ADA COUNTY
PEER COUNTY SELECTION
2020

BOISE STATE UNIVERSITY
IDAHO POLICY INSTITUTE

ADA COUNTY PEER COUNTIES SELECTION: 2020 ANALYSIS

EXECUTIVE SUMMARY

In collaboration with Ada County, Idaho Policy Institute used an objective, statistical approach to determine a set of peer counties for use across County offices and departments. This analysis uses a set of population and demographic variables to identify a group of counties that closely match Ada County's profile. This peer selection process will help County offices and departments standardize their research about peers and apply lessons learned from these counties into policy and operational decisions throughout County government.

Primary Peer Counties:

1. Spokane County, WA
2. Greenville County, SC
3. Washoe County, NV
4. Clark County, WA
5. Seminole County, FL
6. Knox County, TN
7. Polk County, IA

Secondary Peer Counties:

1. Pinal County, AZ
2. Adams County, CO
3. Stanislaus County, CA

INTRODUCTION

Local government leaders often look to peer governments to inform decision-making by comparing policies and practices.[1,2] However, comparator counties are often selected based on assumptions rather than research.[3] For instance, using regional counties as peers is a predominant practice that may overlook counties nationwide that could inform policy. Furthermore, in some counties, departments traditionally choose their own peer counties, resulting in inconsistent comparisons across the county.

Selecting peer counties will help Ada County:

1. Compare performance and service levels to similar counties,
2. Detect problems or patterns in similar counties, and
3. Create opportunities for collaboration across counties.[4]

Ada County (County) partnered with Idaho Policy Institute (IPI) to engage in best practices for determining relevant peer counties. This report provides details about the selection process and suggests a set of peer counties for use across County offices and departments.

RESEARCH USING PEER GOVERNMENT ANALYSIS

A common method of selecting peers is a statistical tool called cluster analysis. Cluster analysis sorts large numbers of entities into smaller, homogeneous groups based on a set of objective measures. The counties in the same group are each other's peer counties. Addressing issues specific to a small group of counties leads to more effective problem solving than using aggregate datasets or anecdotal evidence.[5,6]

Many research institutions use this method to learn which peer governments are facing common problems. For example, the Peer Counties Tool, funded by the Robert Wood Johnson Foundation, focuses on identifying peer counties based on similar health metrics.[7] One study used cluster analysis to identify areas within Idaho that accounted for unusually high suicide rates, in order to more proactively address the issue in those areas, via policy.[8] Another study identified counties with similar levels of drug overdose mortality, so county and national governments can prioritize policy solutions to eventually improve the larger problem.[9]

Along with prioritizing policy agendas, peer government analyses provide guidance on appropriate responses to problems. For instance, leaders in Oklahoma City discovered the life expectancy gap in their city was larger than national averages and looked to other cities for examples of policies to improve this problem.[10] Once cities with similar demographic populations were selected, leaders in Oklahoma City studied the policies and programs of the cities with the lowest life expectancy gap to find solutions.[11]
Peer government studies have the ability to produce and inspire collaboration. In 2011,

the Industrial Cities Initiative (ICI) compiled data across 50 years (1960-2010) for the top ten manufacturing cities in 2010. Once completed, researchers learned that city leaders from across the country wanted to make the same kind of comparisons as the ICI in hopes of finding similar cities to learn from and form collaborations.[12] Another study observed transportation and demographic data with a goal to expand collaborative opportunities across cities.[13] Cities were grouped together based on predicted trends and then city transportation policies were analyzed. Local leaders from cities within these groups are able to learn from each other and work together to prepare for the predicted growth.[14]

Previous peer county studies base the selection of peer counties on metrics specific to the needs of the institution conducting the research. These need-specific metrics make it difficult for counties to use previously generated tools to identify peers.[15] Therefore, the goal of IPI's research was to create a set of peer counties specific to Ada County through a selection process informed by established research practices, as outlined below.

VARIABLE SELECTION AND ANALYSIS

When determining how to group peer counties, the variables should be chosen carefully with input from experts and groups involved in the analysis.[16,17] The following six criteria are recommended for selecting variables. Variables should:

1. Be associated with the goal of analysis,
2. Be accessible at the county level for all counties,
3. Have underlying conditions that can be adjusted at a policy level,
4. Be valid, reliable, recognized, and used by others,
5. Be available at low or no cost, and
6. Be regularly updated.[18]

Following these criteria for selecting variables helps guarantee that the subsequently identified peer counties are accurate and beneficial.[19,20]

Ada County's peer counties were determined using a type of cluster analysis called hierarchical cluster analysis.[21,22,23,24] Cluster analysis considers several variables and creates groupings of counties that are most related to each other.[25] The variables selected determine which counties will be clustered together.[26] First, clustering variables were selected. Clustering variables are population and demographic variables commonly used in social science research to identify similarities between governments. Governments with similar values for a selected set of variables are very likely to be facing similar underlying policy issues, such as issues related to growth and poverty.

After reviewing the literature and consulting with the County, IPI determined five variables to use in the cluster analysis: median age, growth rate, total population, education, and poverty rate (shown in Table 1).

TABLE 1: CLUSTERING VARIABLES

Variable	Definition	Detail
Median Age	Median age	Median age of all residents.
Growth Rate	Population growth rate over past 5 years	Population growth rate is calculated by finding the difference between a county's population in 2018 and 2013, then dividing the result by the 2013 population.
Total Population	The people living in a county	The US Census provides the total population for each county.
Education	% over 25 with a bachelor's degree	This variable measures the proportion of people over age 25 that have earned a bachelor's degree.
Poverty Rate	% of population living below poverty line	The poverty rate reflects the percent of residents living below the federal poverty line.

Next, IPI compiled a list of all 65 counties in the United States with populations between 400,000 and 600,000 people.[27] Data for the five variables was collected for each of these 65 counties. Hierarchical cluster analysis was then utilized to group the counties with the most similarities, according to the chosen variables. Ada County's primary peer counties are those that are in the same cluster as Ada County, while its secondary peer counties are those that are in separate, but similar cluster with variable rankings similar to Ada County.[28]

Once Ada County's peer counties were determined, primary and secondary peer counties were identified and ranked according to their distance from Ada County in the hierarchical clustering output.[29] The ranking includes all five clustering variables. Z-scores were calculated for each variable. A Z-score is a statistical approach to standardize variables for direct comparison, even if variables are measured using different scales.

Finally, the distance from Ada County's score was calculated for each county across all variables. The distances within the hierarchical cluster determine the ranking for each county, with lower distance scores having the closest profiles to Ada County. The seven counties in Ada County's direct cluster are considered primary peer counties and others with similar variable distances are considered secondary peer counties.

GETTING TO KNOW THE PEER COUNTIES

Ada County shares a cluster with 7 other principal counties from across the country. As anticipated, there are no exact similarities to Ada County, but of the 65 counties in the analysis, these are the counties most similar in regards to all five variables. Table 2 lists Ada County's primary and secondary peer counties in order of their similarity to Ada County. The peer counties are spread across regions, including the West, Midwest, and South.

The primary peer counties most closely resemble Ada County based on the five clustering variables identified in this report.

TABLE 2: VALUES OF THE CLUSTERING VARIABLES

Name	Total Population	Median Age	Growth Rate	Education	Poverty Rate
Ada County, ID	446,052	36.7	10.4%	37.8%	10.6%
Primary Peer Counties					
Spokane County, WA	497,875	37.5	6.57%	30.38%	13.73%
Greenville County, SC	498,402	38.1	6.81%	34.16%	11.77%
Washoe County, NV	450,486	38.1	6.70%	30.45%	11.83%
Clark County, WA	465,384	38.2	7.49%	29.81%	9.07%
Seminole County, FL	455,086	39.2	5.98%	38.25%	11.20%
Knox County, TN	456,185	37.3	3.88%	36.69%	14.56%
Polk County, IA	474,274	35.3	5.69%	36.08%	10.67%
Secondary Peer Counties					
Pinal County, AZ	419,721	38.1	12.94%	19.01%	13.04%
Adams County, CO	497,115	33.6	6.58%	23.56%	11.13%
Stanislaus County, CA	539,301	34.0	4.06%	16.92%	15.62%

Source: 2018 American Community Survey 5-year estimates

ACCOMPANYING STEPS

DEVELOP AUTOMATED UPDATES

IPI will work with the County to automate updates to the 'Peer County Clustering' tool. All of the variables utilized for the cluster analysis, as well as many of the variables to be included in the 'Peer County Clustering' tool, are from the U.S. Census Bureau's American Community Survey (ACS). This data can be pulled directly from the U.S. Census application programming interface (API). This application will allow the County to update the clustering variables for all of the 65 counties between 400,000 and 600,000 residents. Additional variables available from ACS will be able to be updated through the automated process.

CONCLUSION

This report identifies Ada County's peer counties based on a cluster analysis that includes five objective measures: median age, growth rate, total population, education, and poverty rate. This peer county list will standardize the process of researching comparator counties across County offices and departments. The experiences and lessons faced by policymakers in the peer counties will aid Ada County in making evidence-based decisions about County policy and operational goals.

ENDNOTES

1 George, T., Longworth, S., & O'Dell, M. (2016). Introducing, understanding, and using the ICI 300 peer cities identification tool. *Profitwise News and Views.* Federal Reserve Bank of Chicago, 4, 4-8.

2 Remington, P., Catlin, B., & Gennuso, K. (2015). The county health rankings: Rationale and methods. *Population Health Metrics, 13*(1), 11.

3 Oliver, T. (2010). Population health rankings as policy indicators and performance measures. *Preventing Chronic Disease*, 7(5).

4 Oliver (2010). See note 3 above.

5 Liu, S., Li, Y., & Liu, B. (2018). Exploratory cluster analysis to identify patterns of chronic kidney disease in the 500 Cities Project. *Preventing Chronic Disease*, *15*(170372).

6 Remington, Catlin, & Gennuso (2015). See note 2 above.

7 University of Wisconsin Population Health Institute. (2019). County Health Rankings & Roadmaps 2019. <www.countyhealthrankings.org>.

8 Kassem, A. M., Carter, K. K., Johnson, C. J., & Hahn, C. G. (2019). Peer Reviewed: Spatial Clustering of Suicide and Associated Community Characteristics, Idaho, 2010–2014. Preventing chronic disease, 16.9 Liu, Li, & Liu (2018). See note 5 above.

9 Wilt, G. E., Lewis, B. E., & Adams, E. E. (2019). Peer Reviewed: A Spatial Exploration of Changes in Drug Overdose Mortality in the United States, 2000–2016. Preventing chronic disease, 16.

10 Knighten, L. (2019). To understand life expectancy, Oklahoma City is looking beyond health. *City Health Dashboard*. <https://www.cityhealthdashboard.com/story/1126>.

11 Knighten (2019). See note 10 above.

12 George, Longworth, & O'Dell (2016). See note 1 above.

13 Moody, J., Wang, S., Chun, J., Ni, X., & Zhao, J. (2019). Transportation policy profiles of Chinese city clusters: A mixed methods approach. *Transportation Research Interdisciplinary Perspectives, 2*(100053).

14 Moody, Wang, Chun, Ni, & Zhao (2019). See note 13 above.

15 Oliver (2010). See note 3 above.

16 Oliver (2010). See note 3 above.

17 Remington, Catlin, & Gennuso (2015). See note 2 above.

18 Remington, Catlin, & Gennuso (2015). See note 2 above.

19 George, Longworth, & O'Dell (2016). See note 1 above.

20 Remington, Catlin, & Gennuso (2015). See note 2 above.

21 George, Longworth, & O'Dell (2016). See note 1 above.

22 Liu, Li, & Liu (2018). See note 5 above.

23 Moody, Wang, Chun, Ni, & Zhao (2019). See note 13 above.

24 Zhang, Zhang, Du, Zhang, Huang, Zhang, Yang, Jianmin, Deng, Shen, Li, & Xiao (2016). See note 8 above.

25 Tan, P., Steinbach, M., & Kumar, V. (2013). Data mining cluster analysis: Basic concepts and algorithms. *Introduction to Data Mining*. Longman Publishing, Boston, Massachusetts: 487-533.

26 George, Longworth, & O'Dell (2016). See note 1 above.

27 Data for population and principal city designation is from the 2018 U.S. Census American Community Survey (ACS) 5-year estimates.

28 Data for each clustering variable is from the 2018 U.S. Census American Community Survey (ACS) 5-year estimates.

29 Blomme, C., Roubal, A., Givens, M., Johnson, S., & Brown, L. (2020). 2020 County Health Rankings Report. Population Health Institute. Madison, WI: University of Wisconsin.

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