

THE CENTER FOR INDIAN COUNTRY
DEVELOPMENT

RESEARCH BRIEF

No. 2019-04

The Availability of Local Jobs Varies Widely
among American Indian Reservations

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May 6, 2019

The Availability of Local Jobs Varies Widely among American Indian Reservations Richard M. Todd¹

Researchers Randall Akee, Elton Mykerezi, and Richard Todd used confidential Census Bureau data to examine the number of jobs per adult resident on American Indian reservations.² They found that jobs per resident were slightly higher, on average, on reservations than in nearby county areas. Their finding of more jobs per resident on reservations seems at odds with the low incomes and employment rates that prevail on many reservations, but the two sets of facts can be reconciled. Jobs on reservations are disproportionately concentrated in public administration and gaming-related industries, suggesting that reservations with strong government revenues and large casinos pull up the overall average. Here I explore that suggestion with data from the National Employment Time Series (NETS). I show that jobs per resident vary widely among reservations, from well below typical county levels to far above. However, in keeping with the relatively low income and employment rates that prevail on many reservations, I show that the majority of American Indian and Alaska Native residents of federal reservations live on reservations where the number of jobs per resident is low. This confirms that the reservations' overall advantage in jobs per resident is due to very high job opportunities, often in the gaming industry or public sector, on a minority of reservations. It also points to the ongoing need to expand and diversify employment opportunities on most reservations.

High Employment in a Few Sectors Boosts Reservation Job Numbers

Figure 1, taken from Akee, Mykerezi, and Todd, highlights some of their key findings. It displays, for 18 industries, an index that compares the number of jobs per resident in 277 reservations to the number of jobs per resident in a collection of 514 nearby county areas.³ An index value of 1 indicates parity—the reservations and the nearby county areas have the same number of jobs per resident. That outcome approximately prevails in the Information industry, for example. In most of the industries in Figure 1, the index is well below 1, indicating that reservations have fewer jobs per resident in those industries.

Reservations have far more jobs per resident, however, with index values well above one, in a few industries: notably Arts, Entertainment, and Recreation (which includes gaming); Public Administration (or government); and, to some extent, Accommodation and Food Services (which includes many establishments closely linked to gaming).⁴ The big job advantages in these few

¹ Vice-President and Senior Advisor, Center for Indian Country Development. I thank CICD research intern Kent Weyrauch for excellent research assistance.

² See their Center for Indian Country Development Working Paper 2018-01, "[Reservation Nonemployer and Employer Establishments: Data from U.S. Census Longitudinal Business Databases](#)," April 2018. They study 277 federal reservations in the contiguous 48 states and compare them to off-reservation portions of 514 nearby counties. However, they did not include the large Navajo reservation in their analysis. They defined adults as individuals 25 years old or older. For convenience, the terms "resident" and "adult resident" will be used interchangeably in this article.

³ For technical reasons, they did not include the large Navajo reservation in their analysis.

⁴ In a conference at the Brookings Institution on February 14, 2019, CICD Director Patrice Kunesh [discussed the implications](#) of these facts for reservation economic development.

industries approximately offset the job deficits in other industries, so that jobs per resident is slightly higher on reservations as compared to nearby county areas.

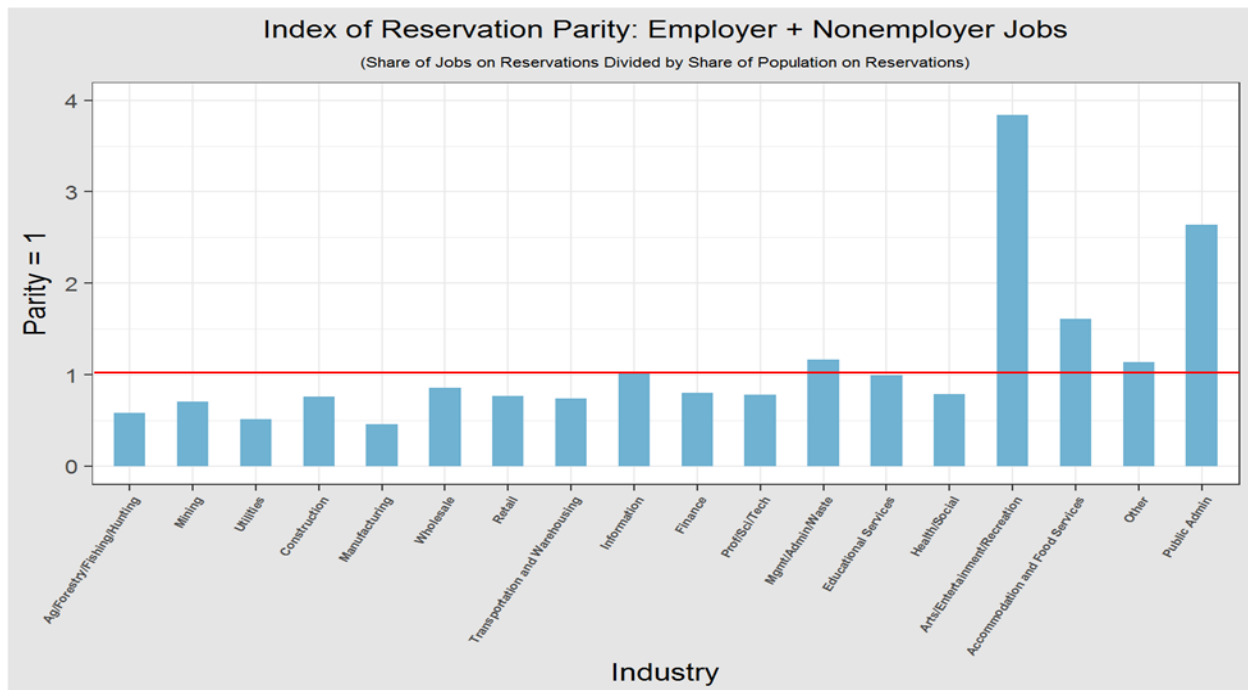


Figure 1: Advantages in key sectors help reservations edge counties in overall jobs per person

Since gaming and the government revenue it generates are far from evenly distributed among reservations, Figure 1 raises the possibility that the overall near parity of reservation and county jobs per resident does not prevail evenly across reservations. Akee, Mykerezzi, and Todd did not explore this in detail, partly because Census Bureau data disclosure guidelines discourage publication of specific results for the many reservations with relatively small populations and business sectors. Here I use an alternative source of data on workplaces and jobs to take another look.

The National Establishment Time Series (NETS) Database

The NETS database is produced by the firm of Walls and Associates from information on U.S. businesses and workplaces gathered by Dunn and Bradstreet (D&B).⁵ It includes data on over 32 million workplaces (or “establishments”), including estimates of the number of jobs at each workplace by industry. Importantly, the NETS data include the location (county, address, and longitude-latitude) of each workplace, so it is easy to use standard geographic analysis tools to determine if a workplace is on a reservation.

⁵ See Walls, Donald W., National Establishment Time-Series Database©: Data Overview (November 2, 2007). 2007 Kauffman Symposium on Entrepreneurship and Innovation Data. Available at SSRN: <https://ssrn.com/abstract=1022962> or <http://dx.doi.org/10.2139/ssrn.1022962>.

An independent assessment of the NETS database found that county-level aggregate statistics based on NETS data were highly correlated with estimates based on Census data. Even for county-by-industry statistics, the “correlations between NETS and official sources are reassuringly strong in appropriately restricted samples.”⁶ The authors concluded that NETS can be a “tremendously useful resource” for flexible analysis of business microdata.

The Federal Reserve System has access to the NETS Database, which I use below to examine the range of jobs-per-resident outcomes among reservations and nearby counties.⁷ I find that the NETS data produce overall averages for reservations and nearby counties that roughly parallel the key findings of Akee, Mykerezi, and Todd, including the disproportionate significance in reservation economies of jobs in gaming-related and government work.

I also find that for 70 large reservations the number of jobs computed from NETS is highly correlated with the number of jobs reported for the same reservations in the Census Bureau’s OnTheMap tool.⁸ I did find a tendency for jobs per resident (and jobs per establishment) to be higher in the NETS data than in Akee, Mykerezi, and Todd’s Census data, and for this tendency to be somewhat stronger for reservations than for the nearby counties. Thus, to some extent, the results below may show higher jobs per resident on reservations than results using the Census data, but the main points probably would be consistent with Census data.

Jobs per Resident Varies Widely on Reservations

Figure 2 compares jobs per resident in 2014 for most federal reservations in the contiguous 48 states and a collection of nearby counties.⁹ The county results are relatively tightly clustered, with a preponderance of counties having between 40 and 100 jobs per 100 residents. The most common results (associated with the tallest green bars) are near the 2014 national average of 59 workers per adult. Counties well above 59 percent may be “bedroom communities” or retirement meccas to some extent and those well below 59 percent are employment centers.

⁶ Barnatchez, Keith, Leland D. Crane, and Ryan A. Decker. 2017. “An Assessment of the National Establishment Time Series (NETS) Database.” Board of Governors of the Federal Reserve System Finance and Economics Discussion Series 2017-110.

⁷ I have not imposed the sample restrictions suggested by the Barnatchez, Crane, and Decker work cited in the footnote above, which focus especially on small establishments (i.e., those with few employees). However, unlike them, I did exclude data from establishments that NETS classifies as in NAICS category 561990, which in NETS appears to greatly exceed that size of that industry computed from Census data and to contain many small establishments.

⁸ For more on OnTheMap’s data on reservations, see Richard M. Todd, “[Using OnTheMap to Understand Reservation Employment and Commuting Patterns](#),” Center for Indian Country Development blogpost, February 14, 2017.

⁹ Unlike Akee, Mykerezi, and Todd, I include the Navajo Reservation. Also unlike them, I compare reservations to entire nearby counties rather than excluding the reservation portion of the nearby counties. The latter choice, made for convenience, means that data on some workplaces is included in both the reservation and county results. Because the reservation-county differences shown here are stark, this should not affect the main points.

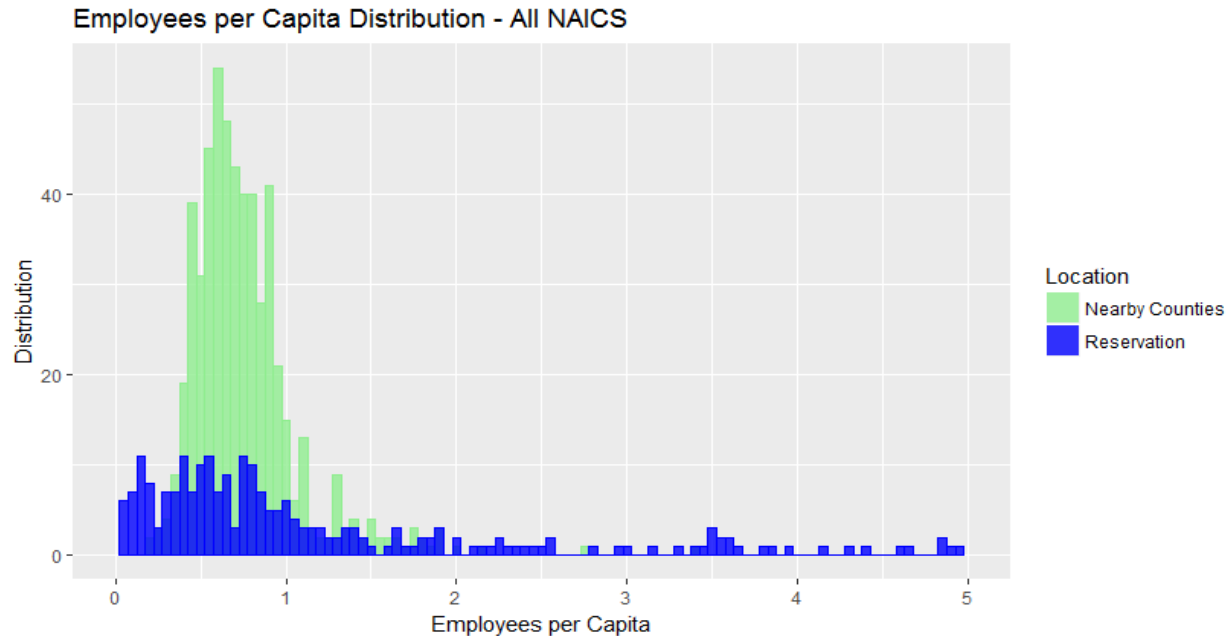


Figure 2: Jobs per adult resident varies far more for reservations than counties

The bulk of the reservation results in Figure 2 (in blue) lie to the left, between the middle of the county distribution and zero. The reservation results also are much more dispersed. On the one hand, a significant cluster of reservations has very few jobs per resident. On the other hand, dozens of reservations have 2 or more jobs per resident, a level attained by very few counties. One reason for this wider distribution is technical—because reservations typically have smaller economies than the nearby counties, the moderating power of statistical averaging is simply less potent in preventing random variations in the location of workplaces from producing extreme ratios for reservations.

The wider distribution of reservation results, however, also reflects something more systematic—the unequal distribution among reservations of government and gaming-based jobs. For example, Figure 3 shows that the reservation and county distribution of jobs per resident is an amalgamation of two industries that often expand along with gaming—Arts, Entertainment, and Recreation (which includes gaming establishments) and Accommodations and Food Services. (To provide better visual detail, Figure 3 is presented in two panels, one for areas with up to 1 job per resident and the other for areas with more jobs per resident.)

Even in these two industries, there are more reservations than counties with extremely low jobs per resident, reflecting the fact that some reservations either choose to forgo gaming or are in locations not propitious for it. On the whole, however, the distribution for reservations is less shifted to the left of the county distribution than in Figure 2 and includes many reservations that contribute to the upper end of the distribution in Figure 2 as well as Figure 3. The results for government jobs (Public Administration) are similar, and those for Educational Services and Health Care and Social Services also show a reduced (compared to Figure 2) tendency to skew toward low jobs per resident.

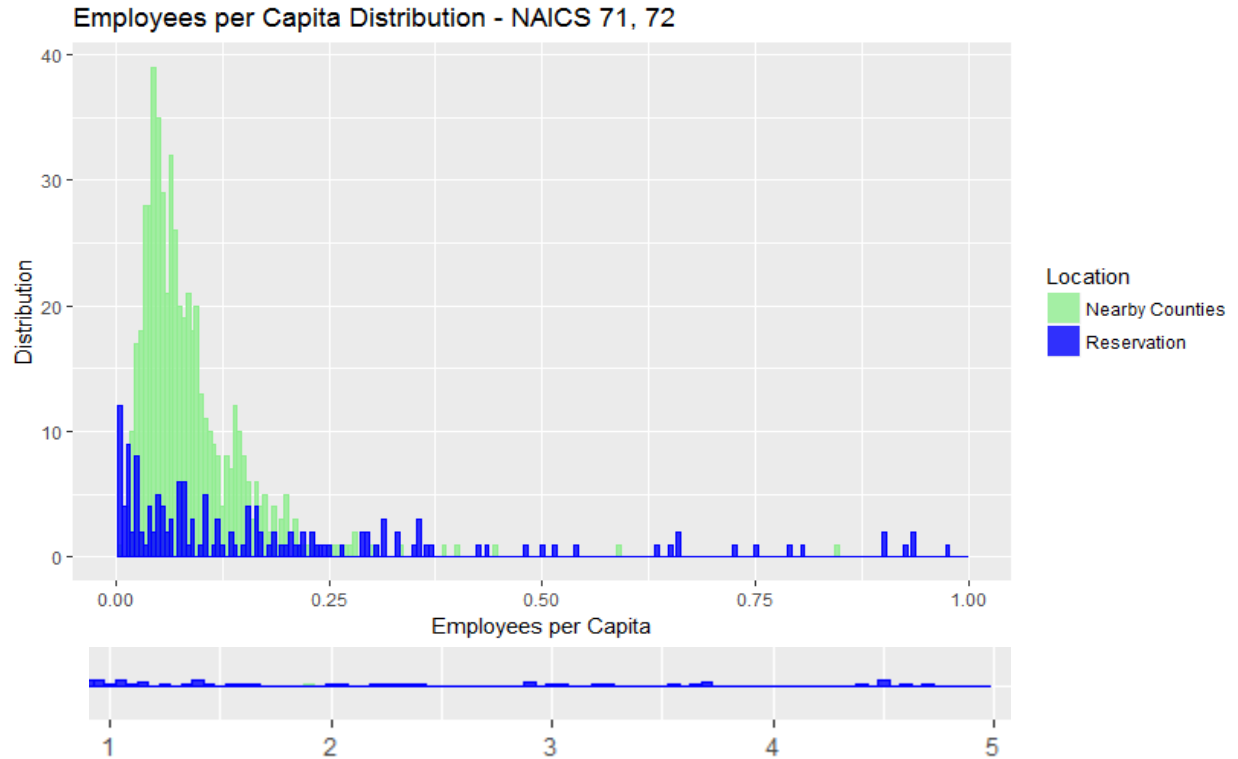


Figure 3: Jobs per adult resident in the arts/entertainment/recreation and accommodations/food services industries

Results for the remaining 13 industries are group in Figure 4. There the number of jobs per resident for reservations is strongly skewed towards zero relative to the county distribution. In addition, these 13 industries collectively make only a small contribution to the upper end of the reservation distribution shown in Figure 2. These industries include major sectors such as Agriculture, Manufacturing, Wholesale Trade, Retail Trade, Transportation and Warehousing, and Finance where private sector employers with limited ties to the gaming industry prevail.

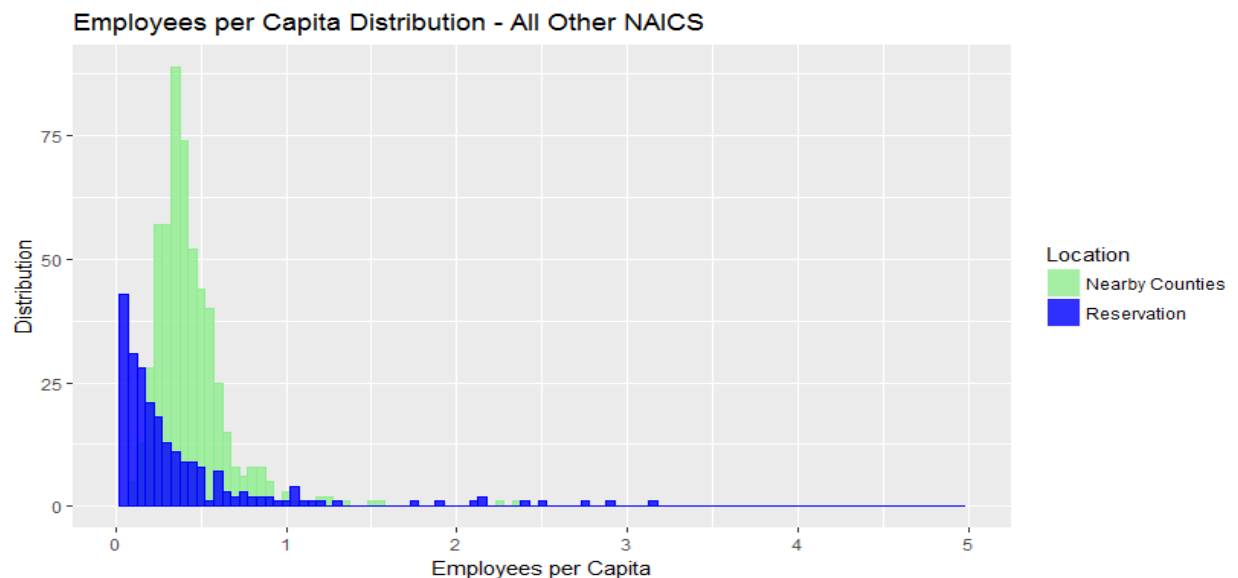


Figure 4: Jobs per adult resident in all industries other than educational services, health care/social services, arts/entertainment/recreation, accommodation/food services, and public administration

Figures 2, 3 and 4 show that the overall reservation-county parity in jobs per resident masks a range of outcomes that vary extremely among reservations, in the aggregate and by industry. What can we say about the experience of American Indian and Alaska Native (AIAN) adults living on these reservations?

Table 1 provides some insights. It shows that about 53 percent of the AIAN adults live on reservations where the number of jobs-per-resident is very low, in the bottom fourth of the distribution of jobs per resident among nearby counties. Sixty-four percent of AIAN adults live where jobs per resident are in the lower half of the distribution of county outcomes. The table also implies that reservations with above average jobs per residents tend to have a higher share of non-AIAN adults than reservations with below average outcomes. That is, to some extent the overall parity of jobs per resident between reservations and counties also masks a tendency for AIAN reservation residents to disproportionately live on reservations where the number of jobs per resident is relatively low.

County Quartiles	Share of Reservation Residents 25+	
	All Races	AIAN Alone
Bottom	37.96%	52.95%
Second	9.96%	11.38%
Third	24.97%	15.42%
Top	27.11%	20.25%

Table 1: Share of reservation population 25+, by race and by where their reservation’s jobs-per-resident 25+ would fall in the distribution of counties by jobs per resident 25+ (Note: Jobs per resident 25+ is based on residents of all races, for both reservations and counties.)

Conclusion

Akee, Mykerezzi, and Todd showed, somewhat surprisingly, that, as a whole, reservations have a slight advantage over nearby county areas in jobs per resident. Here I clarify that this overall advantage reflects the very high numbers of jobs especially in gaming and government on a minority of reservations. However, this does not represent the economic reality facing most AIAN reservation residents.

The potential policy implications of this combination of findings are discussed more fully in other resources by Kunesh¹⁰ and by Akee, Mykerezzi and Todd.¹¹ They suggest that tribal

¹⁰ Kunesh, Patrice H., “Gaming and Diversification” presentation at “The future of American Indian gaming: The next 30 years,” The Brookings Institution (February 14, 2019).

¹¹ Akee, Randall, Mykerezzi, Elton, and Todd, Richard M. “Opportunities to Diversity: Reservation Workplaces and Job Numbers Compared to Nearby Country Areas,” chapter in forthcoming Cambridge University Press (2019).

communities can grow by preserving their strength in gaming-related businesses while also diversifying their economic base into private sectors beyond the recreational and government workplaces that dominate reservation job numbers today.

An important goal would be to promote greater job opportunities in the industries with low parity ratios in Figure 2. Merely bringing reservations up to the level of jobs per resident typical of nearby county areas in those industries represents a major growth opportunity. This inherently will require significant expansion of private entrepreneurship and private investment on reservations. Among the most impactful policy options, according to Kunesh and Akee, Mykerezi, and Todd, is basic “good governance” at the tribal level, as well as at the state and federal levels. This includes helping the reservation private sector catch up to its nearby county peers across a range of industries.