Wallace 2009; Rainwater 1974)]. While his argument is reasonable, it does not negate the fact that those in absolute poverty are seriously deprived (and more so than those who are in relative poverty because the threshold for absolute poverty is lower than that for relative poverty). Both measures provide useful information about the positions of groups in the distribution of income relative to household needs. Rates of absolute poverty may be particularly relevant in the case of American Indians if they are indeed more likely to be characterized by a higher level of economic deprivation (as claimed by Diane Sawyer).

Racial and Tribal Identity

The characteristics of the native population in the USA are contingent upon who identifies as a member of the racial and ethnic group, and the American Indian identity is complicated by many generations of intermarriage with other racial groups and other tribal groups. By the end of the nineteenth century, the American Indian population was

quite small (Snipp 1989; Thornton 1987), and the chances of intermarriage were largely a result of differential population sizes. The depopulation of American Indians and the experiences created from reservations promoted increased intermarriage between American Indians and other racial groups, but also intermarriage between tribal groups (Thornton 1984, 2002, 2005). In some cases, intermarriage between tribal groups was so high that they became merged to create confederated tribes (Thornton 1984). In the 1980 Census, Sandefur and McKinnell (1986) found that American Indians have low levels of marital homogamy and high levels of intermarriage with non-Hispanic whites. The racial identity of the children of interracial marriages is largely influenced by local context; among children who live in counties with a high proportion of American Indians or have tribal lands, the children of one non-American Indian parent and one American Indian parent are more likely to identify as American Indian (Liebler 2004, 2010).

The complexity of identifying as American Indian has also been illustrated in Passel’s (1997) study of trends in American Indians’ population size. He found a substantial increase in population size in the 1960s (as well as in the 1970s and 1980s) that was beyond expected population increase, which suggests that population growth during that era was largely due to persons changing their racial identity. Although the overall population size of American Indians experienced a large population increase, the majority of the growth occurred in metropolitan areas and in counties with no tribal lands, which suggests that in areas near tribal lands, American Indian identity is relatively stable (Eschbach 1993; Passel 1997).

The racial identity of American Indian people is linked to the local context: the number of native people in the area and the proximity to American Indian reservations (Eschbach 1993; Eschbach et al. 1998; Liebler 2004). There are 566 different federally recognized tribal entities (U.S. Department of the Interior Bureau of Indian Affairs 2012a), and there are approximately seventy state-recognized tribal entities. The US Census Bureau relies on self-identified racial categories, which were defined by the US Office of Management and Budget, and American Indians provide additional ethnic information in the write-in category for their principal or enrolled tribe. Tribal affiliation is a measure of ethnicity because each tribe has its own unique language, history, and cultural practices (Liebler and Zacher 2013; van den Berghe 1967). Recently, Liebler and Zacher (2013) found that there are an increasing number of American Indians not reporting a tribal affiliation in the census. The existence of over 600 different tribal entities allows for the possibility of demographic variation in both tribal affiliation and socioeconomic status and illustrates the need for a demographic profile to include tribal affiliation in addition to racial identification.

² See Iceland (2006) for a comprehensive review of the poverty literature, including research on absolute poverty and relative poverty.

Federal Regulation of American Indian Identity and Tribes

The history of the USA has informed the dynamics of racial and tribal identity of American Indian people and their contemporary social status. With the consistent arrival of European settlers, the American Indian people experienced dislocation and drastic depopulation from war and disease (Thornton 1987). The livelihood of American Indians continued to be under threat from the US government, who established federal campaigns to relocate American Indian Tribes west of the Mississippi River (Thornton 1987). These US sociohistorical processes have shaped American Indian reservation locations and social positions (Omi and Winant 1994; Wilkins 2002). However, the American Indian racial and tribal identity is unlike any other racial group in the USA because federal law governs and legislates the very definition of who is officially recognized as an American Indian (Garrouette 2001).

Tribal citizenship is often determined by “blood quantum,” and any individual who does not meet the legal criteria set for citizenship is not allowed to enroll in their affiliated tribe (Garrouette 2001). Blood quantum, or the degree of Indian blood, is calculated by the immediacy of a full-blooded ancestor (Spruhan 2006). For instance, if an individual had one parent who was a full-blood American Indian, that individual would be considered half American Indian. Many federally recognized tribes have one-fourth blood quantum as the minimum standard for tribal enrollment, which means that the individual must have at least one grandparent who is a full-blood tribal member to qualify for tribal enrollment. This blood quantum system of identity is contrary to native traditional forms of identity, which consisted of a network of kinship (Fried 1975; Miller 2004).

In addition to its individual definitions, the federal government also determines tribal recognition or nation recognition (Cohen 1972). That is, the federal government determines the legal recognition of tribal nations and whether or not a tribe meets official definitions to exist as a tribe and benefit from federal programs (U.S. Department of the Interior Bureau of Indian Affairs 2012a, b). Federally recognized tribes are self-governing entities that maintain a government-to-government political relationship with the US government and are eligible for special services and benefits (i.e., Bureau of Indian Affairs programs and Indian Health Service access) (U.S. Department of the Interior Bureau of Indian Affairs 2012a). Many federally recognized tribes have a land base where tribal members reside and tribal government functions, but not every federally recognized tribe has a reservation (U.S. Department of the Interior Bureau of Indian Affairs 2012a, b).

The US government created and chose the location of reservations where American Indian people were to reside (Thornton 1987). It is an enduring example of the modern legacy and consequences of genocide and military conquest. Many American Indian reservations are located in rural areas that are geographically and socially isolated and are the residences of many single-race American Indians (Snipp 1989). In general, reservations offer limited economic development and employment opportunities for community members (Cornell and Kalt 1990, 1998). The sources of employment dominantly originate from single industries such as tribal government, natural resource development (timber or coal), or gaming (casinos) (Cornell and Kalt 1990, 1998). In addition to the limited employment opportunities, educational opportunities are also limited. Although some tribes have tribal colleges or universities that offer post-secondary education on or near reservations, there are only thirty-seven institutions to serve tribal members from 566 different federally recognized tribes across the USA (American Indian Higher Education Consortium 2012; U.S. Department of the Interior Bureau of Indian Affairs 2012a).

The federal governance of the American Indian identity limits the racial and socioeconomic profile of the native population. Thus, the consequences of US sociohistorical events are that American Indian people have limited advantages for socioeconomic achievement and those who identify as multiracial may have a diminished opportunity for legal recognition of their tribal identity, perhaps even limiting full participation in their affiliated tribal community. Unlike other racial groups in the USA, the high rate of interracial marriage and existence of multiracial identities among American Indians (Sandefur and McKinnell 1986)—a symbol of “racial progress” for other racial groups (Feagin et al. 2000)—limits the number of individuals who are allowed to identify and contribute to the racial and tribal population.

We anticipate that poverty rates will vary considerably by principal tribal affiliation because there is wide variation in tribal economic development through casinos, banking, and natural resource development (Cornell and Kalt 1990, 1998). Given the significance of tribal affiliation and racial identity as well as their potential influence on the demographic characteristics of American Indians, the ACS data are critically important because they permit respondents to racially self-identify and indicate their principal tribe affiliation. Similar to the 2000 US Census, the ACS includes information on whether persons identified as only American Indians (i.e., single-race American Indian) or identified as American Indian along with another racial identity (which we refer to as multiracial American Indians). The ACS data therefore permit a more precise delineation of American Indians’ racial identity. Using a

write-in category to collect tribal affiliation information permits analysis across principal tribe affiliations.

Methods

Data and Target Populations

The ACS, conducted annually by the US Census Bureau, is a household survey that is nationally representative of the US population. Unlike other demographic surveys, sampled households are required by law to respond, which improves its response rate and ensures that the collected data are not substantially affected by sample selectivity. ACS data are obtained by way of multistage cluster sampling methods utilizing a national record of households that is maintained by the US Census Bureau.

The ACS is released in 1-year estimates, 3-year estimates, and five-year estimates. The 5-year estimate (2006, 2007, 2008, 2009, and 2010) is most appropriate to use for our investigation because it allows for analysis of very small populations and detailed geographies. The combining of multiple years of the ACS is such a standard practice that the US Census Bureau provides the concatenated files on its Web site so that researchers themselves do not need to combine the years.³ In this way, the ACS provides an adequate sample size for analysis of smaller populations such as American Indians (U.S. Census Bureau 2008). Our statistical analyses are carried out separately by racial groups and tribal affiliation because our primary concern is an overview of poverty among American Indians by self-identified racial category and by principal tribal affiliation.

As mentioned above, we define and investigate the following groups: (1) single-race American Indians; (2) persons who identify as both non-Hispanic white and American Indian; (3) persons who identify as both African American and American Indian; and (4) persons who identify as both American Indian and some other race. Although other groups of American Indian-origin persons do of course exist, their sample sizes were too small in these data to permit them to be reliably investigated using multivariate statistical analysis. For example, the US Department of Interior Bureau of Indian Affairs recognizes 566 tribal entities in the USA, but the samples sizes to analyze all of these tribal affiliations are too low to permit adequate statistical analysis (U.S. Department of the

³ The ACS was established after the retirement of the long-form questionnaire from the decennial US Census. Knowing that the demographic study of smaller populations is hampered by the elimination of the long-form questionnaire, the US Census routinely provides concatenated ACS files that include multiple years of data in order to ensure that adequate sample sizes of minority groups are available for social scientific research (U.S. Census Bureau 2008).

Interior Bureau of Indian Affairs 2012a, b). We therefore limit our investigation to the thirty-seven most commonly affiliated (i.e., largest) tribal groups or categories that are available in the ACS data, including Alaskan Athabascan, Aleut, Apache, Blackfoot, Cherokee, Cheyenne, Chickasaw, Chippewa, Choctaw, Colville, Comanche, Creek, Crow, Delaware, Eskimo, Houma, Iroquois, Lumbee, Navajo, Paiute, Pima, Potawatomi, Pueblo, Seminole, Sioux, Tlingit, Tohono O'odham, Puget Sound Salish, Yakama, Yaqui, Menominee, Yuman, Tribe Unspecified, Other American Indian Tribe, Two or more American Indian Tribes, Other Alaska Native Tribes, and Both American Indian and Alaska Native. These groups consist of aggregate tribal group names as well as both federally recognized tribes and state-recognized tribes.

Variables and Analysis Plan

The two dependent variables that we analyze are measures of absolute poverty and relative poverty. They are both dichotomous. As described earlier, the absolute poverty variable applies the official US Census Bureau definition, which is well known and widely used in research. The relative poverty variable is not a specific measure that is available in the ACS, but we compute it by first adjusting the distribution of household income by family size and composition. This adjustment refers to the ratio of the income of a household relative to its respective official US Census Bureau poverty threshold. The ratio is an indicator of economic well-being and is also known as the income-to-needs ratio, and it is treated as a variable of its own distribution (Danziger et al. 1986; Iceland 2006; Meyer and Wallace 2009; Rainwater 1974; Sakamoto and Xie 2005; Takei and Sakamoto 2011). One-half of the median of this distribution is then used as the cutoff for relative poverty status.⁴ Our measure of relative poverty can thus be viewed as having a household income that is less than one-half of the median, after adjusting for household size and composition (Brady 2003).⁵ Using the 2006–2010 ACS data, we obtain a relative poverty threshold of 1.63 (the median

⁴ If Y_{ic} refers to household income for the i th household of compositional and size type c , then the income-to-needs ratio for that household (INR_{ic}) may be defined as $INR_{ic} = Y_{ic}/T_c$ where T_c refers to the US Census Bureau official poverty threshold for that compositional and size type c . Absolute poverty status is then a dichotomous variable equal to 1 when $INR_{ic} < 1.00$, while relative poverty status is a dichotomous variable equal to 1 when $INR_{ic} < 1.63$. All households in absolute poverty are also by definition in relative poverty as well.

⁵ Once a household is defined to be poor due to being below the appropriate poverty threshold, then poverty status is assigned to every member of that household including persons out of the labor force (e.g., children and retired persons). For example, every child in a household is defined as being poor if the household that they are in is considered to be poor.

income-to-needs ratio is 3.26).⁶ This threshold is thus 63 percent higher than the absolute poverty threshold of 1.00.⁷

Our logistic regression models use the householder as the unit of analysis as has been done in prior research (Iceland 2006).⁸ The dependent variable for the logistic regressions is poverty status (either absolute or relative) for our sample of householders.⁹ The control variables are the basic demographic characteristics generally related to socioeconomic status (Iceland 2006), including gender, age, a quadratic term for age, level of education, metropolitan status, and region of residence. Our basic methodological approach is to ascertain the extent to which the poverty rates of American Indians can be statistically “explained” by these demographic characteristics. This descriptive statistical exercise assesses the degree to which the poverty rate of American Indians differs from that of whites due to group differences in demographic characteristics (that also affect poverty among whites themselves). In this approach, a net “race effect” refers to the estimated difference in the poverty rate between whites and a given minority after taking into account the differences between the two groups in terms of their demographic characteristics. Thus, a “race effect” is the part of some socioeconomic indicator that is intrinsic to the minority

group per se and cannot be “explained” away by other measured characteristics (Iceland 2006; Sandefur and Sakamoto 1988; Takei and Sakamoto 2011).

In this sort of analysis, the demographic variables are used as the independent variables and should not be themselves determined by (i.e., “caused” by) poverty status as measured in a given year. For example, one’s age is clearly exogenously determined (by 1’s year of birth) because it does not become altered depending on one’s annual outcome in regard to poverty status. Furthermore, education is related to the acquisition of job skills and higher occupational attainment (and is therefore an ultimate source of one’s income level, which in turn affects poverty status), but education is usually completed in early adulthood during a time period long before the observed value on the dependent variable (i.e., whether in poverty during the year of the ACS survey). In short, education is typically treated as an independent variable in this multivariate approach to analyzing current poverty status.¹⁰

Results

Descriptive Statistics

Table 1 provides statistics on absolute and relative poverty rates for the various groups along with their sample sizes and reports the coefficient of variation for the income-to-needs ratio.¹¹ The coefficient of variation indicates the degree of inequality in the distribution of the income-to-needs ratio for the particular American Indian racial or tribal group. Our total sample of non-Hispanic whites is 99,933,063, and our total sample of American Indians (all racial identities and tribal affiliations) is 227,303. There are 122,439 single-race American Indians, 78,656 white and American Indians, 9,948 black and American Indians, and 16,260 other multiracial American Indians. Among the thirty-seven tribal affiliations, the sample size ranges from the Navajo sample size of 16,805 to the Houma sample size of 333. The absolute poverty rate for non-Hispanic whites overall is 9.5 percent, while their relative poverty rate is 18.5 percent. That is, the relative poverty is over twice as

⁶ Incomes and the calculation of poverty thresholds are all based on a single year as the time unit of analysis as is customarily done in this literature [although other approaches have been explored for the methodological purpose of analyzing poverty dynamics (Meyer and Wallace 2009)]. In order to increase the available sample size for American Indians, we use the five-year concatenated file of the ACS from 2006 to 2010, but the household income for each person in this data set is still only observed and measured for a single year.

⁷ Due to space constraints, we limit our analysis to the study of these two most common poverty measures that have been typically considered in prior literature. We leave for future research the investigation of other possible poverty measures such as persons who are in relative poverty but not in absolute poverty.

⁸ The householder is the adult in the household who served as the primary respondent for the survey. The term “household head” was used in US Census questionnaires prior to 1980, but in current census survey definitions, the term “householder” is instead used to refer to any adult respondent in the household who answers and records for the other household members.

⁹ For the purpose of our broad, exploratory study, the multivariate analysis is based on householders rather than individuals because the statistical analysis would become far more cumbersome were children included in the logistic regressions (since children’s demographic characteristics do not usually have a major or direct impact on the level of household income, which is the major factor determining poverty status). Although convenient and routinely done in this literature (Iceland 2006), we recognize that our approach has some potential limitations since the householder is not necessarily the adult in the household who has the highest level of education or the highest income. Having said that, there is no one “correct” way to aggregate the characteristics of family members to level of the household. Future research might consider such methodological issues relating to our findings, which may be slightly affected by which adult in the household is reported to be the householder.

¹⁰ The education of one’s parents is well known to have a strong effect on one’s ultimate educational attainment and could be considered to be another independent variable affecting one’s current poverty status. Like most other data sets, however, the ACS does not include information on parental education.

¹¹ ACS sampling weights were used to analyze the descriptive statistics but not used in the regression models. Since the sampling weights are solely a function of independent variables included in the regression model, unweighted regression estimates are preferred because they are unbiased, consistent, and have smaller standard errors than weighted regression estimates (Winship and Radbill 1994).

Table 1 Poverty rates by racial identity and tribal affiliation

	Absolute poverty	Relative poverty	Sample size	Coefficient of variation ^h
Overall non-Hispanic whites	0.0952	0.1852	9,933,063	0.4686
White children (Age ≤18)	0.1151	0.2185	2,191,133	0.5041
White male	0.0845	0.1663	4,831,818	0.4489
White female	0.1055	0.2036	5,101,245	0.4871
Overall American Indians	0.2313 ^a	0.3901 ^a	227,303	0.6599
American Indian children (Age ≤18)	0.2852 ^b	0.4658 ^b	75,384	0.7152
American Indian male	0.2128 ^c	0.3664 ^c	109,055	0.6394
American Indian female	0.2485 ^d	0.4121 ^d	118,248	0.6785
Single-race American Indians	0.2625 ^a	0.4331 ^a	122,439	0.6967
Multirace American Indians				
White and American Indian	0.1842 ^a	0.3300 ^a	78,656	0.6020
Black and American Indians	0.2553 ^a	0.4135 ^a	9,948	0.6897
Other multirace American Indians	0.2171 ^a	0.3579 ^a	16,260	0.6378
American Indians Tribes				
Alaskan Athabaskan	0.2109 ^g	0.3485 ^g	1,030	0.6123
Apache	0.3239 ^e	0.4995 ^e	3,153	0.7622
Blackfoot	0.3117 ^g	0.4730 ^f	1,052	0.7361
Cherokee	0.2238 ^e	0.3758 ^e	14,548	0.6465
Cheyenne	0.3676 ^e	0.5444 ^e	536	0.7995
Chickasaw	0.1428 ^e	0.2833 ^e	1,075	0.5446
Chippewa	0.2619 ^g	0.4398 ^f	5,454	0.6976
Choctaw	0.1570 ^e	0.3211 ^e	4,670	0.5835
Comanche	0.2307	0.4034	642	0.6720
Creek	0.2129 ^f	0.3477 ^e	2,250	0.6325
Crow	0.3850 ^e	0.5746 ^e	485	0.7839
Iroquois	0.2266	0.3677 ^f	2,331	0.6448
Lumbee	0.2464	0.4472 ^e	2,567	0.6903
Navajo	0.3260 ^e	0.5151 ^e	16,805	0.7490
Paiute	0.2466	0.4091 ^g	784	0.6847
Pima	0.3614 ^e	0.5247 ^e	965	0.8188
Potawatomi	0.1729 ^e	0.2927 ^e	999	0.5954
Pueblo	0.2409	0.4161	3,687	0.6629
Seminole	0.2126	0.4135	712	0.6901
Sioux	0.4042 ^e	0.5647 ^e	4,875	0.8486
Tlingit	0.1982	0.4052	802	0.6393

Table 1 continued

	Absolute poverty	Relative poverty	Sample size	Coefficient of variation ^h
Tohono O'odham Tribe Unspecified	0.3427 ^e	0.5876 ^e	802	0.7981
Aleut	0.1408 ^f	0.2707 ^e	762	0.5418
Eskimo	0.2434 ^e	0.4403 ^e	5,145	0.6679
Delaware	0.1908 ^e	0.2730 ^e	435	0.5841
Puget Sound Salish	0.2526 ^g	0.4404	949	0.6945
Yakama	0.3874 ^e	0.6153 ^e	424	0.8446
Yaqui	0.3220 ^e	0.4958 ^e	1,107	0.7490
Colville	0.2492	0.4327	457	0.6709
Houma	0.2919 ^g	0.5295 ^e	333	0.7660
Menominee	0.3178 ^e	0.4934 ^e	359	0.7572
Yuman	0.2877 ^e	0.4701 ^e	623	0.7382
Other American Indian Tribe	0.2462 ^e	0.4187 ^e	20,568	0.6785
2+ American Indian Tribes	0.2533 ^e	0.4238 ^e	3,177	0.6805
Other Alaska Native Tribes	0.1767 ^e	0.3558	793	0.5986
Both American Indian and Alaska Native	0.2308	0.3760	2,394	0.6614

^a $p < 0.001$ relative to overall non-Hispanic whites

^b $p < 0.001$ relative to white children age ≤18

^c $p < 0.001$ relative to white males

^d $p < 0.001$ relative to white females

^e $p < 0.001$ relative to overall American Indians

^f $p < 0.01$ relative to overall American Indians

^g $p < 0.05$ relative to overall American Indians

^h Coefficient of variation refers to the standard deviation of the income-to-needs ratio divided by the mean

likely as the absolute poverty and thus includes many people who are often considered the “working poor.” They are commonly perceived by others in society to be socially deprived even though most of them do not fall below the official poverty line of the US Census Bureau. White children and white females have slightly higher poverty rates than white males.

The absolute poverty rate for all American Indians is 23.3 percent, while their relative poverty rate is 39.0 percent. Poverty is considerably higher among American Indians than among non-Hispanic whites. Notable compared to the non-Hispanic white poverty rate, American Indians do not see a substantial increase in relative poverty

compared to absolute poverty. Overall, American Indian children, male adults, and female adults have higher rates of poverty compared to each of the non-Hispanic white groups. Regarding multiracial American Indians, their poverty rates are higher than non-Hispanic whites, but those identifying as white and American Indian have the lowest rate. Among those who self-identify as single-race American Indians, black and American Indian, and other multirace American Indian, the poverty rate is somewhat higher than the overall American Indian poverty rate.

American Indians are often assembled into a single aggregate group in social research because they are considered to be fairly homogeneous; however, the coefficient of variation for the income-to-needs ratio for American Indians (0.6599) is actually larger than that for non-Hispanic whites (0.4686). In terms of this measure of economic well-being, American Indians as an overall group are thus slightly less homogeneous than non-Hispanic whites, contrary to conventional thinking. The most homogeneous among the American Indian tribal groups are Chickasaw (0.5446) and Choctaw (0.5835), and the most heterogeneous groups are Sioux (0.8188) and Yakama (0.8446).

Despite the fact that every tribal group is more likely to be poorer than non-Hispanic whites, our analysis revealed considerable variability among the thirty-seven tribal groups. The groups with the highest poverty rates are Cheyenne (36.8 percent in absolute poverty and 54.4 percent in relative poverty), Crow (38.5 percent in absolute poverty and 57.5 percent in relative poverty), Sioux (40.4 percent in absolute poverty and 56.5 percent in relative poverty), and Yakama (38.7 percent in absolute poverty and 61.5 percent in relative poverty). The groups with the lowest poverty rates are Aleut (14.1 percent in absolute poverty and 27.1 percent in relative poverty), Chickasaw (14.3 percent in absolute poverty and 28.3 percent in relative poverty), Choctaw (15.7 percent in absolute poverty and 32.1 percent in relative poverty), Delaware (19.1 percent in absolute poverty and 27.3 percent in relative poverty), and Potawatomi (17.3 percent in absolute poverty and 29.3 percent in relative poverty). The variation across tribal affiliations suggests the need for further research into tribal affiliations and tribal economies.

Multivariate Analysis for Absolute and Relative Poverty for All American Indians

Table 2 shows the results for logistic regressions of both absolute poverty and relative poverty. In this model specification, all four racial groups of American Indians (i.e., single-race American Indians; biracial white and American Indians; biracial black and American Indians; and other multirace American Indians) are combined into one overall

Table 2 Logistic regression results for absolute and relative poverty for all American Indians

	Absolute poverty		Relative poverty	
	Odds ratio	Odds ratio	Odds ratio	Odds ratio
All American Indians ^a	2.823***	2.184***	2.572***	2.186***
Age		0.899***		0.883***
Age-squared		1.001***		1.001***
Male		0.44***		0.438***
Educational attainment ^b				
High school		0.463***		0.491***
Some college		0.367***		0.356***
Associate degree		0.226***		0.235***
College degree		0.148***		0.136***
More than college degree		0.098***		0.086***
Metropolitan area		0.754***		0.711***
Region ^c				
New England division		0.897***		0.894***
Middle Atlantic division		0.969***		1.018**
East North Central division		0.988		1.028***
West North Central division		1.014		1.093***
South Atlantic division		1.016*		1.038***
East South Central division		1.28***		1.322***
West South Central division		1.047***		1.1***
Mountain division		0.99		1.04***
Pseudo-R2	0.004	0.104	0.004	0.128

Reported odds ratio refers to the anti-log of the estimated coefficient

^a The reference category is non-Hispanic whites

^b The reference category is less than high school

^c The reference category is Pacific division

* $p < 0.05$, ** $p < 0.01$, *** $p < .001$ (two-tailed tests)

category. This overall combined category is hitherto simply referred to as American Indians. The reference group for these models is non-Hispanic whites.

In the first model without any demographic control variables, the estimate of the odds ratio for American Indians is 2.823 in regard to absolute poverty and 2.572 for relative poverty. Because these differentials are multiplicative in the logistic regression model, they imply that, relative to non-Hispanic whites, American Indians have 182.3 percent higher odds of being in absolute poverty (i.e., 2.823–1.000) and 157.2 percent higher odds of being in absolute poverty (i.e., 2.572–1.000). Thus, before taking

into account any demographic control variables, the chances that American Indians are in poverty are substantially greater than for whites, especially in regard to absolute poverty.

The second model in Table 2 shows the estimates after including all of the other independent variables. According to the results for this second model, American Indians have 118.4 percent higher odds of being in absolute poverty and 118.6 percent higher odds of being in relative poverty. In general, the coefficients for the second model in Table 2 are consistent with prior research, indicating that these demographic factors are associated with both absolute and relative poverty measures as expected. For example, individuals with less education are more likely to experience poverty, while individuals who reside in a metropolitan area are less likely to experience poverty.

However, the findings for the second model in Table 2 underscore the higher likelihood of American Indians experiencing poverty. After taking into account all of the demographic control variables, the net racial effect for American Indians is still very large (i.e., 118.4 percent higher odds of being in absolute poverty and 118.6 percent higher odds of being in relative poverty). In other words, a substantial net race effect is evident because the bivariate association is not statistically explained away by the demographic control variables. In the case of absolute poverty, the higher odds for American Indians are reduced from 182.3 percent (in the first model) to 118.4 percent (in the second model, which includes the demographic control variables). In the case of relative poverty, the higher odds for American Indians are reduced from 157.2 percent (in the first model) to 118.6 percent (in the second model, which includes the demographic control variables). Thus, less than half of the higher odds of being in poverty can be explained by these demographic factors for American Indians; a substantial racial effect is therefore evident in regard to the poverty of American Indians.

As for the distinction between being in absolute poverty rather than relative poverty, these findings in Table 2 do imply that demographic factors play some relevant role. The results from the second model indicate that the size of the net race effect is the same for absolute poverty and relative poverty (i.e., 118.4 percent and 118.6 percent are not significantly different either substantively or statistically). Our multivariate analysis thus reveals that the especially higher chances of American Indians being in absolute poverty (i.e., compared to non-Hispanic whites) derive from the demographic characteristics of American Indians; if American Indians had the same demographic characteristics as non-Hispanic whites, then the racial differential in the absolute poverty rate would be the same as the racial differential in the relative poverty rate. In other words, the difference between the American Indian

coefficients in the first model and the second model in Table 2 is greater in the case of absolute poverty than for relative poverty.

In regard to prior literature, this overall finding of a large net race effect of being in poverty for American Indians (including either absolute poverty or relative poverty after controlling for demographic characteristics) differs notably from the major conclusion for Asian Americans (Takei and Sakamoto 2011). For Asian Americans, the entire poverty differential (i.e., the slightly higher poverty rate among Asian Americans compared to non-Hispanic whites) can be explained by demographic characteristics. There is apparently no substantively significant race effect for Asian Americans in poverty (Takei and Sakamoto 2011).¹² Our current analysis shows that the case of American Indians is quite different.

Multivariate Analysis for Absolute and Relative Poverty by Racial Identification

Table 3 shows the results for logistic regressions of both absolute poverty and relative poverty for the four racial groups of American Indians (with the reference category being non-Hispanic whites). In the first model without any demographic control variables, the estimates indicate that, relative to non-Hispanic whites, single-race American Indians have 226.6 percent higher odds of being in absolute poverty; biracial white and American Indian have 126.4 percent higher odds of being in absolute poverty; biracial black and American Indians have 217.4 percent higher odds of being in absolute poverty; and other multirace American Indians have 138.0 percent higher odds of being in absolute poverty. In regard to relative poverty, Table 3 shows that the estimates, without controlling for any demographic variables, are as follows: 196.5 percent higher odds for single-race American Indians; 112.6 percent higher odds for biracial white and American Indians; 186.4 percent higher odds for biracial black and American Indians; and 102.5 higher odds for multirace American Indians. These results generally indicate that the highest poverty rates are for single-race American Indians and biracial black and American Indians, while the lowest poverty rates are for biracial white and American Indians and multirace American Indians.

The second model in Table 3 shows the estimates after including the demographic control variables. After doing so, single-race American Indians have 137.8 percent higher

¹² In the case of Asian Americans, nativity status and years since arriving in the USA are important demographic control variables that are included in Takei and Sakamoto's (2011) analysis because most Asian Americans are foreign born. These control variables are not utilized in this current study, however, because American Indians are all native born in the USA.

Table 3 Logistic regression models of absolute and relative poverty by racial identification

	Absolute poverty		Relative poverty	
	Odds ratio	Odds ratio	Odds ratio	Odds ratio
Single-race American Indians ^a	3.266***	2.378***	2.965***	2.359***
White and American Indians	2.264***	1.859***	2.126***	1.898***
Black and American Indians	3.174***	2.868***	2.864***	2.955***
Other bi-/multiracial American Indians	2.38***	1.957***	2.025***	1.952***
Age		0.899***		0.883***
Age-squared		1.001***		1.001***
Male		0.44***		0.438***
Educational attainment ^b				
High school		0.463***		0.491***
Some college		0.368***		0.356***
Associate degree		0.226***		0.235***
College degree		0.148***		0.136***
More than college degree		0.098***		0.086***
Metropolitan area		0.755***		0.711***
Region ^c				
New England division		0.898***		0.894***
Middle Atlantic division		0.969***		1.018**
East North Central division		0.989		1.028***
West North Central division		1.014		1.093***
South Atlantic division		1.016*		1.038***
East South Central division		1.281***		1.323***
West South Central division		1.048***		1.1***
Mountain division		0.985		1.037***
Pseudo-R2	0.005	0.104	0.004	0.128

Reported odds ratio refers to the anti-log of the estimated coefficient

^a The reference category is non-Hispanic whites

^b The reference category is less than high school

^c The reference category is Pacific Division

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ (two-tailed tests)

odds of being in absolute poverty; biracial white and American Indians have 85.9 percent higher odds of being in absolute poverty; biracial black and American Indians have 186.8 percent higher odds of being in absolute poverty; and other multirace American Indians have 95.7 percent higher odds of being in absolute poverty. As for

estimated odds of being in relative poverty, they are very similar to the estimates for absolute poverty for each group.

These estimates in Table 3 indicate that after controlling for demographic characteristics, the racial differential in absolute poverty (i.e., compared to non-Hispanic whites) is similar to the racial differential in relative poverty (i.e., compared to non-Hispanic whites). This general conclusion was also evident in Table 2 when all American Indians were grouped together as an overall category. Also consistent with the findings in Tables 2, 3 shows that less than half of the higher odds of being in poverty can be explained by the demographic variables for each racial group of American Indians; a substantial racial effect is therefore evident in regard to poverty for each racial group of American Indians. The particularly new contribution of Table 3 is to show that the highest poverty rates are evident for single-race American Indians and biracial black and American Indians, while the lowest poverty rates are evident for biracial white and American Indians and multirace American Indians. In addition, the variability in the coefficients for these American Indian groups is slightly greater in the first model (without demographic controls) than in the second model (with demographic controls), indicating that demographic characteristics of the four different American Indian racial groups partially account for the differences in their observed poverty rates relative to non-Hispanic whites.¹³

Multivariate Analysis for Absolute and Relative Poverty by Principal Tribal Affiliation

Table 4 shows the estimates of the logistic regressions of absolute and relative poverty by major tribal affiliation. For this part of the analysis, the reference category is all American Indians who are not single-race (American Indians with a tribal affiliation are classified as being single-race in these data); that is, biracial black and American Indians, biracial white and American Indians, and multirace American Indians are combined to constitute the reference group for the models in Table 4. Whites are not included in any of the results shown in Table 4. The purpose of the regression analysis is to investigate variation in poverty among single-race American Indians by tribal affiliation.

¹³ The average deviation for the four American Indian coefficients is 0.45 for the first model and 0.36 for the second model in Table 3. The differences between the four American Indian coefficients are statistically significant at the 0.001 level for both the first model and the second model in Table 3. The very small pseudo-R-squared values for the first model without demographic controls in Tables 2 and 3 partially derived from the much larger sample size of non-Hispanic whites compared to American Indians.

Table 4 Logistic regression models of absolute and relative poverty by principal tribal affiliation

	Absolute poverty		Relative poverty	
	Odds ratio	Odds ratio	Odds ratio	Odds ratio
Alaskan Athabaskan ^a	1.485***	1.375**	1.65***	1.496***
Apache	1.76***	1.454***	1.668***	1.452***
Blackfoot	1.459***	1.37**	1.437***	1.428***
Cherokee	1.102**	1.089*	1.125***	1.093**
Cheyenne	1.943***	1.708**	1.931***	1.76***
Chickasaw	0.81	0.925	0.766*	0.838
Chippewa	1.28***	1.038	1.226***	0.998
Choctaw	0.83**	0.821**	0.886*	0.845**
Comanche	1.123	1.183	1.145	1.184
Creek	1.033	0.976	0.945	0.862
Crow	2.163***	1.952***	1.999***	1.892***
Iroquois	1.022	0.977	1.033	1.04
Lumbee	1.2*	0.926	1.439***	1.156*
Navajo	2.347***	1.663***	2.318***	1.663***
Paiute	1.228	1.045	1.423**	1.261
Pima	2.163***	1.392*	1.841***	1.243
Potawatomi	0.691*	0.637**	0.831	0.751*
Pueblo	1.157*	1.043	1.142*	1.041
Seminole	1.243	1.014	1.315*	1.079
Sioux	2.133***	1.627***	1.89***	1.462***
Tlingit	0.981	1.013	1.03	1.065
Tohono O’Odham	2.497***	1.512**	2.475***	1.604***
Unspecified	1.35***	1.219***	1.325***	1.202***
Aleut	1.052	1.029	1.011	0.985
Eskimo	1.534***	1.359***	1.906***	1.675***
Delaware	0.595*	0.602*	0.529***	0.52***
Puget	1.022	1.021	1.15	1.176
Yakama	1.709*	1.518	1.645**	1.481
Yaqui	1.688***	1.322*	1.602***	1.324*
Colville	1.246	1.317	1.354	1.387
Houma	1.276	0.795	1.482	0.921
Menominee	1.779**	1.501*	1.735**	1.498*
Yuman	1.578**	1.186	1.84***	1.457**
Other American Indian Tribe	1.198***	1.089*	1.172***	1.07*
2+ American Indian Tribes	1.646***	1.497***	1.559***	1.42***
Other Alaska Native tribes	0.87	0.841	0.932	0.884
Both American Indian and Alaska Native	1.219*	1.221*	1.194*	1.203*
Age		0.948***		0.923***
Age-squared		1***		1.001***
Male		0.5***		0.507***
Educational attainment ^b				
High school		0.499***		0.505***

Table 4 continued

	Absolute poverty		Relative poverty	
	Odds ratio	Odds ratio	Odds ratio	Odds ratio
Some college		0.375***		0.38***
Associate degree		0.269***		0.282***
College degree		0.165***		0.156***
More than college degree		0.113***		0.103***
Metropolitan area		0.791***		0.774***
Region ^c				
New England division		1.303***		1.247***
Middle Atlantic division		1.399***		1.282***
East North Central division		1.254***		1.243***
West North Central division		1.478***		1.514***
South Atlantic division		1.188***		1.153***
East South Central division		1.463***		1.501***
West South Central division		1.092**		1.143***
Mountain division		1.258***		1.199***
Pseudo-R2	0.013	0.091	0.012	0.101

Reported odds ratio refers to the anti-log of the estimated coefficient

^a The reference category for each tribal affiliation is all American Indians who are not single-race

^b The reference category is less than high school

^c The reference category is Pacific division

* $p < .05$; ** $p < .01$; *** $p < .001$ (two-tailed tests)

The estimates for the first model without demographic controls reveal substantial variation in poverty rates by tribal affiliation in Table 4. Substantial variation by tribal affiliation is furthermore apparent for the second model with demographic controls. The variability is evident in regard to both absolute poverty and relative poverty. These results underscore how tribal affiliation to some extent mediates poverty among single-race category American Indians.

In general, however, almost all of the coefficients for tribal affiliation are greater than unity in both the first and the second models in Table 4. This finding indicates that most of the identified tribes have greater chances of being in poverty than the reference category, which refers to all non-single-race American Indians (as described above). This pattern is consistent with the results in Table 3, which showed that single-race American Indians (as an overall

category) have greater chances of being in poverty than most of the non-single-race American Indian groups. In the case of coefficients in Table 4 that are not statistically significant, then the chances of being in poverty for those tribes do not statistically differ from the reference category of non-single-race American Indian groups.

After controlling for the demographic factors in the second model in Table 4, the major tribal groups that have the highest odds of experiencing poverty are Cheyenne (70.8 percent for absolute poverty and 76 percent for relative poverty); Crow (95.2 percent for absolute poverty and 89.2 percent for relative poverty); Menominee (50.1 percent for absolute poverty and 49.8 percent for relative poverty); Navajo (66.3 percent for both absolute and relative poverty); and Tohono O'odham (51.2 percent for absolute poverty and 60.4 percent for relative poverty). The tribes with coefficients that are less than one and that are also statistically significant include the Chickasaw (in the first model for relative poverty), the Potawatomi (in the first and second models of absolute poverty and in the second model for relative poverty), the Choctaw (in all of the models), and the Delaware (in all of the models). These latter four groups sometimes have lower chances of being in poverty than non-single-race American Indians. In short, poverty experiences do vary significantly within the broad category of persons who identify as American Indian in some way.¹⁴

Discussion and Conclusions

American Indian racial and tribal identities are shaped by historical and contemporary processes—the establishment of reservations, residency near or on reservations, federal regulation of identity, and the high rates of intermarriage with other racial groups. Each of these processes shapes whether or not an individual chooses to identify as American Indian, but they also thereby influence the socioeconomic profile of the American Indian population. The US federal regulation of tribes/nations and tribal enrollment limits who may be enrolled in a tribe and determines which tribes will receive federal recognition. Reservations tend to be located in rural areas with limited economic opportunity. Each of these elements, in turn, limits the socioeconomic opportunities of American Indians as an historic people in the USA.

Our findings demonstrate that all American Indians, regardless of racial identity or tribal affiliation, are more likely to experience either absolute poverty or relative

poverty compared to non-Hispanic whites. The absolute poverty rate for all American Indians is 23.1 percent, and the relative poverty rate is 39.0 percent. Both rates for American Indians are considerably higher than for non-Hispanic whites (who have a 9.5 percent absolute poverty rate and an 18.5 percent relative poverty rate). The poverty rates for American Indians are thus over twice as high as for non-Hispanic whites.

In general, the demographic characteristics of American Indians show the expected patterns in regard to the odds of experiencing poverty. For example, American Indians are more likely to be poor due to their lower levels of education and their greater proportions residing in non-metropolitan areas (in comparison with non-Hispanic whites). However, even after taking into account their demographic profile, American Indians still have considerably higher chances of being in poverty than whites. Less than half of the greater chances of American Indians being in poverty is statistically explained by age, gender, education, metropolitan status, and region of residence. The remaining greater chances of being in poverty may reflect other unmeasured variables such as reduced migration opportunities, geographic isolation, limited tribal economic development, disadvantageous school quality or racial discrimination in the labor market. Future research might focus more on investigating these sorts of factors as potential sources of the continuing disadvantage for American Indians as revealed by our more broad-brush analysis.

Another possible topic for future research is the role of family and household structure. Previous research has generally found that higher rates of poverty are associated with a larger number of children and single-parent family structure (Sandefur and Sakamoto 1988; Eggebeen and Lichter 1991), which in turn worsens the educational attainment of children¹⁵ (McLanahan and Sandefur 1997). Conversely, three-generational family structure and extended family relations may sometimes ameliorate problems and constraints associated with low income (Chase-Lansdale et al. 1994; Bengtson 2001). On the one hand, the high unemployment rate of American Indian men may lead to stressed marital relations and increased family instability and may thereby exacerbate poverty in comparison with low-income families with two parents. On the other hand, the opportunities for extended family relations may sometimes be greater given the geographic propinquity of some American Indians near tribal lands. A more detailed investigation of the role of family

¹⁴ The differences in the estimated coefficients for the specific tribes (relative to one coefficient for all single-race American Indians) are statistically significant at the 0.001 level for both the first and the second models in Table 4.

¹⁵ As discussed earlier, the poverty thresholds increase with a larger family size. For this reason, a given total household income will be less likely to be above the poverty threshold as family size increases. However, in the USA, wages are not directly affected by family size because such allowances are not customary (and would generally be considered illegal) in the private sector in contrast to some other countries.

structure may thus be a fruitful topic for future research on socioeconomic disadvantage among American Indians.

In terms of our empirical results for the specific American Indian groups, black and American Indians have the highest odds of poverty compared to non-Hispanic whites (i.e., 186.4 percent higher odds for absolute poverty and 195.5 percent higher odds for relative poverty) net of the demographic control variables. Single-race American Indians have the second highest odds (i.e., 135.9 percent higher odds for absolute poverty and 137.9 percent higher odds for relative poverty) net of the demographic control variables. Among the American Indian groups, individuals identified as white and American Indian have the lowest odds of experiencing poverty (i.e., 85.9 percent higher odds for absolute poverty and 89.8 percent higher odds for relative poverty compared to non-Hispanic whites) net of the demographic control variables.

We have not considered single-race African Americans in our analysis, but their overall absolute poverty seems to be about 1 percentage point lower than for single-race American Indians (Macartney et al. 2013). We are not aware of a recent study of African American poverty that has comparable models to ours for American Indians, but based on prior classic research, we suspect that similarly large net race effects would be apparent for African Americans (Farley 1984; Iceland 2006). Although not geographically isolated in remote tribal areas as are many single-race American Indians, African Americans are often geographically segregated into separated neighborhoods and school systems (Iceland 2006). African Americans also have notably higher proportions of female-headed families (Iceland 2006). These conditions for African Americans share some similarities with those for American Indians and thereby suggest the need for further research on the roles of geographic context, schooling, and family structure as possible sources of continued socioeconomic disadvantage among these two racial groups.

Regarding the specific tribal groups that our analysis identified, each one is more likely to experience poverty than non-Hispanic whites. Nonetheless, our results also reveal considerable variation within the American Indian tribal affiliations. After controlling for demographic factors, the major tribal groups with the highest odds of experiencing poverty are Cheyenne, Crow, Menominee, Navajo, and Tohono O’Odham. Notably, Cheyenne and Tohono O’Odham tribal groups are an aggregate group of more than one possible tribe; for example, Tohono O’Odham includes Ak-Chin, Gila Bend, San Xavier, Sells, and Tohono O’Odham (U.S. Census Bureau 2004). Across the absolute and relative poverty models, Delaware, Potawatomi, and Choctaw are less likely to be in relative poverty compared to the non-single-race American Indian groups. Among these tribal affiliations, Potawatomi and Choctaw are also aggregate

group names for multiple tribes. Choctaw includes Choctaw, Clifton Choctaw, Jena Band of Choctaw, Mississippi Band of Choctaw, Mowa Band of Choctaw, and Oklahoma Choctaw (U.S. Census Bureau 2004).

The aggregations may have significant implications for the interpretation of our findings in regard to the groups with lower odds of poverty compared to non-single-race American Indian categories. Within the Choctaw tribal group, there exists considerable variation in the tribal economies. For instance, the Mississippi Band of Choctaw owns and operates a diversified portfolio of manufacturing, service, retail, hospitality, and construction enterprises, which differs greatly from other tribal nations (Mississippi Band of Choctaw Indians Office of the Tribal Miko 2011). The variation between tribal groups and within tribal groups warrants further investigation into the impact of tribal economy on individual socioeconomic characteristics.

Our coefficient of variation results indicate greater variation across the American Indian racial groups and tribal groups than among the non-Hispanic whites. The overall American Indian coefficient of variation (i.e., 0.6599) indicates greater variation than the overall non-Hispanic white coefficient of variation (i.e., 0.4686), which suggests that non-Hispanic whites are more homogeneous in terms of socioeconomic indicators than American Indians. Also, the coefficient of variation indicates considerable heterogeneity across the tribal groups with the most homogeneous groups—Chickasaw and Choctaw—and the most heterogeneous groups—Sioux and Yakama. The variation across tribal groups may indicate a need for further investigation into demographic predictors of socioeconomic status within tribal groups and a need for research to examine the factors associated with specific tribal affiliation in the ACS.

Our results furthermore demonstrate the importance of understanding poverty among American Indians and among major tribal affiliations at both the relative and absolute poverty levels. The results reveal that black and American Indians followed by single-race American Indians have the highest poverty rates (both absolute and relative) compared to non-Hispanic whites, and the results may suggest that these two groups of American Indians have social circumstances that differ from the multiracial American Indians. Overall, the variation across absolute and relative poverty rates for the American Indian racial identities and tribal affiliations suggests not only the lack of absolute resources but also high levels of “social exclusion” (i.e., relative deprivation compared to the US national average) experienced by the group as a whole.

Our study has examined the demographic factors associated with absolute and relative poverty among American Indians by racial identification and by tribal affiliation using the 2006–2010 ACS. The limitation of our study stems from the use of self-identified racial categories and write-in tribal

affiliations in the survey data. Since the self-identification racial categories and write-in tribal affiliation do not require proof of tribal enrollment, more individuals may be counted for each racial or tribal group than are legally recognized as enrolled members (Thornton 1997). Despite this modest limitation, however, the ACS is nonetheless one of the few national surveys in the USA with a sufficient number of American Indians for a detailed level of analysis by both racial identity and tribal affiliation.

In conclusion, American Indians have substantially higher odds of being in absolute or relative poverty (compared to non-Hispanic whites) even after statistically taking into account age, gender, education, metropolitan status, and region of residence. These results show that poverty continues to be a notable problem among American Indians because their poverty levels are well above non-Hispanic whites with otherwise comparable demographic characteristics. Our findings thus suggest that Diane Sawyer's journalistic characterization unfortunately remains fairly accurate for many American Indians who seem to remain among the poorest of the poor groups in the USA. Perhaps the description of twenty-first-century America as "post-racial" may be appropriate for certain subgroups in the contemporary USA, but the persistence of high levels of poverty among American Indians represents the continuation of an age-old pattern of economic deprivation that remains particularly problematic for this racial group.

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