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Using the Internet for Community Analysis: County Data Sources for Western States

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Introduction

Until recently, elected officials, salaried analysts, journalists, consultants, current or prospective employers, and current or potential residents who wanted to better understand issues and trends in their community were sentenced to a trip to a variety of county and municipal offices, the public library and maybe the local extension office of the state's land grant university. Further, locating and learning from communities with similar challenges and opportunities in other states commonly proved logistically or financially infeasible.

Today, many of these useful sources of data and analysis are readily and freely available on the Internet, if you know where to look. In many cases, these data are available over time and are organized using search engines that can be used to compare and contrast one city, county or state to another with little or no additional time or expense. To an increasing extent, the Internet can provide one stop shopping for community information from your home computer.

In this document, we identify the commonly used sources of online socio-economic data and analysis publicly available with particular focus on the Western United States and county level information and an orientation toward rural areas where human and financial resources are likely more thinly spread. We discuss the use of secondary information and the quality of available data, in addition to providing several caveats or concerns with the use of these tools and information.

Why use existing information?

First, we need to distinguish between primary data and secondary data or information. Primary data is collected in order to answer a particular and specific research question. Primary data collection often uses surveys, polls, focus groups or other means to elicit specific information about a particular issue, policy or idea. For example, voters might be polled regarding their preferences for a new business, consumer product, land use policy, or noise ordinance.

On the other hand, secondary information is collected on an ongoing basis, often by a government agency or its representative, in order to provide indicators of community welfare and economic performance over time. For example, school finance information, tax information, housing starts, employment by sector, per capita and per household income, race, age, and education data are all collected by a number of government agencies. These data do not answer specific questions per se, but rather create a context within which a proposed policy might be better understood. Skilled manipulation of secondary data can generate significant insights into potential community opportunities and challenges, support or call into question conventional wisdom and identify areas where further information might be strategically collected.

While both sorts of information are commonly used to facilitate decision making, a review of secondary information should always precede and guide primary data collection efforts. The principal benefits of secondary data include: the perception of objectivity in the collection process, their application across a variety of potential public and private issues, their comparability across jurisdictions, their relatively low cost, and their ease of access. Specificity is the primary benefit of primary information. However, the common concerns surrounding primary information include: objectivity, cost, inability to transfer information across alternative projects or policies or to other jurisdictions, and the proprietary nature of primary data collected by private consultants, businesses and research firms.

What is available and what can I do with it?

Reliable secondary socio-economic data are available from a number of federal, state, and local government sources. Freely available, sorting and analytical tools that use government data are also reviewed here. Secondary data sites are identified only if they provide information at the county level and can be aggregated to the state level or regional level with relative ease. State level aggregation is an option for many of these datasets.

Nationwide databases commonly provide searchable access at one or more of the following scales: census tract, municipality, county, metropolitan region, and/or state. Smaller scale access is generally aggregable to larger scale units, but not the converse. The U.S. census provides such information on demographics, agriculture, and housing, for example. However, nationwide databases do not yet exist for such important features as taxes, education, and building permits, for example. Since most states compile and provide this information, we have provided a URL for taxes, education, and building permits for each state in the bibliography.

In addition, not all states provide their data in the same form, nor do they provide access equally. The most commonly used formats facilitate downloading to a spreadsheet (e.g., Microsoft Excel, Lotus) or database management program (e.g., D-Base, Microsoft Access), which are largely compatible with one another. Unfortunately, some states and older data may appear as scanned documents or Adobe Acrobat (pdf) files, which do not facilitate data analysis. Despite this unfortunate practice, we have provided the active link closest to the desired information in order to facilitate the location, if not use, of the data in question.

These data can be used to illustrate trends of interest and/or a socio-economic profile of the focal community or county. Changes in proposed or adopted policy or development alternatives can be evaluated against changes in broad community indicators over time. Illustrative trends in single parameters or overall profiles can be compared to neighboring communities, regionwide or statewide averages, or similar information from other states. These comparisons can reveal comparative strengths or areas for potential improvement. They can illustrate differences and similarities in communities that have chosen similar or distinct development paths or have similar or distinct natural endowments, challenges or opportunities. They can also help to evaluate the efficacy of community choices over time.

Population/Demography

The United States conducts a comprehensive population census every ten years (e.g, 1980, 1990, 2000). This enormous undertaking provides detailed household information to the census tract level and is considered the definitive source of household level demographic information. Its official uses include determining the number of congressional representatives to which each state is entitled and the number of people each district is meant to represent. The Census also aids the government in the distribution of hundreds of billions of dollars every year.

Population growth estimates in total (by U.S., state, congressional district, county, municipality, census tract) and by ethnicity, age, race, or other household characteristics can be estimated by comparing one census to another, due to consistency in data collection methods over time. Census 1990 and 2000 data are found at http://quickfacts.census.gov/qfd/. This database is easy to use, automatically pulling up 2000 Census information. First, choose the state, then select the county of interest. The 2000 Census data will be displayed, but scroll

to the bottom of the page in order to access more data sets for the particular county. Select, "Browse more data sets for specified county" and the 1990 Census data can be selected from the following web page. The fact finder webpage of the Census Bureau http://factfinder.census.gov/servlet/BasicFactsServlet gives more detailed information on whichever population or demographic feature is of interest. Choose either the 1990 or 2000 Census summary file option. Next, choose whichever summary is desired and then choose "detailed table." In the following web page choose "county" as the geographic area and then the desired state and county. This dataset shows race characteristics, population, household characteristics, families, ethnicity, age, group quarters and many other population and housing features.

Agriculture

The U.S. agricultural sector now employs relatively few people, but still controls a large portion of the nation's natural resources. The agricultural sector remains an important part of the economy in many rural areas and is pivotal in national policy deliberations. Agricultural sector data provide insights into how agriculture communities and their natural resource based have managed over time. Agricultural data can illustrate economic and land use changes, some of the drivers of change, and the likely implications of policy initiatives to guide these changes over time.

The National Agricultural Statistics Service (NASS) has provided the most reliable nationwide agricultural information since its formation in 1863. NASS has offices in every state. Most NASS state offices provide state level historic statistics and provide access to that data from http://www.usda.gov/nass/sso-rpts.htm. NASS annual reports provide information on crop acreage, price, production, farm income, expenditures, and livestock information on a county-by-county basis.

The Department of Agriculture has recently undertaken the responsibility of the Census of Agriculture from the Census Bureau, and surveys are mailed to all farmers in the United States in five-year intervals (e.g., 2002, 1997, 1992, 1987). Oregon State University has compiled data from the 1987, 1992, and the 1997 Censuses of Agriculture and made a very useful dataset accessible through http://govinfo.kerr.orst.edu. After passing through this gateway, select the "Census of Agriculture" hyperlink, then select "Geographic Area," and finally choose the desired state and county. Data are provided for the entire nation, disaggregated to state and county levels. Information includes many types of agriculture sector features such as: number of farms, farm size, acreage in farms, value of sales, irrigation specifics, machinery, crops produced, amount of production, number of livestock operations, and a plethora of other farm categories.

Farm income, expenses, and income totals are provided through the efforts of many agencies. The Economic Research Service (ERS) and NASS provide data to the Bureau of Economic Analysis (BEA) under the U.S. Department of Commerce. The BEA provides information through their website http://www.bea.doc.gov/bea/regional/reis/. On the BEA site, farm income and expenses have been disaggregated to many different income and expense categories such as: cash receipts from crops and livestock, government payments, imputed and miscellaneous income, feed purchased, livestock purchased, seed purchased, fertilizer, petroleum, hired farm labor, and value of inventory change. This information is provided for 1969-2000.

Economic base

Analogous and other essential county data in economic sectors other than agriculture are also available from the BEA Regional Economic Information System (REIS) website (http://www.bea.doc.gov/bea/regional/reis/)

including: personal income, population, change in personal income, earnings-by-industry, jobs-by-sector, and transfer payments. Much like the farm income data, the database is in-depth with many different aspects to each of the outlined categories. For example income-by sector has information broken down to a specific type of mining such as minerals or coal, rather than just mining.

BEA/REIS data may be displayed at the metropolitan statistical area (MSA), the BEA economic region scale, and for metropolitan versus nonmetropolitan (rural) areas of the state, as well as the by the more local political jurisdictions. State level information is also available from the BEA homepage, http://www.bea.gov/, including data such as, gross state product, personal income, and annual/quarterly state personal income plus numerous other topics.

Taxes*

Relative tax burden and its distribution are common issues of interest to consumers, homeowners, business people and local elected officials. The question is not only how much is being paid, but who is paying and how. For example, agricultural use taxes are typically lower than residential or commercial land use taxes on a per acre basis. Mill levies cost people who hold more wealth in real estate than those who do not. On the other had, sales taxes tend to fall disproportionately to lower income residents. However, communities that depend upon tourism often have high sales taxes in order to put more of the tax burden of providing services on visitors. Generally speaking, assuming certain economies of scale in community services, the per capita tax burden should be reduced as population grows for a given portfolio of community services if growth is paying for itself.

No nationwide or regional multi-state web page for county tax information exists. However, each western state's department of revenue keeps time series data online, such as property taxes paid, mill levy rates, sales tax rates, and sales taxes accrued. Historic tax information is often provided to the public through the state department of revenue or the department of taxation, but not always. As a result, there is great variety in the type and amount of secondary tax information provided across western states.

School District Revenue/Expenditures*

Property tax burden is commonly considered in conjunction with school district finance, since school districts are commonly strongly supported by property tax revenues through a designated mill levy. School district revenues and expenses are usually reported through the state departments of education. Again, there is no national or regional repository for school finance information. Some western states have extensive online datasets while others lack an adequate time series. Time series information is of particular importance in understanding education finance due to the large and anticipatory capital investments represented by new school buildings. Colorado changed its data collection procedures in the mid 1990s, making current data noncomparable with revenue and expenditure information prior to the change in 1994-95. Idaho has only two years worth of school finance reports on their website and Wyoming has only one year of financial statement observations. However, these sites provide a starting place for obtaining more information.

Educational Information*

Higher average educational attainment is associated with lower crime rates, higher incomes, better health, greater longevity, and more attractive sites for new business locations, among other things. Again, there is no national or regional website for the number

* The website for each state's information is located in bibliography.

of enrolled students on an annual basis. Generally, each state provides annual enrollment counts to the public. However, decennial information for the number of enrolled students and the level of educational attainment of the population is found within the U.S. Census http://factfinder.census.gov/servlet/BasicFactsServlet. First, choose Summary File 1. Secondly, choose either 1990 Summary File 3 or 2000 Summary File 3. Next, choose the "Detailed Table" option, and the type of data required, such as county, state, or census tract. The following page will need to be displayed by subject, so the selection of "by subject" on the top of the page will put the website in required terms. Then, by scrolling down the subject option box and choosing "education" all the education statistics will be displayed. This page shows school enrollment by school level; elementary, high school, college, and then further categorized by public or private. Other educational information covered includes race by educational attainment and race by school enrollment.

Housing

Increases in population and household numbers generally imply an increase in the demand for housing. An increase in the vacancy rate suggests a decrease in rental rates and home prices. American Fact Finder provides an all encompassing website for the evaluation housing data by county of each state. By going to the same web page as outlined for educational information, http://factfinder.census.gov/servlet/BasicFactsServlet, choose "Detailed Tables" on Summary File 1 for either 1990 or 2000. The following selection is the geo-political unit, "County," and then the appropriate state and county can be selected. Next, choose the "by subject" option. Then, under the subject search box choose "Households and Families," "Housing Unit Totals," "Population Totals," or "Urban/Rural." From these subject titles, the statistics include population in households by race, average household size, average family size, housing units, and urban/rural housing units.

Building Permits[**]

Building permits show the level of construction that is occurring to keep up with population demands on housing. The construction sector follows growth in the reset of the economy. However, some communities experience residential growth without industrial or commercial growth drivers. This phenomenon can be observed in communities that are attractive to retirees or second home owners or where people live, but don't work (bedroom communities). Local officials may want to pay attention to atypical growth profiles due to differential tax rates and the relative demand on services of various land use types. That is, if the community tax structure depends upon commercial development to subsidize residential service demands, high levels of residential construction permits relative to commercial permits may be an indicator of a financial drain rather than a financial boon to community coffers.

The Census Bureau has the most comprehensive multi-state record of building permits, http://www.census.gov/const/www/permitsindex.html. However, some states have more information available on the census site than that of other states. For example, Montana has building permit data available for only two counties, but information on the number of electric permits for all Montana counties is available. The number of electric permits is highly correlated with building permits and can provide a substitute measure for construction sector activity. Neither Washington nor Nevada provide easily

[**] Website for majority of state's information is located in bibliography.

accessible electronic data on building permits, but 13 out of the 17 Nevada counties are accounted for in the census web page. Eight Washington counties are found there.

Multiple Data Pages

Initiated in 1978 by the Census Bureau, the State Data Center (SDC) program combines the information of many of the appropriate state level economic departments (http://www.census.gov/sdc/www/). The SDC was created in order to provide Census Data to the public through universities, state agencies, libraries, and regional and local governments. The websites provided through the SDC are official sources of demographic, economic, and social statistics produced by the Census Bureau.

The state of Nevada has provided easy access to other state government pages (http://silver.state.nv.us/USMAP.htm). Through this website every state government official homepage and all state agencies in the nation are accessible.

Conclusion

Socio-economic data, either primary or secondary, only help to paint a picture of a community and its economy. Combined with local knowledge, they can help to tell a story about the challenges and opportunities facing communities. They do not provide a solution, nor do they generate a decision. They are often an essential part of a solution and a decision, but are not sufficient to provide such resolution. Used properly, secondary data can inform local decision makers, evaluate policy alternatives, and facilitate decision-making, but the decisions themselves require thoughtful and objective use of all available information, inclusive of, but not restricted to, the lessons learned from primary and secondary data. The provision of many sources of data on the Internet has created an unprecedented opportunity to use relevant quantitative information to facilitate and inform community choice, but this information cannot be used without consideration of its source or of its appropriate application.

Sometimes, users may find that not all of the information seems to be available online. Often the time series provided online is short, due to size constraints, or the most detailed information is not as easily accessed as the more general summary information. Experience indicates that what is currently available to the public is the minimum that might actually be available with a bit more searching. With a phone call to the appropriate office, you may be directed to a different internet site that doesn't show up via traditional searches, or you may be told that the data are in the public domain but may only be available via intranet (electronically available, but only within the agency), and the appropriate file may need to be e-mailed to you by the agency. For example, county assessors' information is often stored and disseminated in this way.

Moreover, secondary data must be used carefully. Data used in a time series or compared across study units must be collected in a methodologically consistent manner or their comparison will be misleading and inappropriate. For example, if school expenditure data are collected based on calendar year in one year or district and school or fiscal year in another year or district, they are probably noncomparable. Methodologies used in the research, variable definitions and the data collection process should be explained on the website. Lacking methodological information, there is a very real possibility of being incorrect or making inappropriate comparisons to something similar but not the same. Sometimes, the "data" provided are not data at all, rather they are estimates based upon actual data. Between census annual population estimates serve as an example.

Depending on the issue, estimates may be perfectly adequate, but it should be made clear what type of data is being used.

We hope that this overview of some of the publicly available socio-economic information on the Internet will serve to facilitate the use objective quantitative information in local decision-making. Our treatment was not meant to be exhaustive, but rather to pique the interest of potential users of such information. The interested reader will, no doubt, be able to locate other appropriate sources of information to increase community understanding. The Internet provides a valuable resource with which our understanding can be increased and our decisions better informed. We can now understand ourselves in comparison to others with much greater ease and accuracy and at much less expense. However, there is no substitute for local qualitative understanding of traditions, culture, and institutions in using these comparative socio-economic time trends and profiles toward preferred community solutions.

Western States' Online Data Resources

Tax Information:

Arizona
http://www.revenue.state.az.us/txfcts.htm
California
http://www.sco.ca.gov/pubs/index.htm#stagovrep
Colorado
http://www.dola.state.co.us/is/taxcty.cfm
Hawaii
http://www.state.hi.us/tax/taxreports.html
Idaho
http://www2.state.id.us/tax/publications.htm
Nevada
http://tax.state.nv.us/taxnew/pubs.htm#annual%20report
New Mexico
http://www.state.nm.us/tax/pubs/taxresstat.htm
Montana
http://www.state.mt.us/revenue/css/2forindividuals/07publications.asp
Oregon
http://www.dor.state.or.us/
Utah
http://www.tax.ex.state.ut.us/property/rates.html
Washington
http://dor.wa.gov/content/Statistical_Reports/stats_ecodata.asp
Wyoming
http://revenue.state.wy.us/doclistout.asp?div=3&dtype=23&dtsub=11

School Expenditures and Revenues

Arizona
http://www.ade.az.gov/AnnualReport/AnnualReport1998-99/Summary.asp
California
http://www.cde.ca.gov/fiscal/financial/financialdata.htm
Colorado
http://www.cde.state.co.us/cdefinance/RevExp.htm
Hawaii
http://doe.k12.hi.us/reports/index.htm
Idaho
http://www.sde.state.id.us/finance/financial_sum.htm
Nevada
http://www.nde.state.nv.us/hrt/reports/index.html
New Mexico
http://www.sde.state.nm.us/resources/index.html
Oregon
http://dbi.ode.state.or.us/ssf.htm
Utah
http://www.usoe.k12.ut.us/homepage/datafile.htm#BUDGET
Washington
http://www.k12.wa.us/safs/
Wyoming
http://www.k12.wy.us/DATATECH/statseries.html

Building Permits

Arizona
http://www.cob.asu.edu/seid/arec/index.cfm?page=construct
California
http://www.dof.ca.gov/HTML/FS_DATA/profiles/pf_home.htm
Colorado
http://dola.colorado.gov/demog/mule/Mule.cfm
Hawaii
http://www.state.hi.us/dbedt/
Idaho
http://www.idoc.state.id.us/idcomm/profiles/index.html
Oregon
http://www.econ.state.or.us/stats.htm
New Mexico
http://www.unm.edu/~bber/econ/pmts.htm
Utah
http://www.qget.state.ut.us/programs/c1.asp?database=bp&tabletype=1a
Wyoming
http://eadiv.state.wy.us/housing/annlbldg.htm