Using an Economic Performance Index to Reform Payments in Lieu of Taxes (PILT)

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Headwaters Economics proposes incorporating an economic performance index as part of future Payments in Lieu of Taxes (PILT) with the goal of targeting payments to where they have the most economic benefit. Such targeting could reduce the need for future federal appropriations. The index is part of a broader proposal that simplifies county payments by combining three complex and interacting payment formulas into a single PILT payment with modest reforms.

The index builds off the precedent of the economic performance adjustment in the Secure Rural Schools and Community Self-Determination Act (SRS) that adjusted payments by the relative per-capita personal income (PCI) of counties.[1] The economic index uses five measures to provide a relative ranking of counties based on economic performance and potential. The index is used to allocate PILT payments proportionately to counties based on economic performance.

The five variables in the index—household income, earnings per job, families below the poverty level, education, and access to markets—are updated annually and published by the U.S. Census Bureau and U.S. Bureau of Economic Analysis.

This paper provides detailed methods and data sources; and is accompanied by a map and spreadsheet so users easily can review the impacts and methodology for every county.

County Economic Performance Scores: Incorporation in the PILT Formula

PILT interacts with Forest Service and U.S. Fish and Wildlife Service payments (among others) as a shock absorber. When payments from these programs decline, counties are eligible for larger PILT payments. When payments from these programs rise during high-resource production years or due to high prices (or perhaps due to larger appropriations from Congress), the PILT formula responds with lower appropriations.[2]

The PILT formula also defines a minimum (floor) and maximum (ceiling) payment so that PILT acts as a safety net while limiting the total federal liability. The ceiling is set based on county population, ensuring that rural counties that have small populations and large areas of public land are not overly enriched.

One unintended consequence is that the PILT formula has a built-in urban bias. Metropolitan counties (as classified by the U.S. Office of Management and Budget) can effectively receive a higher share of their full entitlement payment. It also means that as other payment programs decline, urban counties are more often able to realize higher PILT payments while counties with smaller populations are more likely to be limited by their ceiling payment. This means Metropolitan counties continue to receive relatively stable payments even as Forest Service and

USFWS payments decline, while rural counties by comparison tend to see lower overall payments.

The economic performance adjustment described here, if adopted as part of the PILT formula, would have the effect of reallocating a share of PILT payments from counties with larger populations and relatively strong economic performance to rural and relatively less well-off counties.[3]

County Economic Performance Scores: Methods

The methods explained below offer a straightforward approach to measuring the economic performance of counties and other local governments in the United States that are eligible to receive PILT payments.

Step 1: Collect Measures of Economic Performance

Headwaters Economics calculates the economic performance score annually for all local governments that receive PILT.[4] The five metrics used for the formula are readily available nationwide for all counties from data published by federal agencies. Headwaters Economics utilizes the data directly reported the U.S. Census Bureau, American Community Survey; Bureau of Economic Analysis, Regional Economic Accounts; and the Office of Management and Budget.

A. <u>Median Household Income</u>: This includes the income of the householder and all other individuals 15 years old and over in the household, whether they are related to the householder or not. It includes wage and salary income; self-employment income; interest, dividends, or net rental or royalty income from estates and trusts; Social Security and Railroad Retirement income; Supplemental Security Income, public assistance, or welfare payments; and retirement, survivor, or disability pensions. For households, the median income is based on the distribution of the total number of households including those with no income.[5] The advantage of median household income is that it is a comprehensive measure of all the sources of income, measured at the household level. The SRS formula used a similar technique, using per-capita personal income (PCI).[6]

B. <u>Average Earnings Per Job</u>: The total earnings divided by total full-time and part-time employment. Earnings is the sum of three components of personal income—wages and salaries, supplements to wages and salaries, and proprietors' income. The Bureau of Economic Analysis employment series for states and local areas comprises estimates of the number of jobs, full-time plus part-time, by place of work. Full-time and part-time jobs are counted at equal weight. Both employment for wages and salaries and proprietors' employment are included, but the employment of unpaid family workers and volunteers is not included.[7] The advantage of this measure is that it indicates the relative quality of jobs in a county.

C. <u>Percentage of Families Below the Poverty Level</u>: The U.S. Census Bureau uses a sophisticated technique for measuring poverty for different family configurations. Poverty statistics in American Community Survey products adhere to the standards specified by the

Office of Management and Budget in Statistical Policy Directive 14. The Census Bureau uses a set of dollar value thresholds that vary by family size and composition to determine who is in poverty. Further, poverty thresholds for people living alone or with nonrelatives (unrelated individuals) vary by age (under 65 years or 65 years and older). The poverty thresholds for two-person families also vary by the age of the householder. If a family's total income is less than the dollar value of the appropriate threshold, then that family and every individual in it are considered to be in poverty.[8] This measure is expressed in positive terms (families above poverty) so it can be added to the other positive-term metrics in the index.

D. <u>Percentage of the Population with a Bachelor's Degree or Higher</u>: The percentage of the population 25 years or older who have earned at least a bachelor's degree from a college or university, or a master's professional or doctorate degree. The percentages are obtained by dividing the counts of graduates by the total number of persons 25 years old and over. Education is one of the most important indicators of the potential for economic success, and lack of education is closely linked to poverty. [9] Studies show that areas whose workforces have a higher-than-average education level grow faster, have higher incomes, and suffer less during economic downturns than other regions. Education attainment makes a difference in earnings and unemployment rates.[10] In 2013, the average weekly earnings for someone with a bachelor's degree were $1,108, compared to $651 per week for someone with a high school diploma. While in 2013 the unemployment rate among college graduates was 4.0 percent, for high school graduates it was 7.5 percent.[11]

E. <u>County Typology—Degree of Isolation from Markets</u>: The U.S. Office of Management and Budget (OMB) classifies counties into four types: Central Metropolitan Statistical Area; Outlying Metropolitan Statistical Area; Central Micropolitan Statistical Area; and Outlying Micropolitan Statistical Area. [12] All remaining counties, those neither metropolitan nor micropolitan, are labeled "rural."

One of the determinants of economic performance for a county is the ability of its businesses to trade with market centers and of its residents to work in centralized population centers. For example, someone living in a county designated as a Central Metropolitan Area, or an adjacent Outlying Metropolitan Statistical Area, has different employment opportunities from someone who lives in a rural county. The OMB categories delineated above serve as a continuum from most densely populated to most sparsely populated. This typology serves as a measure of the degree of connection to markets, including labor markets. [13]

Step 2: Calculate the Economic Performance Score
Headwaters Economics gathers the five variables listed above for every county in the U.S on an annual basis and updates the Economic Performance Index for the latest year. The variables are first normalized by recalculating each variable to a zero to one index by dividing the individual county values for each variable by the highest value for that variable for the latest year (for example, Index Household Income for Clark County, Idaho = Household Income (Clark County / Household Income (Highest Household Income County nationally).

A combined economic performance index was calculated for each county as:

$$\text{Combined Index} = \left(\frac{MHI_{i,j}}{MHI_{max,j}} + \frac{EPJ_{i,j}}{EPJ_{max,j}} + \frac{Poverty\%_{i,j}}{Poverty\%_{max,j}} + \frac{Bachelors\%_{i,j}}{Bachelors\%_{max,j}} + Type\ Score \right)$$

Where:
i = Local unit of government;
j = Year;
MHI = Median Household Income;
EPJ = Average Earnings per Job;
Poverty% = Percent of families above poverty;
Bachelors% = Percent of individuals with bachelor's degree or higher;
Type = County typology as defined by degree of isolation.

To calculate the economic performance score, each unit's combined economic index was assigned a percentile rank relative to all the other units' combined economic indices. The percentile rank for each unit of local government's combined economic performance index is calculated as:
Percentile Rank = (100 * (i - 0.5)) / n

Where:
i = the rank of the unit's combined index score;
n = the total number of governmental units.

The economic performance score is calculated based on the percentile rank as:

Economic Performance Score = (Percentile Rank − 0.5) * 0.4 + 1

For example, the 75th percentile county receives a score of 1.1, calculated as:

(0.75 - 0.5) *.4 + 1 = 1.1

The result is an economic performance score for each county where the median county receives a score of 1, the highest-performing county receives a score of 1.2, and the lowest percentile rank receives a score of 0.8.

Step 3: Adjust Each County's Payment Using the Economic Performance Score
Each county's calculated PILT payment is divided by its economic performance score to determine the final payment. The new formula guarantees each county 80 percent of its entitlement amount defined in the PILT formula (in effect, only 20 percent of PILT is subject to the economic performance adjustment). The county with the lowest score will receive a 20 percent increase in PILT, while the county with the highest score will receive only 80 percent of its entitlement payment. The median county receives the same payment. (There is no adjustment at the median because the value of the score is equal to 1.)

Headwaters Economics calculates the economic performance score for each local government jurisdiction that receives a PILT payment on an annual basis. These data, calculations, documentation, and map are available at http://headwaterseconomics.org/land/county-payments-research#single-payment-proposal.

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Headwaters Economics is an independent, nonprofit research group whose mission is to improve community development and land management decisions in the West.

Endnotes

[1] PCI is total per-capita personal income, including non-labor income, divided by total population. In many counties, non-labor income, such as dividends, interest and rent (money earned from investments), and transfer payments (including retirement payments), makes up more than one-third of total personal income and is often the source of new real income growth (related in large part to an aging population). This means PCI can rise even when the overall economy is in decline. It is not unusual to find counties where non-labor income is growing while other measures of well-being, such as household income or average earnings per job, are declining. A second concern with PCI is that it consists of total personal income divided by total population. In some counties the average family size is relatively large, leading to a large overall population. Dividing total personal income by population in those instances may result in a low PCI that does not accurately reflect the well-being of the average family. Another problem with PCI is that it does not address economic development potential. Some counties have low education levels and are in rural areas with no easy access to larger markets. These counties may have a more limited set of economic opportunities available to them. PCI can rise in response to a resource boom, but measuring only PCI often fails to recognize how adjacent counties are different from each other, and how the economic role of federal public lands changes from county to county.

[2] Schuster, Ervin G. 1995. *"PILT—its purpose and performance."* *Journal of Forestry*. 93(8):31-35 and Corn, M. Lynne. 2008. *PILT (Payments in Lieu of Taxes): Somewhat Simplified*. Congressional Research Service (CRS) Report RL-31392.

[3] The broader "Single Payment" proposal crafted in partnership between Headwaters Economics and the Clearwater Basin Collaborative in Central Idaho also allows rural counties to increase their ceiling payment if they have protected public lands in their jurisdictions. See Headwaters Economics testimony in front of the Senate Energy and Natural Resources Committee, March 19, 2013: http://headwaterseconomics.org/wphw/wp-content/uploads/Testimony_of_MarkHaggerty_CountyPayments.pdf.

[4] The variables are all accessible through the Economic Profile System – Human Dimensions Toolkit (EPS-HDT) developed jointly by Headwaters Economics, Bureau of Land Management, and U.S. Forest Service. To learn about EPS-HDT and access socio-economic profiles for all U.S. counties, see http://headwaterseconomics.org/tools/eps-hdt. Documentation, data, and a map of the results of the Economic Performance Score detailed here can be found at http://headwaterseconomics.org/land/county-payments-research#single-payment-proposal.

[5] The U.S. Census Bureau, American Community Survey, 5-Year Estimates, Table DP03; a definition can be found at: http://quickfacts.census.gov/qfd/meta/long_INC110210.htm; and to access data by place: http://factfinder2.census.gov/.

[6] See endnote 1 for a fuller discussion of PCI.

[7] The Bureau of Economic Analysis, Regional Economic Accounts, Table CA30; a definition can be found at: http://www.bea.gov/regional/definitions/; and to access data by place, go to http://www.bea.gov/regional/downloadzip.cfm and download Table CA30.

[8] The U.S. Census Bureau, American Community Survey, 5-Year Estimates, Table S1702; a definition can be found at:
http://www.census.gov/acs/www/Downloads/data_documentation/SubjectDefinitions/2012_ACSSubject Definitions.pdf (page 102); and to access data by place: http://factfinder2.census.gov/.

[9] The U.S. Census Bureau, American Community Survey, 5-Year Estimates, Table S1501; a definition can be found here: http://quickfacts.census.gov/qfd/meta/long_EDU685212.htm; and to access data by place: http://factfinder2.census.gov/.

[10] For information on the relationship between level of education, earnings, year-round employment, and unemployment rates, see: U.S. Census Bureau's 2002 publication "The Big Payoff: Educational Attainment and Synthetic Estimates of Work-Life Earnings," http://www.census.gov/prod/2002pubs/p23-210.pdf .

[11] The wage and unemployment effects of education are available from the Bureau of Labor Statistics: http://www.bls.gov/emp/ep_chart_001.htm.

[12] The U.S. Census Bureau describes the U.S. Office of Management and Budget (OMB) county classification. See "Delineating Metropolitan and Micropolitan Statistical Areas" section of https://www.census.gov/population/metro/about/.

[13] For a discussion of the importance of access to markets, see Rasker, R., P.H. Gude, J.A. Gude, and J. van den Noort. 2009. The Economic Importance of Air Travel in High-Amenity Rural Areas. *Journal of Rural Studies* 25(2009): 343-353,
http://www.headwaterseconomics.org/3wests/Rasker_et_al_2009_Three_Wests.pdf .