Sources of Labor Market Information for the On-Reservation Indian Population

The lack of employment opportunity is a severe and persistent problem in Indian Country. Jobs are scarce in many reservation areas. The jobs that are available are often relatively low paying. These conditions give rise to a variety of social problems.

However, the amount of data on the extent of the labor market issues that Indian people face is limited. The published numbers of Indian workers without jobs are misleading at best and arguably wrong at least some of the time. Official unemployment rates tend to seriously underestimate the extent of the problems Indian workers face. The standard federal definition of unemployment ignores the reality of reservation joblessness.

This paper describes the major sources of labor market information available for the on-reservation American Indian and Alaska Native population.[1] It summarizes the methodologies used to produce the data and provides cautions on the interpretation of the published figures. Several appendices provide supplemental information.

The analysis looks at four different sources of labor market data:[2]

- **The Labor Force Report, published by the Bureau of Indian Affairs (BIA) in the US Department of the Interior**
- **The American Community Survey (ACS), published by the Census Bureau in the US Department of Commerce**
- **The Current Population Survey (CPS), published by the Bureau of Labor Statistics (BLS) in the US Department of Labor, and the Annual Social and Economic Supplement (ASEC) to the CPS developed by the Census Bureau**
- **The Local Area Unemployment Statistics (LAUS) series, published by BLS in cooperation with state Labor Market Information (LMI) offices**

Following the discussion of these four sources, the paper offers guidance on the use of the data that are available.

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[1] The terms "Indian" and "Native" are used throughout this paper to cover both the American Indian and Alaska Native populations. The abbreviation for these populations used by the Census Bureau is "AI/AN." The terms "Native" or "Native American" as used in this paper do not include the Native Hawaiian population.

[2] Links to each source are provided in Appendix B.

Indian Joblessness in a Reservation Setting

Although the experience of joblessness is all-too-common for Indian people in reservation areas, there has been very little research on its nature or the ways in which it varies significantly from joblessness among the general population.

In the general economy the building blocks of the labor market information system involve several key data points. As people reach the age of 16, most are assumed to be in school, in the military, working at a paying job (or self-employed) or looking for work among the job openings in the area.

A person age 16 or older is regarded as "in the labor force" if he or she is in the armed forces or in the "civilian labor force." The civilian labor force consists of persons who are either employed or unemployed but "actively seeking work;" that is, they have taken steps to find a job within the last four weeks. Everyone else is simply "not in the labor force."

Some Indian people living in reservation areas fit this profile. Many don't.

On most reservations, a significant percentage of the jobs may be in public or public-related entities. Knowledge of available openings is widely disseminated by word of mouth. If a person who would like a job knows that the major employers aren't hiring, he or she has little reason to actively look for work. Such a person is not unemployed; he or she is simply "not in the labor force" as far as the statistical system is concerned.

If the person's education, skills and work history are limited, his or her ability to qualify for some of the openings that may be available can be non-existent. There is little point, and added frustration, in applying for a job that a person knows he or she cannot get. Again, the person is not counted as unemployed; he or she is simply not in the labor force, and invisible in the published unemployment rate.

Jobs may exist in nearby border towns, but the Indian job seeker can confront both a transportation problem and a discrimination problem.

The labor market experience of Indian people living on a reservation is often substantially different than the theoretical construct that serves as the foundation for the American system of labor market information.

Understanding this background is essential in any analysis of the labor market information produced by federal agencies for the on-reservation Indian population.

The Bureau of Indian Affairs Labor Force Report

In the 1970's the Bureau of Indian Affairs (BIA) began to publish a document it called the "American Indian Population and Labor Force Report." It is generally referred to simply as the BIA Labor Force Report.

The report provides estimates of the Indian population eligible for BIA services on or near a reservation or other type of BIA service area. There is some limited detail on the age distribution of this population and its labor force characteristics. The most commonly cited data element in the report is the percentage of the "available" labor force that is not employed. This percentage is usually referred to as an "unemployment" rate, though it would be more accurate to portray it as a "jobless" rate.

BIA has collected data for the report directly from tribal governments. However, it has provided no funding and prescribed no methodology for the collection of this data. There has been virtually no technical assistance available on the collection or tabulation of the requested data. If tribes did not supply the data, data from a prior report were often used.

These are most important characteristics of the BIA Labor Force Report:

- The data consist of estimates only. There is no standard methodology for producing these estimates. The way they are calculated has varied from tribe to tribe and from one BIA region to another.

- The data cover only the population eligible for BIA services.

Unemployment Rate v. Jobless Rate

The US Bureau of Labor Statistics (BLS) and the US Census Bureau use the same definition of the "unemployment rate." Expressed as a percentage, it is the number of persons age 16 and over counted as unemployed; i.e., they are not employed but are "actively" seeking work, having made specific efforts to find employment within the previous four weeks, divided by the number in the "civilian labor force" (excluding those in the armed services).

As used in this paper, the term "jobless rate" is broadly defined as the number of people potentially available for work who do not have a job, divided by the size of the potential labor force.

- The data are for BIA service areas; that is, areas "on or near" reservations or other Native American communities.

- The BIA concept of unemployment is different than that used by the Bureau of Labor Statistics (BLS) and the Census Bureau. Persons are considered by BIA as "unemployed" if they are thought to be available for work, but not employed. This approach is a more realistic one in view of the economic circumstances in reservation areas than is the definition of unemployment used by BLS and the Census Bureau.

The most recent report is for 2005. There have been no reports issued since then, although federal law requires their publication on a biennial basis. Several of the leaders of tribal workforce service integration programs authorized under the Indian Employment, Training and Related Services Demonstration Act (Public Law 102-477) attempted to revive and restructure the report. Information was collected in 2010, but BIA declined to publish that data, citing "methodology inconsistencies."

In a Federal Register Notice on May 29, 2012[3], BIA announced that it intended to revise the questionnaire used to collect data for the Labor Force Report. That Notice, followed by letters to tribal leaders from the Acting Assistant Secretary of Interior for Indian Affairs indicated that the agency is considering the use of Census data (from the American Community Survey) or at least adopting the BLS/Census definition of unemployment in the development of future editions of the Labor Force Report[4].

Such changes, if fully implemented, would significantly change the profile of unemployment in reservation areas. It would lower the reported unemployment rates by excluding all those who need and want a job, but do not actively seek work that they know is not available. It would simply ignore what the Indian residents of rural underdeveloped reservations know well -- labor market conditions are very different in such areas than they are in urban America. Labor market conditions on reservations can't be realistically captured using the same metrics appropriate for the big cities.

Although BIA has promised training and technical assistance in compiling the data for the proposed revisions to the report, historically it has had no institutional expertise in this area. In addition, the Acting Assistant Secretary's letters made no mention of the funding that will be necessary to develop and maintain tribal capacity to collect the desired information.

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[3] Federal Register Notice of Tuesday, May 29, 2012, Vol. 77, No. 103, p. 31637

[4] See PowerPoint presentation by Dr. Steven Payson, Economist, US Bureau of Indian Affairs available at: http://www.bia.gov/WhoWeAre/AS-IA/Consultation/index.htm.

The American Community Survey

The decennial census has been a major source of information on the labor force characteristics of the on-reservation Indian population. Through and including the 2000 census, the national headcount provided data on employment and unemployment, along with educational attainment, income and other socio-economic characteristics of the population, by race, down to the reservation level.

This socio-economic characteristics information was gathered through the use of a "long form" census questionnaire distributed to a sample of households. In reservation areas, the sampling goal was to survey one in every two households, an attempt to make the data as representative as possible of the total reservation population.

In 2010 the Census Bureau discontinued the use of the "long form" questionnaire in the decennial census. Instead, all households received a "short form" questionnaire that asked only for basic information on age, sex, race, ethnicity (Hispanic origin) and relationship to other household members. No labor force information was collected.

Instead, the Census Bureau now collects data on the socio-economic characteristics of the population through what it calls the American Community Survey (ACS). The ACS, like the decennial census before it, uses the standard definitions of labor force status, including the requirement that a person must have actively sought work in the previous four weeks in order to be counted as unemployed.

Although designed to collect the same detailed information that was collected on the "long form" questionnaire used in past decennial censuses, the ACS is different in a number of key respects[5]:

- The ACS is a smaller survey, collecting data from fewer households.
- Unlike the "long form," used once every ten years, the ACS is an ongoing survey. It mails questionnaires to a sample of households throughout the US every month. The responses from various geographic areas are aggregated over periods of one, three and five years, depending on population size, weighted and extrapolated to the estimated total population in that particular area.

[5] For a detailed discussion of the design and methodology of the ACS, see the Census Bureau technical report available at: http://www.census.gov/acs/www/Downloads/survey_methodology/acs_design_methodology.pdf.

- Data are published annually on the labor force status of the AI/AN population, but figures for all reservation areas are available only from the "5-year estimates" series[6]. This series aggregates responses over a 5 year period, an approach designed to compensate for the potential for error that results from the small sample size. One result is to obscure year-to-year changes in the levels of employment and unemployment.[7]

- There is no major outreach and promotion campaign to make people aware of the ACS and its importance, unlike the major outreach efforts that accompany the decennial census.

The small size of the sample and other aspects of the ACS raise questions about the reliability of the data for the Indian population, particularly in reservation areas. A close look at the ACS data illustrates some of the potential problems.

The ACS appears to produce a significant undercount of the American Indian/Alaska Native (AI/AN) "alone"[8] population at the national level, when compared to the count from the 2010 Census. The ACS estimate for the total AI/AN alone population in 2010 was about 2.6 million. The 2010 decennial census actually counted 2.9 million. No information is available on what the characteristics might be of the Indian people missing in the ACS count.

There are also questions as to how accurate the ACS data on Indian unemployment are for some individual reservations.

For example, the ACS recorded an unemployment rate over the 5-year period from 2006 to 2010 for the Indian population on the Navajo reservation of 16.3%. For the Fort McDowell reservation, the reported rate was 17.5%. The Navajo reservation is large, with a geographically scattered population remote from any major metropolitan labor

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[6] The ACS produces three data sets, 1-year estimates, 3-year estimates and 5-year estimates. One-year estimates are available for areas with total populations of 65,000 and greater; 3-year estimates for areas with total populations of 20,000 and greater; and 5-year estimates for all areas. Since most reservations have total populations of less than 20,000, only the 5-year estimates cover all reservation areas.

[7] Other federal data series, including the Local Area Unemployment Statistics (LAUS), discussed later in this paper, and the BLS Quarterly Census of Employment and Wages (QCEW) provide information at the county level on monthly changes in total employment, although neither reflects specific changes in the number of on-reservation jobs available to the local Indian workforce.

[8] The Census Bureau now publishes several different counts for the American Indian and Alaska Native (AI/AN) population. One is for people who identify themselves in response to the race question on a Census form as being AI/AN and not also members of another racial group. These people are referred to as "AI/AN alone." Persons who identify as AI/AN and also as members of another racial group are considered "AI/AN in-combination-with-one-or-more-other-races." The latter are included in counts of the "AI/AN alone-or-in-combination" population. In the 2010 decennial census only 1.3% of the AI/AN "in-combination" (multi-race) population lived in federal reservation areas.

market. The Fort McDowell reservation is much more compact and entirely within the Phoenix metro area. Considering the geographic and other factors involved, the rate reported in the ACS for the Navajo reservation is subject to question.

The potential for sampling error in the ACS is greater with respect to small populations and small geographic areas than was the case with the decennial "long form" data.

For instance, the amount of sampling error in the data for the number of on-reservation Indian persons ages 16 to 64 counted as unemployed on 54 of the 65 largest reservations in the country exceeds a level that might be considered as reliable.[9] The sampling error is generally greater, sometimes much greater, for the remaining 259 reservations in the country.

These aspects of ACS would appear to make reliance on the data problematic for at least some reservation areas.

In 2011 the Census Bureau initiated efforts to improve the coverage of the ACS. In June of 2011 it increased the sample size for the ACS by 18%. It is now mailing questionnaires to 295,000 households a month, up from the previous 250,000.

Other changes were implemented to improve the accuracy of the ACS in smaller geographic areas, particularly AI/AN areas. In "bush" Alaska, the Bureau now conducts in-person follow-up interviews of every household that does not return its mail questionnaire. The non-response follow-up by personal visit increased to 100% in most reservation areas. Sampling rates in the smallest communities have also been increased.

If the Congress continues to support expanded coverage of the ACS -- there is a possibility that it may not -- the full effect of these improvements won't be known until late in the year 2017 when the 5-year estimates for the 2012 to 2016 period are released.

The Current Population Survey

The most common source of labor force data for the general population at the national level is the Current Population Survey, or CPS. The survey is conducted by the Census Bureau for the Bureau of Labor Statistics in the Department of Labor. This is the source used to report the national US unemployment rate on the first Friday of every month.

The CPS interviews a sample of about 60,000 households every month. The sample is designed to be representative of the total population at the national level. It asks each

[9] The extent of sampling error is measured by the coefficient of variation (CV) of the estimate. A coefficient of variation of 15% was considered in this example as the upper limit of reliability.

respondent to identify his or her race, along with a series of detailed questions on labor market behavior.

The standard definitions of labor force participation and unemployment are used to classify the status of respondents. Unlike the ACS, the CPS data include only the civilian non-institutionalized population. (The population on most reservations includes relatively few, if any, persons currently living within reservation boundaries who are on active duty in the armed forces or in institutional settings, such as nursing homes or correctional facilities.)

In its monthly report on the employment situation, the BLS provides data from the CPS that include unemployment figures for the White, African-American, Asian and Hispanic populations. There is no data for the Indian population in this report, as the sample size is too small to produce reliable monthly numbers at the national level.

However, the BLS annual report on labor force characteristics by race and ethnicity for 2011 did provide a limited amount of data on the AI/AN alone population. In the overview to the report, BLS explained:

> "For the first time, this report also includes a limited amount of data for American Indians, Alaska Natives, Native Hawaiians, Other Pacific Islanders, and for people who are of two or more races [a category that includes multi-racial Indians]. Due to their relatively small sample size, estimates for these additional groups are not included in all tables."[10]

Although not accessible on the Web, BLS can provide annual CPS labor force data for all races, including AI/AN alone, on request.

The CPS also serves as the base for an expanded annual supplemental questionnaire that collects detailed information on income as well as employment.. This survey, known as the **Annual Social and Economic Supplement, or ASEC**, is used by the Census Bureau for its annual report on income, poverty and health insurance coverage.

That report provides national level data, including numbers by race and ethnicity for the White, African-American, Asian and Hispanic populations. Data for the AI/AN population, which has a higher poverty rate than the others, are not shown separately in this widely-publicized report[11].

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[10] US Department of Labor, Bureau of Labor Statistics. (August 2012). *Labor Force Characteristics by Race and Ethnicity, 2011.* Report 1036.

[11] A paper by Census Bureau staff pointed out that the small sample size is a significant issue for the counts of the AI/AN alone or in combination population in both the ACS and ASEC. See Caribert Irazi, Population Division, US Census Bureau, "Comparison of the American Community Survey and the

Although the Census Bureau's poverty report does not include information on the AI/AN population, ASEC data are available via the not-well-publicized "Table Creator" feature on the Bureau's Web site. This tool enables a user to construct custom tables on employment and other characteristics for the AI/AN population at the national and state levels from each year's ASEC.

The Local Area Unemployment Statistics Series

The Current Population Survey is designed to produce national level data on employment and unemployment. With the exception of several of the largest metro areas, its sample size is too small to produce data for local communities.

Instead state and substate data are generated for the Local Area Unemployment Statistics (LAUS) series, a product developed under the guidance of BLS by the Labor Market Information (LMI) agency in each state.

LAUS uses the same concepts and definitions of labor market behavior used in the CPS, including the requirement that a person must be actively seeking work during the last four weeks in order to be counted as unemployed.

LAUS data are available from BLS for roughly 7,300 geographic areas in the country. However, no data are available in the BLS data tables for any reservation or other American Indian or Alaska Native area. LAUS data are not published by race.

The LAUS data involve estimates calculated with the use of the "handbook method" mandated by BLS. Data from state Unemployment Insurance (UI) records provide one significant input to these calculations.[12] However, Indian people with a marginal attachment to the labor force are not likely to apply for or to receive benefits from state UI systems as they often lack the necessary time in UI covered employment.

LAUS data are available monthly, and 12-month averages are published for each year.

Arizona is one of the few states, possibly the only one, that does publish information from its LAUS program for reservation areas. The information uses standard LAUS concepts, with reservation data based on a census share approach that is currently applied to 2000 Census ("long form") data. The reservation data are not broken out by race, although in Arizona reservation populations tend to be almost exclusively Indian.

Annual Social and Economic Supplement to the Current Population Survey Data on Race: 2004," dated August 14, 2009

[12] See the BLS "Overview" of the LAUS program at: http://www.bls.gov/lau/lauov.htm.

The Choice of Which Data to Use

The range of the unemployment/jobless rates for a single reservation can be substantial.

The table below illustrates this issue for the San Carlos Apache reservation in Arizona.

Jobless Rates Compared: San Carlos Reservation v. US

Source and Measure	AI/AN Alone Population San Carlos	Total US Population All Races
Bureau of Indian Affairs		
Jobless rate - 2005 BIA Labor Force Report	67.7%	Not Applicable
Census Bureau - American Community Survey 5-Year Estimates - 2006 to 2010		
Unemployment Rate	21.2%	7.9%
Labor Force Participation Rate	43.5%	65.0%
Unemployment Rate Adjusted for LF Participation*	47.2%	
National U-6 Alternate Measure of Unemployment - BLS		12.0%
	San Carlos Reservation	**Arizona Statewide**
Arizona Local Area Unemployment Statistics		
Annual Average Unemployment Rate for 2011	35.7%	9.5%

*** See Appendix C for a description of the adjustment methodology**

The San Carlos data demonstrate the wide range of estimates of unemployment/ joblessness for a single reservation. Is the appropriate rate nearly 68% as shown in a report for 2005 from BIA, or is it just over 21% as reported in the Census Bureau's ACS 5-year estimates for 2006 to 2010?

Using numbers from the same source, calculated the same way, the on-reservation Indian unemployment rate for San Carlos is 21.2%, 2.7 times the national rate for persons of all races. Using an approach similar in concept to the "U-6" alternative measure of labor underutilization developed by BLS[13] produces a rate of joblessness for

[13] The BLS U-6 rate is an alternative measure of labor underutilization that computes a rate by considering the total number of unemployed, plus all marginally attached workers, plus the total number

the on-reservation Indian population of 47.2%, 3.9 times the roughly comparable national rate. The Arizona LAUS information reports the reservation rate as 35.7%, 3.7 times the statewide rate for 2011.

There can be little doubt that joblessness among Indian people, however defined, is much more prevalent in reservation areas than it is for the general population nationwide. The federal statistical system provides only varying guesses as to just how prevalent it is.

This results in a dilemma for the person or agency needing data on labor market conditions relevant to the Indian population in reservation areas. In the absence of information from a recent locally-administered household survey conducted according to survey research methods, what data can be used and what limitations should be attached to its use?

At this point in time there is only one federal source of data for the labor force characteristics of the Indian population in reservation areas -- the ACS. The BIA Labor Force Report was last published with data for 2005. The monthly employment situation report produced by BLS from the CPS covers the nation as a whole. It has no Indian data, even at the national level. LAUS data are not available by race or for reservation areas, with reservations in Arizona as possibly the sole exception.

As noted earlier, there are a variety of issues with the ACS data. It is available for all reservations only for five-year periods, during which time economic conditions may have changed. It is subject to sizeable degrees of sampling error for medium-sized and smaller reservations. Even on the larger reservations where sampling error does not appear to be an issue, its accuracy is subject to question by knowledgeable tribal observers. Moreover, it uses the conventional BLS/Census definitions that relegate many Indian people that need and want jobs to being "not in the labor force."

One approach to dealing with the ACS data is described in Appendix C of this paper: "Adjusting ACS Reservation Unemployment Data Using Labor Force Participation Rates."

This approach uses a concept somewhat similar to that of the U-6 alternative measure of labor underutilization developed by BLS. This includes many who are potential labor force participants in calculating a rate. In focusing on the potential labor force, it has similarities to the approach historically taken in the BIA Labor Force Report series.

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of those employed part time for economic reasons, as a percent of the civilian labor force plus all marginally attached workers.

The methodology draws on the sometimes significant differences in the labor force participation rates of Indians in reservation areas and the rate for the total population of all races. It assumes that if work were available, Indian people currently counted as not in the labor force would join and participate to the same extent that the general population does.

The methodology was designed to provide a more realistic picture of the difficulties that Indian workers face in large remote rural reservation areas with limited job opportunities. It should be used for only such areas and only after carefully considering several factors:

- Information available at the tribal level that may provide an indication of the extent of labor market difficulty. Such information may be available from the records of tribal workforce, education and social services programs, along with a knowledge of trends in the employment patterns of major local employers, including tribal and other Indian-controlled entities.

- The available ACS data from the most recent 5-year estimates. The key question is whether the figures on unemployment and labor force participation of the AI/AN alone population appear plausible to knowledgeable local observers.

- The extent of sampling error in the ACS estimates, calculated using labor force data for the AI/AN alone population. A coefficient of variation[14] of 15% or less may be considered as an indication that a data value is relatively reliable from the perspective of potential sampling error. A coefficient of variation above 15% indicates that the data value may be less reliable and may not be useful.

As described in greater detail in Appendix C, the methodology involves several simple calculations.

The national or state labor force participation rate derived from the ACS 5-year data set is multiplied by the ACS figure for the AI/AN alone age 16 and over population on the reservation to produce a potential reservation Indian labor force figure. The difference between the potential labor force figure and the number shown in the ACS data as employed is calculated as a rough estimate of the size of the "jobless" population. This

[14] Coefficients of variation provide a relative measure of sampling error for estimates calculated from sample surveys. They can be obtained for ACS data using the method described in Appendix 3, "Measures of Sampling Error" of the Census Bureau's guide entitled "A Compass for Understanding and Using American Community Survey Data; What General Data Users Need to Know" and available at: http://www.census.gov/acs/www/guidance_for_data_users/handbooks/.

jobless number is then divided by the potential labor force number to produce a "jobless" rate.

This methodology does not compensate for the issues with using the ACS data. However, it can sometimes do a better job of depicting the extent of labor market problems facing the Indian population in reservation areas.

A Summing Up

BIA labor force data, or estimates developed by tribes using similar concepts, have, in the past, been the source of unemployment data preferred by tribal leaders and staff. The data provide a more realistic picture of the severity of joblessness among Indian people in reservation areas. However, the data consisted of estimates based on unknown methodologies. The process of gathering the information has very seldom involved any type of on-the-ground survey. No data have been published since the 2005 Labor Force Report was issued. The changes in the report recently proposed by BIA involve the use of the standard BLS/Census definition of unemployment, a major shift from past practice.

Decennial census data are no longer available on the labor force characteristics of the population. The "long form" questionnaire was discontinued in the 2010 census.

Data from the ACS are now the only detailed, regular source of Census Bureau information on the socio-economic characteristics of the Indian population in reservation areas. However, the small sample size and other issues can and do produce numbers of questionable reliability.

The **CPS** provides a wealth of data on the labor force at the national level. However, the number of Indian respondents in the survey is too small to produce reliable data for the Indian population at the reservation level.

A supplemental questionnaire administered annually to an expanded CPS sample of households, the **ASEC**, is used for the Census Bureau's annual report on poverty in the US. Although the report itself contains no information on the AI/AN population, ASEC annual data for the nation and for individual states can be generated using the "Table Creator" function on the Bureau's Web site.

The **LAUS** series, overseen by BLS, uses a methodology which does not take reservation conditions into account. Arizona is one of the few states, possibly the only one, that publishes LAUS data for reservation areas.

As a general rule, it is preferable to use a tribe's own estimates, if available, in describing labor market conditions on a specific reservation. Data obtained from

federal or state sources should be used with great care and understood for their strengths and weaknesses.

Unless a tribe has recently conducted its own house-to-house enumeration, using standard survey techniques and appropriate definitions of labor market activity, there is no completely accurate source of labor market information for the on-reservation Indian population.

Norm DeWeaver *November 9, 2012*

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Appendix A

Basic Labor Force Concepts

BIA Labor Force Concepts

Historically, the BIA Labor Force Report has used a definition of "unemployment" that is expressed in terms of joblessness, rather than one involving an active search for work within the previous four weeks.

The BIA labor force report counts only those who are eligible for BIA services residing "on or near" an Indian reservation or other BIA service area, such as former reservations in Oklahoma and Alaska Native villages.

The concepts that have been used in the BIA Labor Force Report nest within the following hierarchy:

Persons Age 16 and Over

> **Persons considered as Not Available for Work**, those whose personal circumstances make them unable to "assume or sustain gainful employment"
>
> **Persons considered as Available for Work**, all those ages 16 and over minus those considered as Not Available for Work
>
> > **Persons Employed**
> >
> > **Persons Available for Work but Not Employed**
> >
> > **Unemployment Rate**, the number Available for Work but Not Employed divided by the number considered as Available for Work

For more information on these concepts and definitions, see the "2005 American Indian Population and Labor Force Report" issued by BIA and available at: http://www.bia.gov/WhatWeDo/Knowledge/Reports/index.htm.

BLS/Census Labor Force Concepts

The Bureau of Labor Statistics (BLS) and the Census Bureau share the same concepts and definitions of the labor force. These concepts nest within the following hierarchy:

Persons Age 16 and Over, the population considered to be of working age

Persons in the Labor Force, the sum of those on active duty in the Armed Forces and those in the Civilian Labor Force

Persons on active duty in the Armed Forces (who currently reside within the area)

Persons in the Civilian Labor Force, the sum of those who are Employed and those who are Unemployed

Persons Employed, including those with part-time or temporary work and various categories of those with a job but not at work during the survey week

Persons Unemployed, including those who do not have a job, have actively sought work in the four weeks preceding the survey and are available for work

Unemployment Rate, the number Unemployed divided by the number in the Civilian Labor Force

Persons Not in the Labor Force, all those who are not counted as in the Armed Forces or in the Civilian Labor Force, including persons who did not actively seek work because they believed that none was available to them along with others considered to be "marginally attached" to the labor force

Labor Force Participation Rate, the number of persons in the labor force divided by the number of persons age 16 and over

For more information on these concepts and definitions, see "How the Government Measures Unemployment," a paper posted on the BLS Web site at: http://www.bls.gov/cps/cps_htgm.htm.

Appendix B

Web Links

Data from all of the sources described in this memo can be found on the Web. The basic links are:

- **BIA Labor Force Report Data**

  http://www.bia.gov/WhatWeDo/Knowledge/Reports/index.htm

  This Web page provides access to each of the Labor Force Reports published from 1982 to 2005. The files are in Acrobat Reader format.

- **American Community Survey Data from the US Census Bureau**

  http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml

  This is the main Web page for the Census Bureau's American FactFinder data retrieval tool.

  To obtain summary labor market data on the AI/AN alone population for one or more reservations, click on Topics on the navigation bar to the left. When a drop down list appears, click on the + sign for Dataset. Then click on the link to "2010 ACS 5-year estimates," not the link to the American Indian and Alaska Native Tables. Close the Select Topics box.

  Click on Geographies on the navigation bar to the left. Click on the down arrow for "Select a geographic type" to get a drop down list of all the types of geographies available. Click on AIA/ANA/HHL. From the drop down list of reservations, shown in alphabetical order, click on the desired reservation. (By holding down the Control key, it is possible to select multiple reservations.) Click Add to Your Selections and close the Select Geographies box.

  This will display tables and tables of available information. About 36 pages into the 37 pages of tables, click in the box next to C23002C, SEX BY AGE BY EMPLOYMENT STATUS FOR THE POPULATION 16 YEARS AND OVER (AMERICAN INDIAN AND ALASKA NATIVE ALONE).

  Then click on View or Download at the top (or bottom) of the page.

If downloading, click OK and wait until the download bar indicates that the file is ready. Click on Download. This will download an aff_download.zip file to your Downloads subdirectory. Unzip the series of files and manipulate them with Excel or a similar spreadsheet program. It will be necessary to transpose and insert the column headings from the "ACS_10_5YR_C23002C_metadata.csv" file into the "ACS_10_5YR_C23002C_with_ann.csv" file in order to understand what the data in each column means. It will then be possible to aggregate the data to produce summary numbers, such as the total number of AI/AN alone unemployed for all age and both sex groups.

Note that for each data value, the table shows the corresponding Margin of Error (MOE). This figure is used to calculate the coefficient of variation for the data value, a measure of the relative extent of sampling error.

The Census Bureau's American FactFinder tool does have special American Indian and Alaska Native tables. These make it possible to get employment status data for both the AI/AN alone and the AI/AN alone or in combination populations and for more detailed age groups. However, this file will produce data only for the larger reservations.

- **Current Population Survey Data from the Bureau of Labor Statistics**

  http://www.bls.gov/cps/

  This is the main page for data published by BLS from the Current Population Survey (CPS). It provides access to a variety of information, including the most recent monthly release on the employment situation. However, BLS does not publish any data on the Web for the American Indian/Alaska Native population with the exception of the data in several tables of the publication "Labor Force Characteristics by Race and Ethnicity, 2011." This publication, BLS Report 1036 issued in August of 2012, is available on the BLS Web site at http://www.bls.gov/cps/cpsrace2011.pdf.

  BLS can provide annual tables with information on the employment status of the AI/AN population on request.

  Data from the Annual Social and Economic Supplement (ASEC) to the CPS for the AI/AN population are available through the "Table Creator" function on the Web site for the Census Bureau (not the BLS) at: http://www.census.gov/cps/data/cpstablecreator.html

- **Local Area Unemployment Statistics**

  http://www.bls.gov/lau/

  This is the main page for data from the Local Area Unemployment Statistics (LAUS) program, a cooperative program involving BLS and the various state Labor Market Information (LMI) offices. This page provides access to data for states, counties within each state and special labor market areas. However, the page does not provide access to any data specifically for reservation areas or for the American Indian/Alaska Native population.

- **The Arizona LAUS Program**

  http://www.workforce.az.gov/local-area-unemployment-statistics.aspx

  This page provides access to LAUS data from the Office of Employment and Population Statistics in the Arizona Department of Administration, Arizona's LMI unit. "Special Unemployment Reports" are available through links in a navigation bar on the right. Both Microsoft Excel (.xls) and Acrobat Reader (.pdf) files are provided for downloading. The reservation data can be found in the last section of these Special Unemployment Report files.

Appendix C

Adjusting ACS Reservation Unemployment Data Using Labor Force Participation Rates

As this paper indicates, the unemployment rates calculated with data from the ACS are based on standard BLS/Census definitions. They do not take into account the unique circumstances facing Indian people in reservation areas.

One way to compensate for this in the case of large remote rural reservations with relatively few job opportunities available to the Indian population is to factor in the abnormally low labor force participation rates in many such areas. These rates reflect the fact that people don't actively seek work that they know is not available to them.

This methodology produces a result somewhat similar in concept to that of the "U-6" alternative measure of labor underutilization developed by BLS. BLS refers to the U-6 rate as one that takes into consideration the "total unemployed, plus all marginally attached workers, plus total employed part time for economic reasons, as a percent of the civilian labor force plus all marginally attached workers."

The idea in both cases is to include in the computations all those who may be interested in full time employment, including those who are not considered to be unemployed because they do not meet the "actively seeking work" test. They may be discouraged from actively looking for work because of a scarcity of jobs in the area or for other reasons.

The methodology should be used only in the case of large, remote rural reservations with relatively few job opportunities available to the Indian population and only after carefully considering the factors mentioned earlier in this paper; namely:

- Information available at the tribal level that may provide an indication of the extent of labor market difficulty. Such information may be available from the records of tribal workforce, education and social services programs, along with a knowledge of trends in the employment patterns of major local employers, including tribal and other Indian-controlled entities.

- The available ACS data from the most recent 5-year estimates. The key question is whether the figures on unemployment and labor force participation of the AI/AN alone population appear plausible to knowledgeable local observers.

- The extent of sampling error in the ACS estimates, calculated using labor force data for the AI/AN alone population. A coefficient of variation of 15% or less may be considered as an indication that a data value may be considered as relatively reliable from the perspective of potential sampling error. A coefficient of variation above 15% indicates that the data value may be less reliable and may not be useful.

The adjustment procedure involves the following steps:

1. Obtain the necessary data items from the most recent set of ACS 5-year estimates. These are available through the "American FactFinder" link on the Census Bureau's Web home page.

    a. For the AI/AN alone population age 16 and over on the reservation or reservations of interest:

        i. The population age 16 and over.

        ii. The number in the civilian labor force.

        iii. The number employed.

        iv. The number unemployed.

    b. For the nation or state as a whole, persons of all races:

        i. The total population age 16 and over.

        ii. The number in the labor force.

2. Calculate the Indian unemployment rate on the reservation by dividing the number of on-reservation AI/AN alone persons age 16 and over who are officially counted as unemployed by the number in the civilian labor force. This is the official unemployment rate for the AI/AN alone population on the reservation according to the ACS data.

3. Calculate the national or state labor force participation rate for persons of all races by dividing the number of persons in the labor force by the number of persons age 16 and over.

4. Multiply the number of AI/AN alone persons age 16 and over on the reservation by the national or state labor force participation rate calculated in step 3. This produces the number of AI/AN alone persons on the

reservation who would have been in the labor force if the AI/AN alone on-reservation labor force participation rate had equaled the national or state labor force participation rate for persons of all races.

5. Subtract the number of AI/AN alone persons on the reservation who are employed from the number of AI/AN alone persons on the reservation who would have been in the labor force if the AI/AN alone on-reservation labor force participation rate had equaled the national or state labor force participation rate for persons of all races from step 4. Assume that the result equals the number of AI/AN alone persons on the reservation who would have been counted as unemployed if the AI/AN alone on-reservation labor force participation rate equaled the national or state rate.

6. Divide the number of AI/AN alone on-reservation persons who would have been counted as unemployed if the AI/AN alone on-reservation labor force participation equaled the national or state rate from step 5 by the total number of AI/AN alone on-reservation persons who would have been in the labor force if the AI/AN alone on-reservation labor force participation rate equaled the national or state rate from step 4.

7. The result is an adjusted AI/AN alone on-reservation jobless rate that can then be compared to the official AI/AN alone on-reservation unemployment rate in the ACS data. The adjusted rate will usually be higher, sometimes several times higher than the official rate. This will produce a more realistic -- though less than perfect -- measure of the actual severity of joblessness among Indian persons on that reservation.

Using data from the 2006-2010 ACS 5-year estimates for the San Carlos reservation in Arizona as an example, these are the data values used in the computations:

Step 1:

The AI/AN alone population age 16 and over on the reservation is 7,249.

The AI/AN alone population counted in the civilian labor force is 3,155.

The AI/AN alone population counted as employed is 2,486.

The AI/AN alone population counted as unemployed is 669.

For the nation as a whole, including persons of all races, the total population age 16 and over is 238,733,844.

For the nation as a whole, including persons of all races, the number counted as being in the labor force is 155,163,977.

Step 2:

The AI/AN alone unemployment rate on the reservation is 669 divided by 3,155, or 21.2%.

Step 3:

The national labor force participation rate for persons of all races is 155,163,977 divided by 238,733,844, or 65.0%.

Step 4:

The AI/AN alone on-reservation labor force would have been 4,711 (the number age 16 and over of 7,249 multiplied by the national labor force participation rate of 65.0%) if the AI/AN alone labor force participation rate was equal to the national rate for persons of all races.

Step 5:

Then subtract the number of AI/AN alone persons on the reservation who are employed (2,486) from the number of AI/AN alone persons on the reservation who would have been in the labor force if the AI/AN alone on-reservation labor force participation rate had equaled the national labor force participation rate for persons of all races from step 4 (4,711). The result of 2,225 equals the number of AI/AN alone persons on the reservation who would have been counted as unemployed if the AI/AN alone on-reservation labor force participation rate equaled the national rate.

Step 6:

Divide the number of AI/AN alone on-reservation persons who would have been counted as unemployed if the AI/AN alone on-reservation labor force participation equaled the national rate from step 5 (2,225) by the total number of AI/AN alone on-reservation persons who would have been in the labor force if the AI/AN alone on-reservation labor force participation rate equaled the national or state rate from step 4 (4,711).

Step 7:

The result, 47.2%, is an adjusted AI/AN alone on-reservation jobless rate that can then be compared to the official AI/AN alone on-reservation unemployment rate in the ACS data of 21.2%.