

SOUTHWEST COLORADO ECONOMIC DRIVERS

*Job Generation by Second Homes and Other Economic Drivers
In Archuleta, Dolores, La Plata and Montezuma Counties*

PREPARED FOR
REGION 9 ECONOMIC DEVELOPMENT DISTRICT OF
SOUTHWEST COLORADO, INC.

FINAL REPORT
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STUDY TEAM

- Lloyd Levy Consulting LLC conducted the analysis and is solely responsible for the results and the report.
- Donna Graves, Information Services, provided data on second homes and assisted with editing and the preparation of figures and tables.
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- David Schwartz, Economic and Planning Systems assessed the region's economic development assets and opportunities.

CONTRIBUTORS

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EXECUTIVE SUMMARY

This report presents the findings of a study to estimate the size – in terms of jobs – of the economic drivers of Archuleta, Dolores, La Plata and Montezuma Counties in Southwestern Colorado. The most recent round of analysis covered Archuleta, Dolores, and Montezuma counties as part of a Colorado Heritage Planning Grant award of \$22,000, with matching funds of \$17,500 provided by the Region 9 Economic Development District of Southwest Colorado (Region 9). For these counties the economic data is from 2007, which was the latest data available for analysis. A pilot study covering La Plata County was conducted in 2008, and the results from the La Plata County Study are also included here in order to provide a more complete regional overview. It should be noted that the La Plata County Economic Driver Study used 2006 economic data; however, the method of data collection and analysis is identical for all of the counties.

Economic drivers are related groups of activities that bring “outside” money into the local (county) economy. A traditional example of an economic driver is a base industry, like agriculture, mining or manufacturing, which sells most or all of its products into markets that are located outside of the county. These sales support the direct “basic” jobs in each industry (the farmer, miner or assembly worker). In turn, additional supporting jobs are generated as basic industries buy goods and services and as local residents—who work for the basic industries or the basic industries’ vendors—spend their income. The additional jobs are known as the “multiplier” or “ripple” effect. The multiplier effect occurs as income is spent and re-spent within the local economy, minus the “leakage” to outside economies that occurs with every round of spending. The sum of the basic jobs plus the supporting jobs comprises an economic region’s total employment.

This economic drivers study uses methods that are comparable to earlier studies done for Region 10 and Region 12 and to the study of La Plata County done previously for Region 9.¹ The method uses IMPLAN Social Accounting and Impact Analysis Data and Software² to estimate the total employment effect of the economic drivers for which local data are available and to estimate the direct and total employment effect of drivers whose direct effect is not easily measured at the local level. The study is a tool for planning a response to growth and change and for strategizing for economic development. Region 9 hopes that these studies will provide the starting point for public discussions to review the results and consider the implications for the future – for each county and

¹ See “Second Homes and the Economic Base of Four Counties in West Central Colorado: An Economic Drivers Study for Gunnison, Hinsdale, Ouray and San Miguel Counties”(Prepared for the USDA Forest Service, Region 2, in Partnership with the Region 10 League for Economic Assistance and Planning, Inc., September 2006 [available from the Region 10 League]), “The Social and Economic Effects of Second Homes”(Prepared by Linda Venturoni for the Northwest Colorado Council of Governments, June 2004[<http://www.nwc.cog.co.us/Second%20Home%20Study/NWCCOG%202ndHome%20Study%20Binder.pdf>]), and Lloyd Levy Consulting, La Plata County Economic Drivers Job Generation by Second Home and Other Economic Drivers. Prepared for Region 9 Economic Development District of Southwest Colorado, Inc., July 2008. Available from the District.

² The IMPLAN software and data are products of the Minnesota IMPLAN Group, Inc. (MIG), Stillwater MN 55082. The MIG website address is www.implan.com.

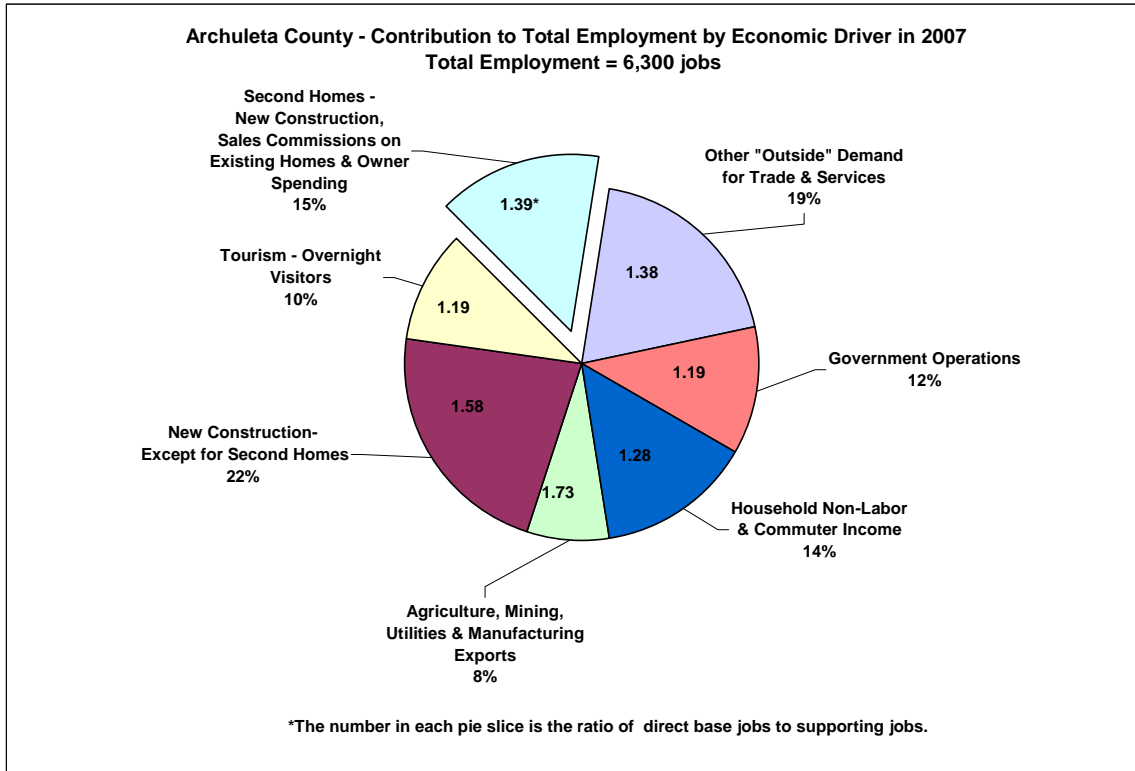
for Southwestern Colorado as a region – of the strengths and weaknesses, opportunities and problems accompanying each economic driver.

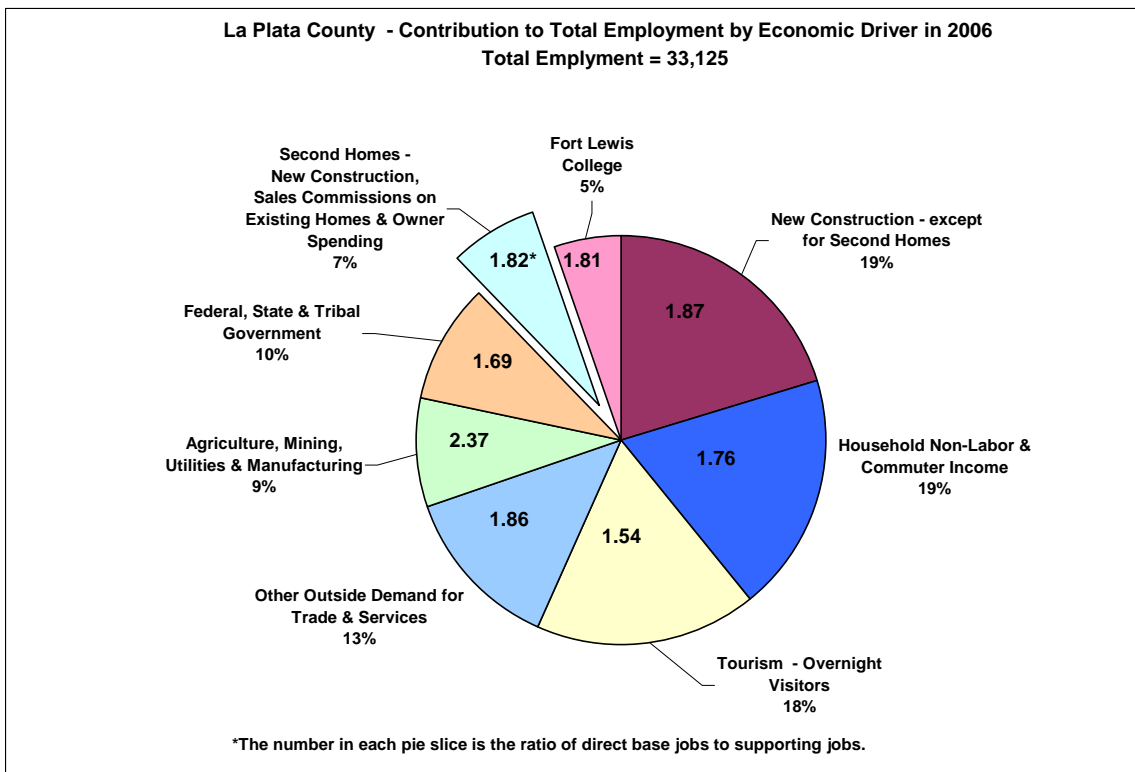
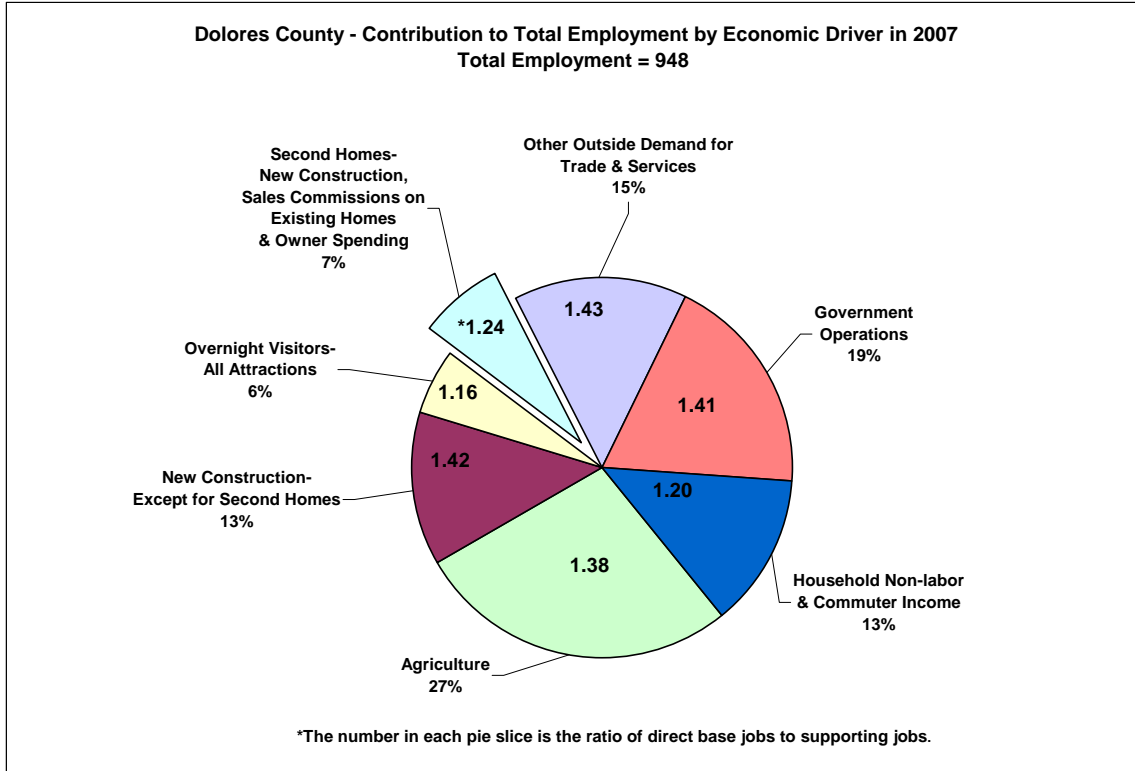
WHAT DRIVES THE ECONOMIES OF REGION 9?

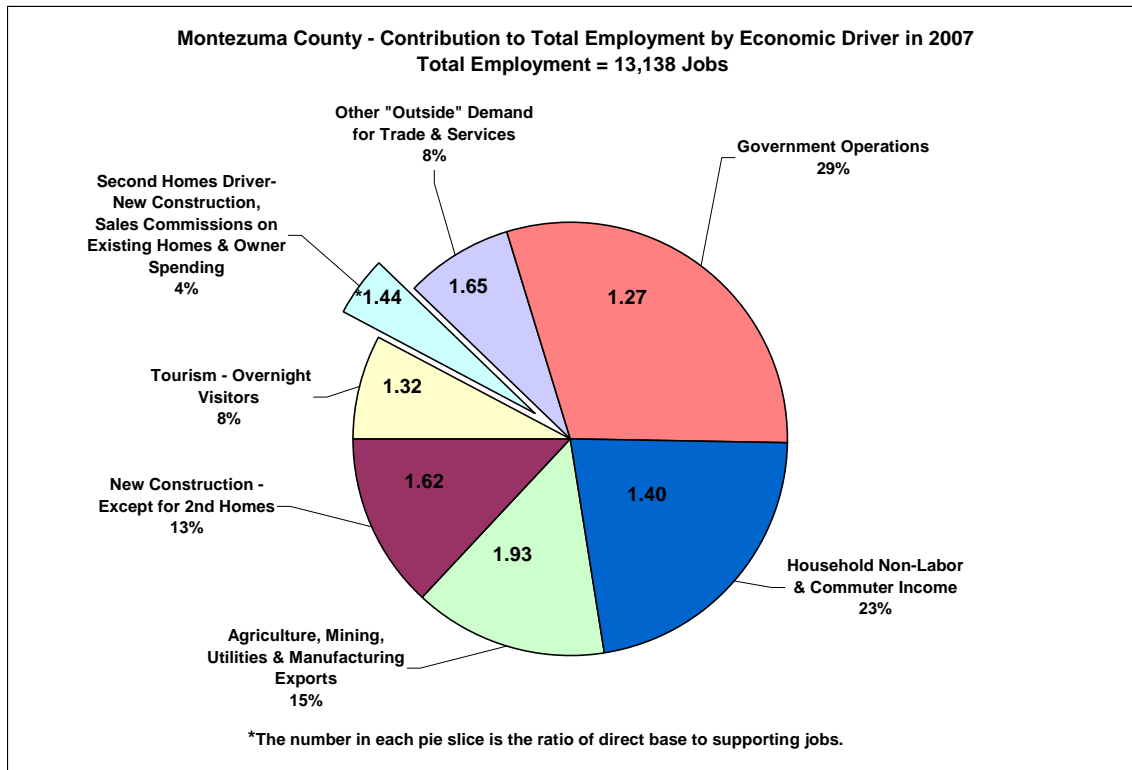
The Economic Drivers study grew out of a desire to estimate how many jobs are associated with the building, sales and maintenance of second homes. To put this information in context the study also examines each county economy as a whole and all of its main economic drivers. The focus is on giving numerical answers to three key questions:

- First, what share of total employment is generated by each economic driver?
- Second, how important is each driver, compared to all the other drivers, in terms of its total employment effect?
- Third, how much total employment is generated in response to one basic job within a given economic driver, or in other words what is the ratio of total to direct employment for each economic driver?

The answers to these questions can be shown in one graphical figure – a pie chart – presented here for each county. Each chart depicts the size, relative importance and total employment ratio for economic drivers in 2007 in Archuleta, Dolores and Montezuma counties and in 2006 for La Plata County. (La Plata County results were based on an analysis of 2006 data because the study was conducted separately and completed in 2008).







WHAT ASSETS & OPPORTUNITIES ARE HIGHLIGHTED BY A STUDY OF ECONOMIC DRIVERS?

In each county, the analysis of economic drivers indicates the potentials inherent in each economic driver. This is reflected in the two metrics presented in the pie charts of the previous section. As the charts indicate, some drivers have a large presence in the region but generate fewer “ripple” effects (i.e. indirect and induced jobs); other drivers may have a smaller presence but a larger ripple effect.

An ideal economy would contain economic drivers with only higher multipliers, but this is never possible. It is, however, possible to identify certain industry sectors that are good candidates for investment or enhancement. That is, to the extent demand exists to support such opportunities, investment in the supply side can grow and strengthen the economy. An assessment of assets suggests where these opportunities lie among the counties of Region 9 described here.

ARCHULETA COUNTY

Construction in Archuleta County—of both permanent-resident housing and second homes—is a driver that contributes many jobs and has a high ratio of indirect and induced jobs to direct jobs. The County also benefits from a strong second homeowner presence, in that the spending of these owners during their time spent in the county accounts for nine percent of jobs in the local economy. Marketing to increase the use of second homes by owners and renters in a secondary market could enlarge the effect of this economic driver. Along similar lines, the overnight visitation sector is a component of the economy (10 percent) that represents the inflow of dollars to the County. Archuleta County’s visitor driver benefits from the multiple natural regional assets and

attractions that are capitalized upon to an extent that would be enhanced by intensified marketing efforts.

DOLORES COUNTY

Dolores County's location near Mesa Verde National Park and other recreational and cultural amenities creates opportunities to engage visitors already attracted to Southwestern Colorado. The "visitors" economic driver would benefit from investments in marketing to position the county as a significant part of the wide-area recreational region that includes other parks such as the not-distant Grand Canyon. The county's agricultural driver has gathered strength and, as demand grows, investment in the supply side of agriculture would enhance its attractiveness as an equity investment for tax incentive purposes. Visitation and agriculture converge in the opportunity to position Dove Creek, known as the "Pinto Bean Capitol," as the location of events and festivals built around a unique and colorful culture.

LA PLATA COUNTY

The La Plata County economy—with diverse drivers including natural and cultural landscapes on a variety of public lands, skiing, historical attractions like the narrow gauge railway, a "destination" college, and a strong natural resource development sector—presents opportunities for strategic investment and cooperation among many stakeholders. The activities and capacity of Fort Lewis College and the Growth Company Initiative suggest the presence of a strong entrepreneurial base as well as resources to ensure their success. Teaming among various economic drivers in the style of an agglomeration economy (i.e. knowledge and idea sharing, as well as potentially mutual beneficial relationships among suppliers, producers, and consumers) could contribute to the enhancement of the economy as a whole.

MONTEZUMA COUNTY

Montezuma County, like other counties studied here, possesses many natural and economic assets that have a regional and even national pull on visitors and tourists. Among them are Mesa Verde National Park, Hovenweep National Monument, Canyon of the Ancients National Monument, Ute Mountain Tribal Park, McPhee Reservoir, and the Dolores River corridor. Given its setting, the county can play a pivotal role in a regional effort to benefit from and collectively market to visitors traveling by car to various national and regional attractions. Visitation and tourism to the parks could also be augmented by visits to the tribal park, the reservation, as well as the tribal facilities (including the restaurants, casino, or the community of Towaoc on the Ute Mountain Reservation). Enhancing the "visitors" economic driver balances the county's other important economic drivers, oil and gas development and agriculture. This can create economic diversification that can maintain economic vitality through business cycles.

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INTRODUCTION

This report presents the findings of a study to estimate the size – in terms of total jobs generated locally – of the economic drivers of Archuleta, Dolores, La Plata and Montezuma counties in Southwestern Colorado. The most recent round of analysis covered Archuleta, Dolores, and Montezuma counties as part of a Colorado Heritage Planning Grant award of \$22,000, with matching funds of \$17,500 provided by the Region 9 Economic Development District of Southwest Colorado (Region 9 EDD). For these counties the economic data is from 2007, which was the latest data available for analysis. A pilot study covering La Plata County was conducted in 2008, and the results from the La Plata County Study are also included here in order to provide a more complete regional overview. It should be noted that the La Plata County Economic Driver Study used 2006 economic data; however, the method of data collection and analysis is identical for all of the counties, and the results are comparable.

This study was initiated in order to estimate the relative importance of second homes in the region. However, that question could not be answered without a comprehensive and consistent estimate of all drivers within each county. This report constitutes Phase 3 of the Region 9 Economic Development District's (Region 9 EDD) continuing study of the economic impacts of second homes³. Phase 1 and Phase 2 provided the baseline data for this analysis in terms of identifying second homes, defining their characteristics and quantifying key characteristics of second-home owners. These reports can be found at www.scan.org/regional_data.html.

WHAT IS AN ECONOMIC DRIVER?

Economic drivers are related groups of activities that bring “outside” money into the local (i.e., county) economy. A traditional example of an economic driver is a base industry, like agriculture, mining or manufacturing, which sells most or all of its products into markets that are located outside of the county. These sales support the direct “basic” jobs in each industry (the farmer, miner or assembly worker). In turn, additional supporting jobs are generated as basic industries buy goods and services and as local residents—who work for the basic industries or the basic industries’ vendors—spend their income. The additional jobs are known as the “multiplier” or “ripple” effect. The multiplier effect occurs as income is spent and re-spent within the local economy, minus the “leakage” to outside economies that occurs with every round of spending. The sum of the basic jobs plus the supporting jobs comprises an economic region’s total employment.

However, sales of traditional commodities and services into outside markets aren’t the only economic drivers. Basic jobs also occur in services industries if the industry targets outside markets. Tourism is a prime example because it generates jobs in a range of industries. The area’s natural and

³ The Social and Economic Effects of 2nd Homes in Southwest Colorado (2006). Research by Donna K. Graves of Information Services, Durango, Colorado.

built amenities attract visitors from outside the county that spend money on accommodations, food services, admissions, transportation and shopping.

Visitor spending, using money that comes from outside the county creates the basic jobs and, through the multiplier effect, contributes to total employment. For our purposes, tourism can be broken down into two categories: "traditional tourism" which consists of day and destination (overnight) visitors, and "second homes". In this study we have not included timeshares or fractional ownership of residential units as second homes because we believe the spending patterns of these visitors most closely resemble traditional tourism. On the other hand, second homeowners also make purchases related to construction when they build or renovate homes, and when they purchase goods to furnish these homes.

Finally, there is an economic driver that is often important in a small economy consisting of direct additions to personal income from employers, governments and institutions located outside of the county. For example, social security payments to retired residents of the county and certain public assistance payments given to distressed households generate basic jobs in industries that supply household goods and services.

Today's county economies usually have more than one economic driver, but counties vary in their diversity. Sometimes one economic driver clearly dominates. Elsewhere, several economic drivers may be more balanced. A more balanced economy may mitigate employment ups and downs, sometimes even in the face of national economic trends.

OVERVIEW OF APPROACH

Phase 1 of the second home study defined the typology of second homes and vacant lands owned by "non-locals" and "locals" using assessor's databases and defining key characteristics of properties owned by non-locals (property owners whose mailing addresses are outside of each county in the three county study area).

Phase 2 fielded a survey of home owners to investigate shopping and travel patterns, demographics, values, current and future usage of property, recreational activities, and community involvement, among many items of interest.

The scope for Phase 3 was drawn to complete the investigation of second homes by quantifying their economic impacts in a comprehensive framework including all of the economic drivers in each county. The analysis addresses three key questions for each county. The objective is to provide answers in quantitative terms:

- First, what share of total employment is generated by each economic driver?
- Second, how important is each driver, compared to all the other drivers, in terms of its total employment effect?
- Third, how much total employment is generated in response to one basic job within a given economic driver, or in other words what is the ratio of total to direct employment for each economic driver?

The economic drivers study (Phase 3) uses methods that are comparable to earlier studies done for Region 10 and Region 12 and to the study of La Plata County done previously for the

Region 9 EDD.⁴ The method uses IMPLAN Social Accounting and Impact Analysis Data and Software⁵ to estimate impacts of economic drivers for which local data are available and to estimate impacts of drivers that are not easily measured at the local level.

The IMPLAN model used for this study was customized by substituting locally validated employment by sector for each of the counties. This forces the model to more accurately reflect actual relationships between industries and institutions and makes sure that impacts are consistent, meaning that they add up to a total employment number that has been reviewed and accepted by county officials and other stakeholders.

HOW CAN WE USE THIS INFORMATION?

Counties may wish to periodically assess their most important economic drivers in order to ensure that priorities fit local circumstances and the needs of the public. Determining which regional economic drivers are important can be challenging, since the definition of “important” is not always agreed upon by regional stakeholders. To avoid resorting to multiple surveys or word-of-mouth evidence, hard data supports a strong planning process. Quantitative methods like those used in the Region 9 study are also less prone to bias.

One specific application of the estimates developed here would be to assist in planning for and responding to growth. Current estimates and forecasts of growth in any economic driver can be used in conjunction with the ratios of total to basic employment, which have been estimated for each county and are presented in the report, to assess the full impact of basic job growth in the future. In turn, total job growth projections can be translated into population projections and people’s needs for housing, transportation, telecommunications and other county services.

For example, if a manufacturing company wanted to open a new plant and knew how many people they would employ, planners could estimate the number of supporting jobs and amount of job income this industry would add to the county economy. Or, if an economic driver is in decline, the analysis can project the potential loss of jobs. Given a current labor force or unemployment situation, a planner could estimate the number of new jobs filled by existing residents, commuters and new residents. From this estimates could be made of the number of new people and new households, and the overall effect on household types and household incomes. From there, the marginal effects on each of the abovementioned concerns – housing, transportation, other county services, land and other resource use – could be estimated.

Viewed this way, the economic drivers study is a tool for planning a response to growth and change and for strategizing for economic development. Region 9 EDD hopes that these studies will provide the starting point for public discussions to review the results and consider the implications for the future – for each county and for Southwestern Colorado as a region – of the strengths and weaknesses, opportunities and problems accompanying each economic driver.

⁴ See “Second Homes and the Economic Base of Four Counties in West Central Colorado: An Economic Drivers Study for Gunnison, Hinsdale, Ouray and San Miguel Counties”(Prepared for the USDA Forest Service, Region 2, in Partnership with the Region 10 League for Economic Assistance and Planning, Inc., September 2006 [available from the Region 10 League]),“The Social and Economic Effects of Second Homes”(Prepared by Linda Venturoni for the Northwest Colorado Council of Governments, June 2004[<http://www.nwc.cog.co.us/Second%20Home%20Study/NWCCOG%202ndHome%20Study%20Binder.pdf>]), and Lloyd Levy Consulting, La Plata County Economic Drivers Job Generation by Second Home and Other Economic Drivers. Prepared for Region 9 Economic Development District of Southwest Colorado, Inc., July 2008. Available from the District.

⁵ The IMPLAN software and data are products of the Minnesota IMPLAN Group, Inc. (MIG), Stillwater MN 55082. The MIG website address is www.implan.com.

To augment Region 9's understanding of each county's economic base, the analysis is extended to include a juxtaposition of different metrics describing each economic driver within each county. These metrics include each county's employment contribution factors, each driver's share of the total employment, and an inventory of the regional natural and economic assets. The purpose of this additional perspective is to shed light on opportunities that each county can capitalize upon.

As described above, defining which of a region's economic drivers are among the most does not always find consensus among regional stakeholders. This analysis quantifies several characteristics and assets of each economic driver in order to foster a greater appreciation of what makes each driver important. It is intended to facilitate the discussion of whether the importance of an economic driver should be determined on its size alone, its contribution factor (i.e. its jobs multiplier), or some combination of the two.

The analysis is complemented by taking inventory of assets unique to Region 9, Southwest Colorado, and each county. Both natural and economic assets are considered in each county. The natural assets, such as river corridors, national parks, and forests are identified as supply-side as well as demand-side assets. For example, these attractions serve as tourist destinations for visitors from and outside of Colorado. To the extent they are being marketed accordingly, they are capturing demand-side potentials. On the other hand, economic assets such as industries and institutions strong with outside markets are also identified to illustrate their function as not only supply-side but also demand-side characteristics. For example, the presence of an agglomeration economy (i.e. the presence of multiple industries with similar forward and backward linkages, located in close proximity to each other in order to benefit from spillover effects, and functioning in a mutually beneficial supply/demand arrangement) with employers and institutions may serve to attract additional businesses. A partnership between an economic driver, the employer or employers comprising the economic driver, and an institution may benefit a region's supply and demand potentials.

The purpose of the inventory is to facilitate the process of evaluating whether opportunities for growth exist and whether and to what extent partnerships or other development efforts can be made to further the development of the regional and local economy. Overall, this additional perspective is provided to aid the conversation about formulating economic development strategy and policy that strengthens the regional economy against potential downturns and also enhances economic drivers where assets are either underutilized or not utilized at all by the component industries and institutions.

ARCHULETA COUNTY

WHAT DRIVES THE ARCHULETA COUNTY ECONOMY?

A 2006 study by the Region 9 Economic Development District (Region 9 EDD) estimated that about 38% of single family homes in Archuleta County were owned by someone whose primary residence was outside of the county (this figure does not include time shares). The analysis applied a common-sense rule: If the County Assessor mails the tax bill to an owner of a residential unit at a non-county address, the unit is counted as a second home.

The Economic Drivers study grew out of a desire to estimate how many jobs are associated with the building, sales and maintenance of these homes. To put this information in context we must also examine the other important parts, or “drivers” of the county economy. This research is designed to give numerical answers to three key questions about a county economy:

- First, what share of total employment is generated by each economic driver?
- Second, how important is each driver, compared to all the other drivers, in terms of its total employment effect?
- Third, how much total employment is generated in response to one basic job within a given economic driver, or in other words what is the ratio of total to direct employment for each economic driver?

The answers to these questions can be shown in one graphical figure - a pie chart - that can be constructed for any county. Figure 1 depicts the size, relative importance and total employment ratio for Archuleta County’s economic drivers in 2007. Figure 2, on the following page, provides more details.

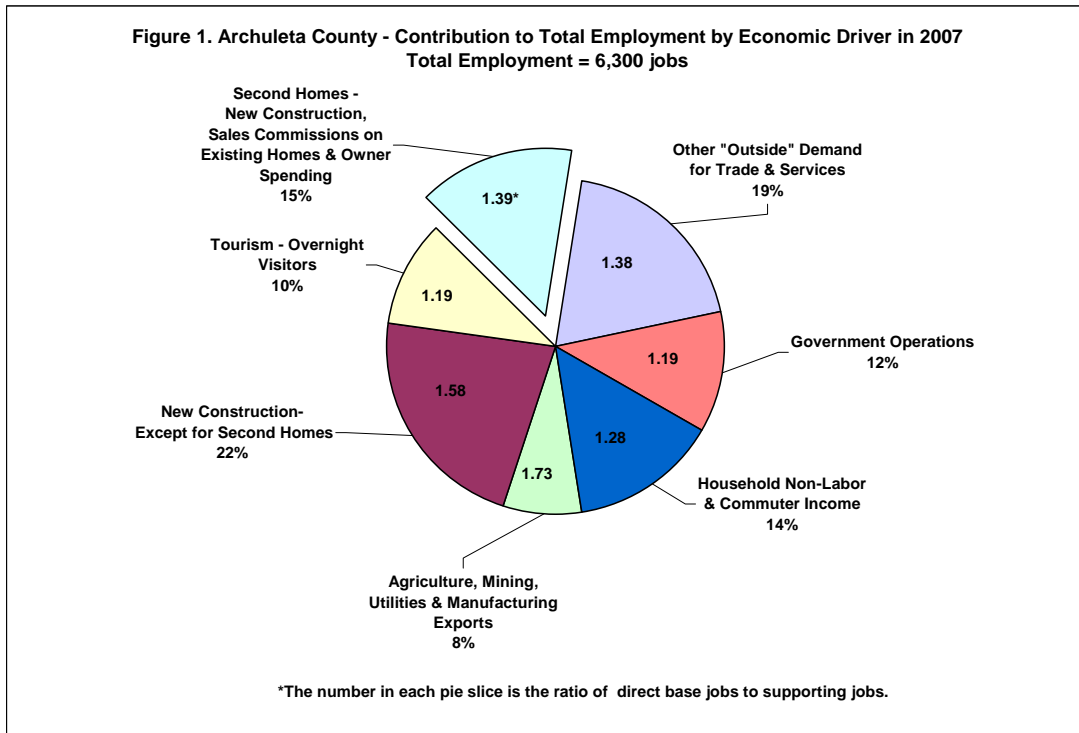


Figure 2.

Archuleta County – Direct Basic Jobs, Contribution to Total Employment and Total Employment per Direct Job by Economic Driver in 2007

ECONOMIC DRIVERS (1)	DIRECT BASIC JOBS GENERATED BY ECONOMIC DRIVER		CONTRIBUTION TO TOTAL EMPLOYMENT BY ECONOMIC DRIVER (COMPARE TO FIGURE 1)		TOTAL EMPLOYMENT CONTRIBUTION PER DIRECT JOB (COMPARE TO FIGURE 1)
	AMOUNT	SHARE OF TOTAL	AMOUNT	SHARE OF TOTAL	
AGRICULTURE, MINING, UTILITIES & MANUFACTURING EXPORTS	277	6%	479	8%	1.73
ALL NEW CONSTRUCTION EXCEPT FOR SECOND HOMES	887	20%	1,401	23%	1.58
Private Residential	762	17%	1,229	20%	1.61
Private Non-Residential	82	2%	111	2%	1.36
All Government Funded	44	1%	60	1%	1.36
TOURISM - OVERNIGHT VISITOR SPENDING	543	12%	645	10%	1.19
SECOND HOMES DRIVER	673	15%	935	15%	1.39
Construction of New Second Homes	220	5%	335	6%	1.62
Real Estate Commissions on Sale of Existing	22	<1%	30	<1%	1.37
Local Spending by Second-Home Owners	431	9%	550	9%	1.28
OTHER "OUTSIDE" DEMAND FOR TRADE AND SERVICES – see page 38	877	19%	1,209	19%	1.38
GOVERNMENT OPERATIONS	628	14%	745	12%	1.19
State & Local Government (2)	570	12%	668	11%	1.17
Federal Government	58	1%	77	1%	1.32
HOUSEHOLD NON-LABOR & COMMUTER INCOME	692	15%	886	14%	1.28
Dividends, Interest, Rent & Investment Withdrawals	410	9%	525	8%	1.28
Social Security & Medicare Benefits	201	4%	258	4%	1.28
Public Assistance (3)	43	1%	55	1%	1.28
Other Transfer Receipts (4)	21	<1%	27	<1%	1.28
Net In-Flow of Income Earned by Commuters (5)	16	<1%	21	<1%	1.28
TOTAL	4,577		6,300		1.38

Notes:

1. Economic drivers are groupings of business activities that bring money into a county by serving an external market or are distributions of income from outside sources that directly support resident households. Money brought into the county by economic drivers circulates within the economy to create direct basic jobs and supporting jobs, adding up to total employment in the county.
2. Local government reflects the impact of transfers from levels of government outside the county (e.g., state general funding of education), making it an economic driver.
3. This category covers government transfers for income maintenance, medical public assistance, and unemployment benefits.
4. This category comprises mostly government benefits for veterans.
5. The earnings of county residents who work outside the county are an in-flow of household income. The earnings of non-county residents who work in the county are an out-flow. This amount in this category is the net effect of the two income flows.

Sources: Estimates by Lloyd Levy Consulting LLC. For methodology see Appendix 2, Data and Methods.

Economic drivers are analyzed in terms of broad types of activity that bring money into a county, for example, “Manufacturing” or “Agriculture.” Driver definitions are flexible and can be redefined using local knowledge. In some economies a driver may be a single large employer. Other drivers are not “industries” at all but are clusters of businesses that market to related types of customers, as is the case with tourism. And some drivers are just flows of income from outside sources that support resident households, providing these households with income that they can spend locally. When they do spend locally, the non-labor income is translated into local jobs.

This analysis depicts considerable diversity in Archuleta County’s economy in 2007. Six of seven economic drivers contribute shares of total employment in the range of 10 percent to 23 percent. The traditional agricultural and natural resource driver adds to this a small but significant contribution of 8 percent of total employment.

- Agriculture (176), mining (27), utilities (8) and manufacturing (66) exports contributed 277 direct basic jobs plus 202 supporting jobs -- totaling 479 total jobs (8% of total employment) for a ratio of 1.73 total jobs per basic job;
- All new construction except for second homes, consisting mostly of construction of private residences, contributed 887 direct basic jobs plus 514 supporting jobs – totaling 1,401 jobs (23% of total employment) for a ratio of 1.58 total jobs per basic job;
- Government operations at all levels of government contributed 628 direct basic jobs plus 117 supporting jobs -- totaling 745 total jobs (12% of total employment) for a ratio of 1.19 total jobs per basic job;
- Household non-labor & commuter income, mostly consisting of household property income and withdrawals from savings, contributed 692 direct basic jobs plus 194 supporting jobs -- totaling 886 jobs (14% of total employment) for a ratio of 1.28 total jobs per basic job.
- Other “outside” demand for trade and services contributed 877 direct basic jobs plus 332 supporting jobs – totaling 1,209 jobs (19% of total employment) for a ratio of 1.38 total jobs per basic job. The industries in this economic driver, often referred to as the Regional Trade and Services driver, include Real Estate and Rental, Other Services, Trade, Professional, Scientific and Technical Services, and Administrative Services. This category is further delineated on page 38 of this report.

The Second Homes Driver contributed substantially to the Archuleta County economy, creating 673 direct basic jobs, 262 supporting jobs and 935 total jobs; this is a 15 percent share of total employment and a ratio of 1.39 total jobs per basic job. The range of activities for the second homes driver was defined to include the construction of new second homes, the real estate commissions earned on the sales of existing second homes, and the spending of second-home owners while they are using their second homes.

The second-home owner spending analysis was based on a Region 9 EDD survey that reported total household income, an income-level specific disposable income factor, and the amount of time spent using the second home. The IMPLAN model was used to make the estimates of direct and total employment from the estimate of second-home owner spending.

The same characteristics that attract second home development also attract tourists/visitors to Archuleta County for overnight stays. This driver created 543 direct basic jobs, 102 supporting jobs and 645 total jobs (10% of total county employment, total to basic employment ratio of 1.19).

The attractions that create a market for visitors to Archuleta County are the various hot springs spas and other amenities in Pagosa Springs, accommodations for the Wolf Creek Ski Area (which is in Mineral County) and the recreation opportunities and scenery found on the San Juan National Forest and other public parks and land. Other businesses have the potential to attract overnight visits and to drive the tourist and visitors segment of the economy. An example is the Parelli Natural Horsemanship's headquarters in Archuleta County, which also attracts a small but potentially growing number of overnight visits for on-site training sessions.

ASSETS AND OPPORTUNITIES: ARCHULETA COUNTY

The analysis of each county's economic base is complemented by a juxtaposition of several metrics: each economic driver's share of total employment, its contribution factor, and an inventory of assets. The chart below (Figure 3) depicts the two quantitative attributes simultaneously to illustrate one perspective on the dynamics of the local economy. Some economic drivers have a large presence in the region but may not actually contribute significantly to generating spillover effects (i.e. indirect or induced jobs). On the other hand, some economic drivers represent a small portion of the economy but possess large contribution factors.

While the presentation of this chart may suggest that the ideal economy would contain economic drivers with only higher multipliers, this is never possible. It is, however, possible to identify the drivers that are good candidates for investment or enhancement. That is, to the extent demand side opportunities exist, supply side investment will result in a stronger economy.

In Archuleta County, new home construction (both permanent resident housing and second homes) are large economic drivers with high jobs multipliers. An upswing in construction due to investment in housing generates not only new direct jobs but also additional indirect and induced jobs. Conversely, a downturn in construction would result in the loss of direct jobs and also jobs in other fields.

The County benefits from a strong second homeowner presence, in that their spending alone accounts for nine percent of jobs in the local economy. People in the county recognize that currently the second home construction industry is in a bust cycle, however, the second home owners already have homes that need to be maintained, and goods and services are being purchased whenever they visit. A marketing effort aimed at second homeowners (i.e. a mailed brochure outlining upcoming events, etc) could be one way of increasing that spending by enticing them to visit more often or for longer periods of time. Second homes that are used infrequently by the owner could also go into a locally managed rental pool, providing income for the owners, jobs in the community and more opportunities for overnight visitors to stay longer and spend more money. Extra lodging during events such as the Four Corners Folk Festival, for example, could be beneficial.

Along similar lines, the overnight visitation sector is a component of the economy (10 percent) that represents the inflow of dollars to the County. This economic driver benefits from the multiple natural regional assets and attractions that are capitalized upon to an extent. Can more local events surrounding ranching traditions, for example, benefit overnight tourism or day visitors? If more selective marketing efforts succeeded at attracting more visitors, would the County's lodging and services industries be in a position to accommodate this?

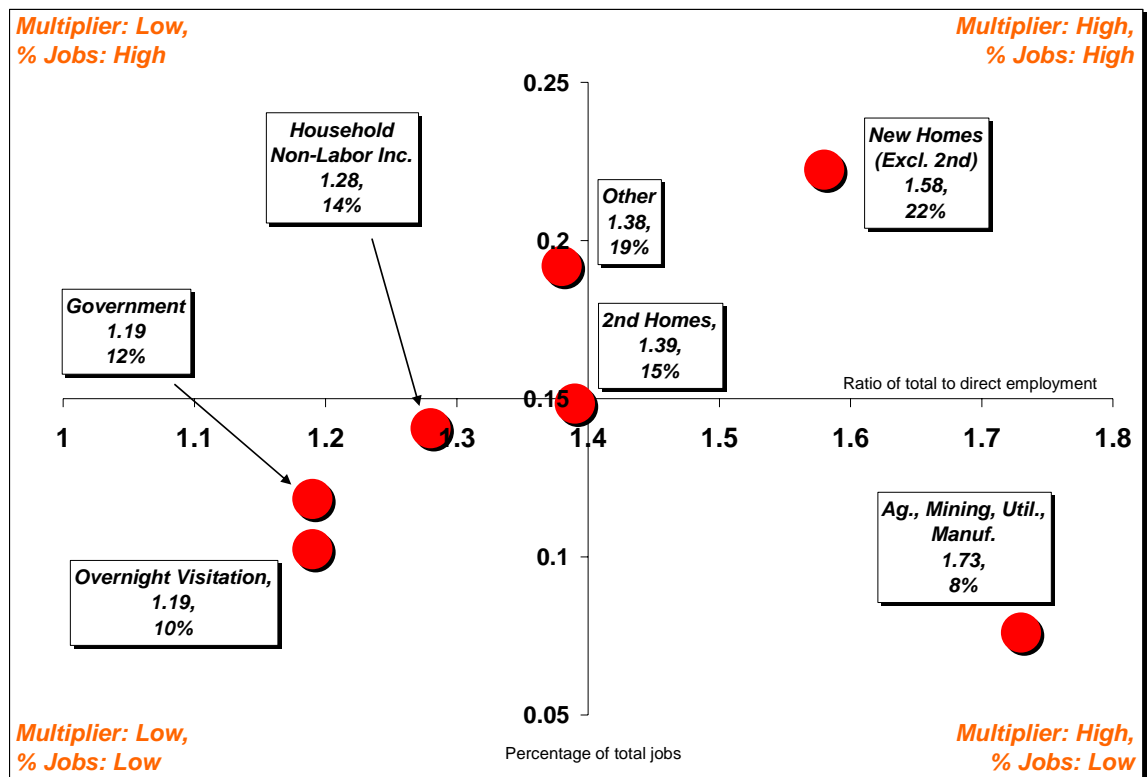
Other attractions that create a market for visitors to Archuleta County are the various hot springs, spas, and other amenities in Pagosa Springs, accommodations for the Wolf Creek Ski Area (in Mineral County) and the recreation opportunities and scenery found on the San Juan National Forest and other public parks and land.

The proximity of Mesa Verde National Park to Archuleta County, and to each county in Region 9, also offers an opportunity for the entire region to benefit from and collectively market itself. Visitors could be drawn not only by the local resources and assets but also by the County's proximity to the national parks.

Other businesses have the potential to attract overnight visits and to drive the tourist and visitors segment of the economy. An example is the Parelli Natural Horsemanship's headquarters in Archuleta County, which also attracts a small but potentially growing number of overnight visits for on-site training sessions. Can a more selective marketing effort capture a greater share of the destination-travel visitor? And can it contribute to a broadening of the guest profile? Along these lines, can existing services and businesses be branded together in a creative marketing effort to brand a more diverse set of attractions, e.g. health and wellness destination travel?

By comparison, the agriculture, mining, utilities, and manufacturing economic driver (a composite of traditionally basic industries) accounts for the smallest portion of the County's workforce, but have the largest contribution factor. With an increased interest in organic food production, is there sufficient local or regional demand to warrant additional investment in the supply side (production) of this sector? The availability of cheap energy, i.e. hot springs, has already created a proposal to build community greenhouses for the provision of local produce. Furthermore, what is the appropriate role for the County in such a venture, if any?

Figure 3. Archuleta County



DOLORES COUNTY

WHAT DRIVES THE DOLORES COUNTY ECONOMY?

A 2006 study by the Region 9 Economic Development District (Region 9 EDD) estimated that about 44% of single family homes in Dolores County were owned by someone whose primary residence was outside of the county. The analysis applied a common-sense rule: If the County Assessor mails the tax bill to an owner of a residential unit at a non-county address, the unit is counted as a second home.

The Economic Drivers study grew out of a desire to count how many jobs are associated with the building, sales and maintenance of these homes. To put this information in context we must also examine the other important parts, or “drivers” of the county economy. This research is designed to give numerical answers to three key questions about a county economy:

- First, what share of total employment is generated by each economic driver?
- Second, how important is each driver, compared to all the other drivers, in terms of its total employment effect?
- Third, how much total employment is generated in response to one basic job within a given economic driver, or in other words what is the ratio of total to direct employment for each economic driver?

The answers to these questions can be shown in one graphical figure - a pie chart - that can be constructed for any county. Figure 4 depicts the size, relative importance and total employment ratio for Dolores County’s economic drivers in 2007. Figure 5, on the following page, provides more details.

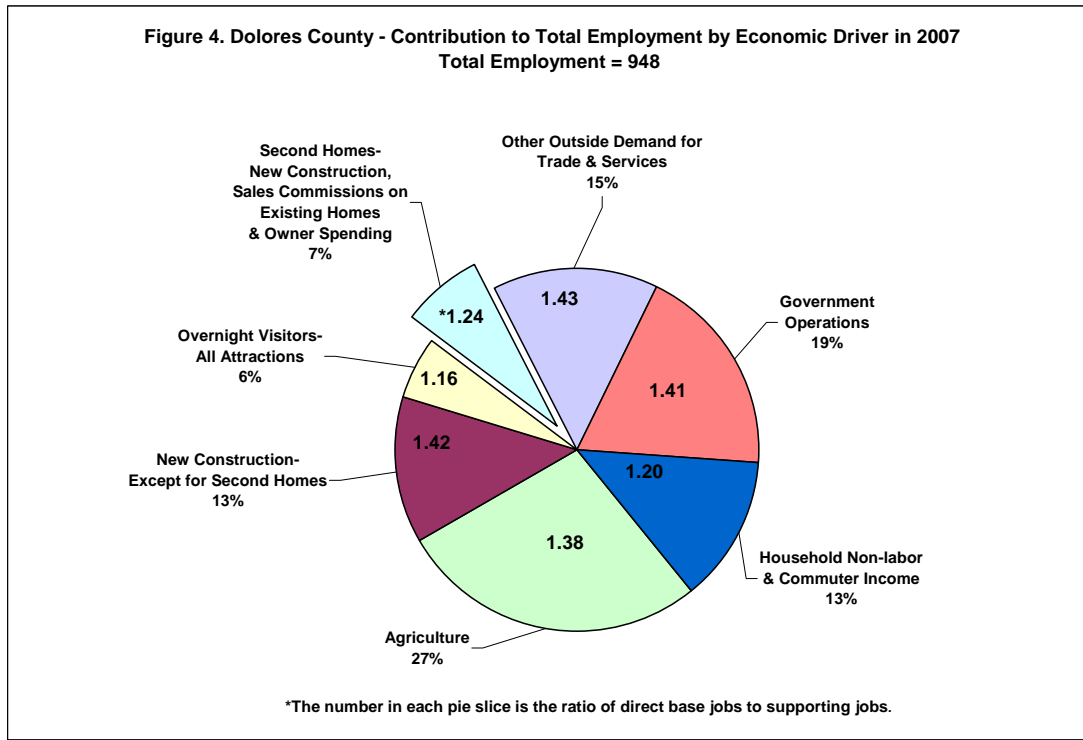


Figure 5.

Dolores County – Direct Basic Jobs, Contribution to Total Employment and Total Employment per Direct Job by Economic Driver in 2007

ECONOMIC DRIVERS (1)	DIRECT BASIC JOBS GENERATED BY ECONOMIC DRIVER		CONTRIBUTION TO TOTAL EMPLOYMENT BY ECONOMIC DRIVER (COMPARE TO FIGURE 1)		TOTAL EMPLOYMENT CONTRIBUTION PER DIRECT JOB (COMPARE TO FIGURE 1)
	AMOUNT	SHARE OF TOTAL	AMOUNT	SHARE OF TOTAL	
AGRICULTURE	189	27%	260	27%	1.38
ALL NEW CONSTRUCTION EXCEPT FOR SECOND HOMES	87	12%	124	13%	1.42
Private Residential	56	8%	83	9%	1.47
Private Non-Residential	15	2%	20	2%	1.32
All Government Funded	16	2%	21	2%	1.34
TOURISM - OVERNIGHT VISITOR SPENDING	45	6%	52	6%	1.16
SECOND HOMES DRIVER	56	8%	70	7%	1.24
Construction of New Second Homes	10	1%	15	2%	1.48
Real Estate Commissions on Sale of Existing	8	1%	9	1%	1.14
Local Spending by Second-Home Owners	39	5%	46	5%	1.19
OTHER "OUTSIDE" DEMAND FOR TRADE AND SERVICES – see page 39	98	14%	139	15%	1.43
GOVERNMENT OPERATIONS	126	18%	178	19%	1.41
State & Local Government (2)	116	16%	166	18%	1.43
Federal Government	11	1%	12	1%	1.12
HOUSEHOLD NON-LABOR & COMMUTER INCOME	104	15%	125	13%	1.20
Dividends, Interest, Rent & Investment Withdrawals	63	9%	75	8%	1.20
Social Security & Medicare Benefits	23	3%	27	3%	1.20
Public Assistance (3)	8	1%	10	1%	1.20
Other Transfer Receipts (4)	2	<1%	2	<1%	1.20
Net In-Flow of Income Earned by Commuters (5)	8	1%	10	1%	1.20
TOTAL	705		948		1.34

Notes:

1. Economic drivers are groupings of business activities that bring money into a county by serving an external market or are distributions of income from outside sources that directly support resident households. Money brought into the county by economic drivers circulates within the economy to create direct basic jobs and non-basic jobs, adding up to total employment in the county.
2. Local government reflects the impact of transfers from levels of government outside the county (e.g., state general funding of education), making it an economic driver.
3. This category covers government transfers for income maintenance, medical public assistance, and unemployment benefits.
4. This category comprises mostly government benefits for veterans.
5. The earnings of county residents who work outside the county are an in-flow of household income. The earnings of non-county residents who work in the county are an out-flow. This amount in this category is the net effect of the two income flows.

Sources: Estimates by Lloyd Levy Consulting LLC. For methodology see Appendix 2, Data and Methods.

Economic drivers are analyzed in terms of broad types of activity that bring money into a county, for example, “Manufacturing” or “Agriculture”. Driver definitions are flexible and can be redefined using local knowledge. In some economies a driver may be a single large employer. Other drivers are not “industries” at all but are clusters of businesses that market to related types of customers, as is the case with tourism. And some drivers are just flows of income from outside sources that support resident households, providing these households with income that they can spend locally. When they do spend locally, the non-labor income is translated into local jobs.

Viewed as a whole, and comparing the contributions of economic drivers to each other, this analysis depicts Dolores County’s continued reliance on a traditional economic base founded on agriculture and natural resources.

- Agriculture contributed 189 direct basic jobs and 71 supporting jobs – totaling 260 jobs (27% of total employment) for a ratio of 1.38 total jobs per basic job;
- All new construction except for second homes – mostly construction of private residences – contributed 87 direct basic jobs and 37 supporting jobs – totaling 124 jobs (13% of total employment) for a ratio of 1.42 total jobs per basic job;
- Government operations at all levels of government contributed 126 direct basic jobs and 52 supporting jobs – totaling 178 total jobs (19% of total employment) for a ratio of 1.41 total jobs per basic job; and
- Household non-labor & commuter income mostly consisting of household property income and withdrawals from savings – contributed 104 direct basic jobs and 21 supporting jobs – totaling 125 jobs (13% of total employment) for a ratio of 1.20 total jobs per basic job;
- Other “outside” demand for trade and services contributed 98 direct basic jobs and 41 supporting jobs – totaling 136 jobs (15% of total employment) for a ratio of 1.43 total jobs per basic job. The industries in this economic driver, often referred to as the Regional Trade and Services driver, include Real Estate and Rental, Other Services, Trade, Professional, Scientific and Technical Services, and Administrative Services. This category is further delineated on page 39 of this report.

The Second Homes Driver contributed marginally to the Dolores County economy, creating 56 direct basic jobs, 14 supporting jobs and 70 total jobs, a 7 percent share of total employment. The range of activities was defined to include the construction of new second homes, the real estate commissions earned on the sales of existing second homes, and the spending of second-home owners while they are using their second homes. The ratio of 1.24 means that for every direct basic job associated with second homes, there are 0.24 jobs in supporting industries.

The second-home owner spending analysis was based on a Region 9 EDD survey that reported total household income, an income-level specific disposable income factor, and the amount of time spent using the second home. The IMPLAN model was used to make the estimates of direct and total employment from the estimate of second-home owner spending.

The same characteristics that attract second home development also attract tourists/visitors to Dolores County for overnight stays. This driver created 45 direct basic jobs, 7 supporting jobs and 52 total jobs (5% of total county employment, total to basic employment ratio of 1.16). Dolores County attracts visitors primarily because of scenery and recreation on its public lands and waters.

ASSETS AND OPPORTUNITIES: DOLORES COUNTY

The analysis of each county's economic base is complemented by a juxtaposition of several metrics: each economic driver's share of total employment, its contribution factor, and an inventory of assets. The chart below (Figure 6) depicts the two quantitative attributes simultaneously to illustrate one perspective on the dynamics of the local economy. Some economic drivers have a large presence in the region but may not actually contribute significantly to generating spillover effects (i.e. indirect or induced jobs). On the other hand, some economic drivers represent a small portion of the economy but possess large contribution factors.

While the presentation of this chart may suggest that the ideal economy would contain economic drivers with only higher multipliers, this is never possible. It is, however, possible to identify the drivers that are good candidates for investment or enhancement. That is, to the extent demand side opportunities exist, supply side investment will result in a stronger economy.

Dolores County possesses a number of natural amenities including proximity to Mesa Verde National Park, the San Juan National Forest, the Dolores River corridor, and the Canyon of the Ancients. The County is also situated to benefit from destination tourists seeking to take advantage of the local and regional assets, but also other national park destination attractions, such as the Grand Canyon.

These attractions serve to satisfy demand for recreational opportunities. Other regional assets that are more economic in nature relate to the agriculture driver. Sunflower, safflower, and pinto beans are grown successfully in Dolores County's climate. For the County's gross regional product, these natural resources and assets contribute significantly to the local economy.

Agriculture already accounts for nearly 30 percent of the workforce and has a multiplier of 1.38. Each job created in this field generates additional indirect and induced jobs in other subordinate industries. The supply side of the agriculture driver has developed and expanded over the past decade to include more advanced bio-fuel/bio-energy production capabilities, as well as reaching into four neighboring counties for its supply chain of basic materials. The grower base includes Montezuma, San Miguel, and San Juan County (Utah). In response to increasing demands of the past for the production of sunflower oil, safflower, and other byproducts, this grower base has increased from approximately 3,000 acres in 2000 to approximately 10,000 acres today, according to local interviews. On the demand side, opportunities may exist to expand the production capacity in the County by adding other manufactured and processed byproducts of sunflower oil and safflower to the region's exports. To the extent that the demand can be quantified, investment in the supply and production capacity of this driver would enhance its attractiveness as an equity investment for tax incentive purposes.

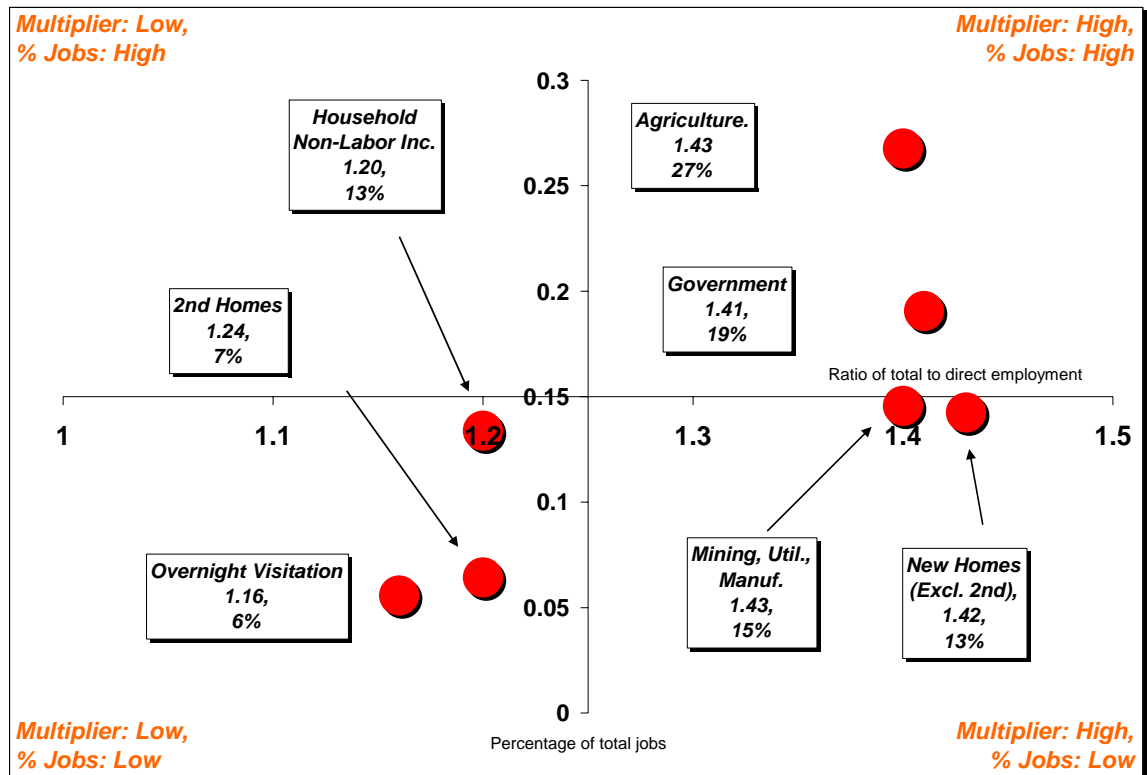
At a bit of convergence between the local overnight visitation driver and the agriculture driver is the production of pinto beans. Dove Creek is known as the "Pinto Bean Capitol". While there may be uncertainty surrounding the sustainability of a crop that must be rotated to preserve the ground's fertility, there (if we can credibly establish an indication of more demand) is an opportunity to capitalize on this notoriety and market festivals and other public events that attract more tourists to the region.

In the past, the County has had experiences with small business incubators and incentive programs. The success and failure of these past experiences is largely attributed to factors beyond the County's control, i.e. access to federal grant funding with optimal local match requirements. Today, under tighter federal and state funding conditions, the County must find a way to reinstate policies that serve small businesses seeking to expand, relocate, or set up operations in the County.

The County contains a wide variety of beautiful natural assets, but for which none has been amply marketed. Investment in a marketing campaign is challenging given that dollars invested early in a campaign yield higher returns than dollars invested later. Nevertheless, marketing to potential tourist markets that Dolores County offers day trip proximity to multiple attractions as well as the Canyon would likely be met with success. Similarly, there are a number of assets that serve recreational demands, such as rafting on the Dolores River, or hiking, biking, and touring along the corridor. The flow of water, however, is regulated by the reservoir, and there are competing demands for this important natural resource. The challenge facing the County in this regard is balancing between the need to provide water for its largest driver, agriculture, to meet demands of recreation, as well as meeting consumption demands of ordinary population and agriculture.

The proximity of Mesa Verde National Park and the Grand Canyon to Dolores County, and to each county in Region 9, also suggests that an opportunity for the entire region to benefit from and collectively market itself may be present. Visitors could be drawn not only by the local resources and assets but also by the County's proximity to the national parks.

Figure 6. Dolores County



LA PLATA COUNTY

WHAT DRIVES THE LA PLATA COUNTY ECONOMY?

A 2006 study by the Region 9 Economic Development District (Region 9 EDD) estimated that about 17% of single family homes in La Plata County were owned by someone whose primary residence was outside of the county. The analysis applied a common-sense rule: If the County Assessor mails the tax bill to an owner of a residential unit at a non-county address, the unit is counted as a second home.

The Economic Drivers study grew out of a desire to count how many jobs are associated with the building, sales and maintenance of these homes. To put this information in context we must also examine the other important parts, or “drivers” of the county economy. This research is designed to give numerical answers to three key questions about a county economy:

- First, what share of total employment is generated by each economic driver?
- Second, how important is each driver, compared to all the other drivers, in terms of its total employment effect?
- Third, how much total employment is generated in response to one basic job within a given economic driver, or in other words what is the ratio of total to direct employment for each economic driver?

The answers to these questions can be shown in one graphical figure - a pie chart - that can be constructed for any county. Figure 7 depicts the size, relative importance and total employment ratio for La Plata County’s economic drivers in 2006. Figure 8, on the following page, provide the details.

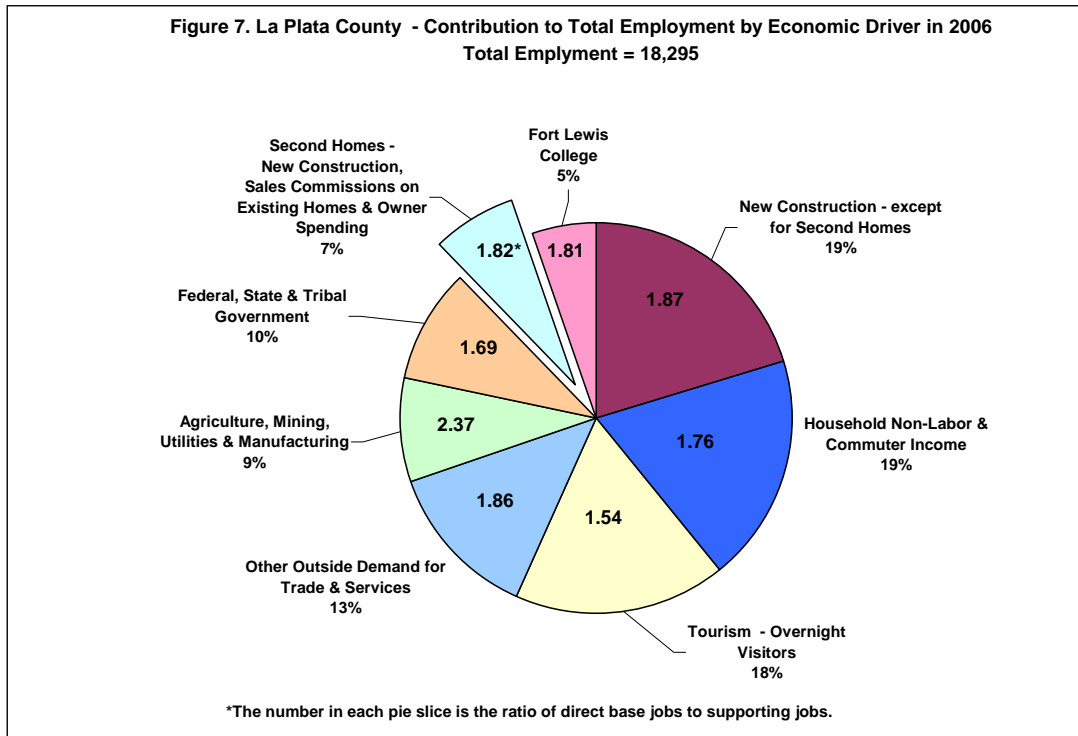


Figure 8.

La Plata County – Direct Basic Jobs, Contribution to Total Employment and Total Employment per Direct Job by Economic Driver in 2006

Economic Driver	Direct Jobs Attributable to Economic Drivers		Contribution To Total Employment By Economic Driver		Total Employment Contribution Per Direct Job
	AMOUNT	share of total	AMOUNT	share of total	
CONSTRUCTION					
Federal Government	101	< 1%	177	< 1%	1.75
Other State & Local Government	390	2%	676	2%	1.73
Private Local (Residential, Commercial & Industrial)	2,987	16%	5,766	17%	1.93
Other Non-Local	237	1%	333	1%	1.4
subtotal	3,715	20%	6,952	21%	1.87
SPENDING OF HOUSEHOLD "BASIC" INCOME					
Retiree Households – Basic Income plus Medicare Payments	1,709	9%	3,143	10%	1.84
Other Households – Government Payments	417	2%	710	2%	1.7
Other Households – Dividends, Interest & Rent	1,328	7%	2,227	7%	1.68
subtotal	3,454	18%	6,080	19%	1.76
TOURISM - Overnight Visitor Spending	3,218	18%	4,954	15%	1.54
REGIONAL SERVICES					
Trade & Transportation	332	2%	618	2%	1.86
Information & Communications	62	< 1%	116	< 1%	1.86
Financial & Insurance	304	2%	558	2%	1.83
Professional & Business	1,162	6%	2,161	7%	1.86
Education & Health	498	3%	927	3%	1.86
subtotal	2,358	13%	4,380	13%	1.86
AGRICULTURE, MINING, UTILITIES & MANUFACTURING	1,568	9%	3,711	11%	2.37
FEDERAL, STATE & TRIBAL GOVERNMENT					
Federal Government	552	3%	1,115	3%	2.02
Southern Ute Tribal Government Agencies (excluding Sky Ute Casino-Hotel)	1,011	6%	1,552	5%	1.54
State Government (excluding Fort Lewis College & Southern Ute Tribal Government)	186	1%	286	1%	1.54
subtotal	1,749	10%	2,953	9%	1.69
2ND HOMES					
2nd Home Construction	270	1%	555	2%	2.06
Real Estate Commissions on 2nd Home Sales	28	< 1%	60	< 1%	2.17
2nd Home-Owner Spending	955	5%	1,670	5%	1.75
subtotal	1,253	7%	2,285	7%	1.82
FORT LEWIS COLLEGE					
Fort Lewis College Employment & Spending	645	4%	1,178	4%	1.83
Fort Lewis College Capital Construction	10	< 1%	17	< 1%	1.79
Fort Lewis College Student Spending	325	2%	615	2%	1.89
subtotal	980	5%	1,810	5%	1.85
Total	18,295	100%	33,125	100%	1.81

Source: Lloyd Levy Consulting, La Plata County Economic Drivers Job Generation by Second Home and Other Economic Drivers. Prepared for Region 9 Economic Development District of Southwest Colorado, Inc., July 2008. Available from the District.

Economic drivers are analyzed in terms of broad types of activity that bring money into a county, for example, “Manufacturing” or “Agriculture”. Driver definitions are flexible and can be redefined using local knowledge. In some economies a driver may be a single large employer. Other drivers are not “industries” at all but are clusters of businesses that market to related types of customers, as is the case with tourism. And some drivers are just flows of income from outside sources that support resident households, providing these households with income that they can spend locally. When they do spend locally, the non-labor income is translated into local jobs.

This analysis emphasizes the diversity of La Plata County’s economy, which benefits from government, education, tourism, trade, natural resources, capital construction, and the various types of household wealth and income that originate outside the local job market. These include:

- Fort Lewis College, which generated 980 direct basic jobs plus 830 supporting jobs -- totalling 1,810 (5% of total employment) jobs, for a ratio of 1.85 total jobs per basic job;
- The Southern Ute Tribe also drives the local economy, which generated 1,474 total jobs in the economy as a whole (4% of total employment). It is safe to assume that the Sky Ute Casino-Hotel is significant to La Plata County’s economic base because of trade from outside the county. Base jobs attributable to the casino-hotel are probably among the total jobs attributable to tourism, where one would also find economic-base jobs driven by attractions like Durango Mountain Resort, the Durango-Silverton Railroad, and the region’s abundant public land and parks;
- Agriculture (476), mining (566), utilities (11) and manufacturing exports (516) contributed 1,568 direct basic jobs plus 2,143 supporting jobs – totaling 3,711 total jobs (15% of total employment) for a ratio of 2.37 total jobs per basic job. All new construction except for second homes, contributed 3,715 direct basic jobs plus 3,237 supporting jobs – totaling 6,952 jobs (21% of total employment) for a ratio of 1.87 total jobs per basic job. These include substantial investments in capital construction by federal, state and local government. Capital construction is an economic driver, even when development is undertaken by local households, business and institutions, because capital investments, even private dwellings, are generally paid for with borrowed funds that originate from external capital markets, from draw-downs of savings (which originated in a different time period), or from granted funds that come from other levels of government or from outside institutions;
- Government operations at all levels of government (including Southern Ute Tribal Government) contributed 1,749 direct basic jobs plus 1,204 supporting jobs -- totaling 2,953 total jobs (9% of total employment) for a ratio of 1.69 total jobs per basic job;
- Household non-labor & commuter income, contributed 3,454 direct basic jobs plus 2,626 supporting jobs -- totaling 6,080 jobs (19% of total employment) for a ratio of 1.76 total jobs per basic job;
- Other “outside” demand for Regional trade and services contributed 2,358 direct basic jobs plus 2,022 supporting jobs – totaling 4,380 jobs (13% of total employment) for a ratio of 1.86 total jobs per basic job.

The Second Homes Driver contributed 1,253 direct basic jobs plus 1,032 supporting jobs – totaling 2,285 jobs (7% of total employment) for a ratio of 1.82 total jobs per basic job. The range of activities for the second homes driver was defined to include the construction of new second homes, the real estate commissions earned on the sales of existing second homes, and the spending of second-home owners while they are using their second homes.

The second-home owner spending analysis was based on a Region 9 EDD survey that reported total household income, an income-level specific disposable income factor, and the amount of time spent using the second home. The IMPLAN model was used to make the estimates of direct and total employment from the estimate of second-home owner spending.

The same characteristics that attract second home development also attract tourists/visitors to La Plata County for overnight stays. This driver created 3,218 direct basic jobs, 1,736 supporting jobs and 4,954 total jobs (15% of total county employment, total to basic employment ratio of 1.54).

ASSETS AND OPPORTUNITIES: LA PLATA COUNTY

The analysis of each county's economic base is complemented by a juxtaposition of several metrics: each economic driver's share of total employment, its contribution factor, and an inventory of assets. The chart below (Figure 9) depicts the two quantitative attributes simultaneously to illustrate one perspective on the dynamics of the local economy. Some economic drivers have a large presence in the region but may not actually contribute significantly to generating spillover effects (i.e. indirect or induced jobs). On the other hand, some economic drivers represent a small portion of the economy but possess large contribution factors.

While the presentation of this chart may suggest that the ideal economy would contain economic drivers with only higher multipliers, this is never possible. It is, however, possible to identify the drivers that are good candidates for investment or enhancement. That is, to the extent demand side opportunities exist, supply side investment will result in a stronger economy.

La Plata County's assets include multiple natural amenities such as nearby Mesa Verde National Park, the San Juan National Forest, and other public parks and land. The County also possesses tourist destination spots such as ski areas like Durango Mountain Resort, and other amenities in the built environment like the Durango & Silverton narrow gauge railway, and Durango's historic downtown. Additionally, the region possesses natural gas and servicing wells that are important to the economy.

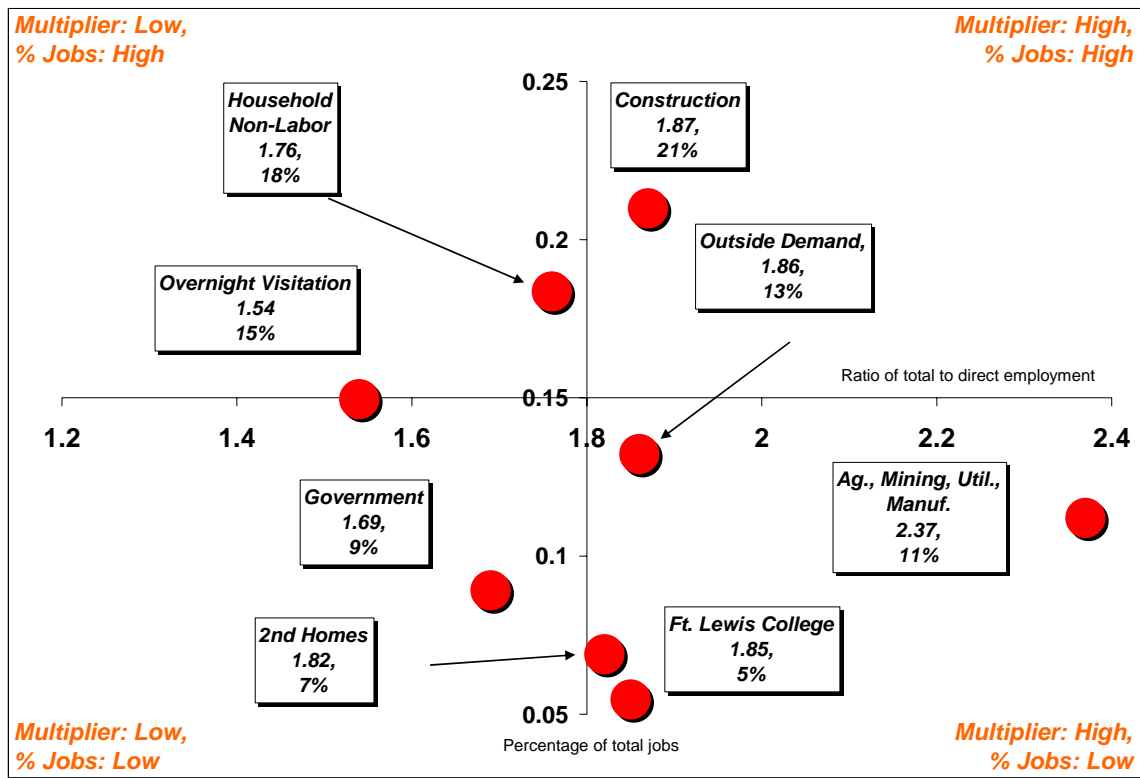
The County's economic drivers include a collection of institutions and enterprises with markets beyond county boundaries. Fort Lewis College is a substantial economic driver in the County though it accounts for a smaller portion of the local workforce. The office for Region 9 EDD and other important organizations such as the Growth Company Initiative serve as examples of regional economic assets, which support both supply and demand side opportunities for the County.

To the extent that the demand side factors can be properly evaluated, there may be opportunities to enhance La Plata County's economy through strategic investment and cooperation. The activities and capacity of Fort Lewis College and the Growth Company Initiative suggest the presence of a strong entrepreneurial base as well as resources to ensure their success. A teaming arrangement between the two in the style of an agglomeration economy (i.e. knowledge and idea sharing, as well as potentially mutual beneficial supplier, producer, and consumer relationships) could contribute to the enhancement of the region's economy. Simultaneously, a business incubator might indirectly benefit the region's workforce in the form of increased opportunities.

According to local interviews, some professional and technical businesses have searched for adequate non-residential and even residential space suitable for their relocation into La Plata County, but have not been met. To the extent that this level of demand for businesses relocating is consistent, an assessment of adequate and suitable space will benefit the County in overcoming any challenges not related directly to the generation of new employment sources.

Also within the region, particularly in La Plata County, there is also a growing movement towards “sustainability”, an economic strategy that reduces dependence on imports and maintains or increases exports. Unfortunately, that concept is beyond the scope of this study.

Figure 9. La Plata County



MONTEZUMA COUNTY

WHAT DRIVES THE MONTEZUMA COUNTY ECONOMY?

A 2007 study by the Region 9 Economic Development District (Region 9 EDD) estimated that about 13% of single family homes in Montezuma County were owned by someone whose primary residence was outside of the county. The analysis applied a common-sense rule: If the County Assessor mails the tax bill to an owner of a residential unit at a non-county address, the unit is counted as a second home.

The Economic Drivers study grew out of a desire to count how many jobs are associated with the building, sales and maintenance of these homes. To put this information in context we must also examine the other important parts, or “drivers” of the county economy. This research is designed to give numerical answers to three key questions about a county economy:

- First, what share of total employment is generated by each economic driver?
- Second, how important is each driver, compared to all the other drivers, in terms of its total employment effect?
- Third, how much total employment is generated in response to one basic job within a given economic driver, or in other words what is the ratio of total to direct employment for each economic driver?

The answers to these questions can be shown in one graphical figure - a pie chart - that can be constructed for any county. Figure 10 depicts the size, relative importance and total employment ratio for Montezuma County’s economic drivers in 2007. Figure 11, on the following page, provides more details.

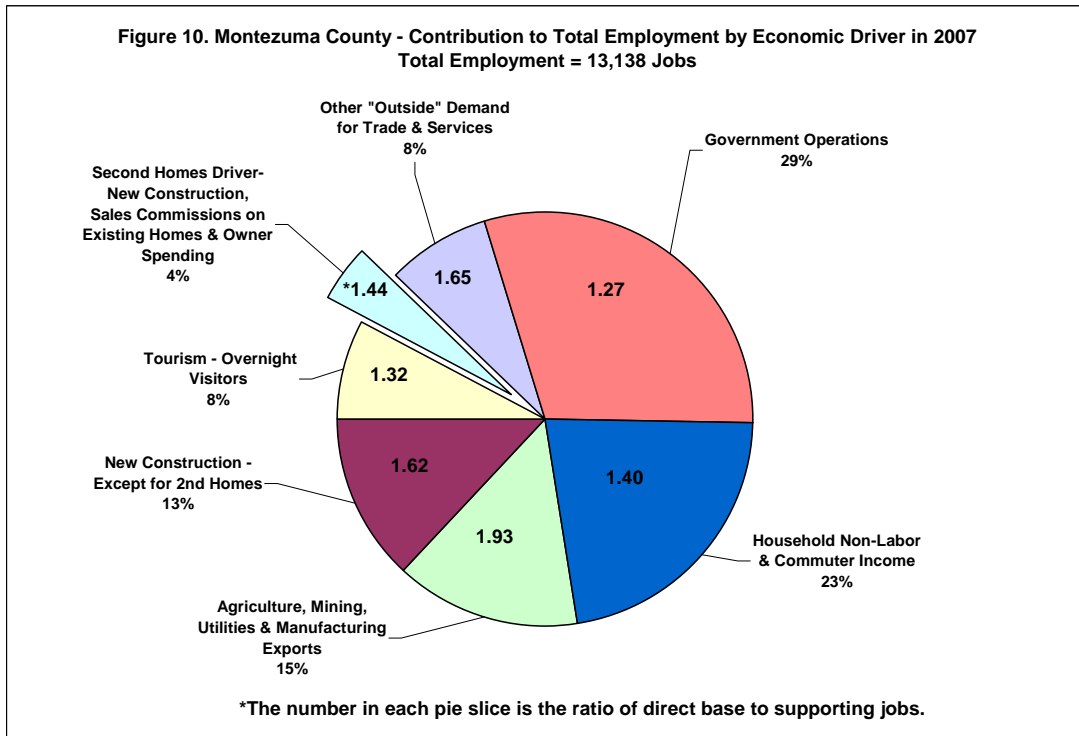


Figure 11.

Montezuma County – Direct Basic Jobs, Contribution to Total Employment and Total Employment per Direct Job by Economic Driver in 2007

ECONOMIC DRIVERS (1)	DIRECT BASIC JOBS GENERATED BY ECONOMIC DRIVER		CONTRIBUTION TO TOTAL EMPLOYMENT BY ECONOMIC DRIVER (COMPARE TO FIGURE 1)		TOTAL EMPLOYMENT CONTRIBUTION PER DIRECT JOB (COMPARE TO FIGURE 1)
	AMOUNT	SHARE OF TOTAL	AMOUNT	SHARE OF TOTAL	
AGRICULTURE, MINING, UTILITIES & MANUFACTURING EXPORTS	999	11%	1,931	15%	1.93
ALL NEW CONSTRUCTION EXCEPT FOR SECOND HOMES	1,053	12%	1,707	13%	1.62
Private Residential	281	3%	546	4%	1.94
Private Non-Residential	508	6%	762	6%	1.50
All Government Funded	276	3%	420	3%	1.52
OVERNIGHT VISITOR SPENDING: ALL ATTRACTIONS	774	9%	1,025	8%	1.32
National Park and National Monument	390	4%	512	4%	1.31
Other Attractions (including casino)	384	4%	513	4%	1.34
SECOND HOMES DRIVER	406	4%	587	4%	1.44
Construction of New Second Homes	41	<1%	81	1%	1.95
Real Estate Commissions on Sale of Existing	6	<1%	8	<1%	1.36
Local Spending by Second-Home Owners	359	4%	498	4%	1.39
OTHER "OUTSIDE" DEMAND FOR TRADE AND SERVICES – see page 39	643	7%	1,060	8%	1.65
GOVERNMENT OPERATIONS	3,135	35%	3,983	30%	1.27
State, Tribal & Local Government (2)	2,770	31%	3,449	26%	1.17
Federal Government	365	4%	534	4%	1.46
HOUSEHOLD NON-LABOR & COMMUTER INCOME	2,018	22%	2,824	21%	1.40
Dividends, Interest, Rent & Investment Withdrawals	1,121	12%	1,567	12%	1.40
Social Security & Medicare Benefits	551	6%	772	6%	1.40
Public Assistance (3)	195	2%	274	2%	1.40
Other Transfer Receipts (4)	48	1%	67	1%	1.40
Net In-Flow of Income Earned by Commuters (5)	102	1%	144	1%	1.40
TOTAL	9,041		13,138		1.38

Notes:

1. Economic drivers are groupings of business activities that bring money into a county by serving an external market or are distributions of income from outside sources that directly support resident households. Money brought into the county by economic drivers circulates within the economy to create direct basic jobs and non-basic jobs, adding up to total employment in the county.
2. Local government reflects the impact of transfers from levels of government outside the county (e.g., state general funding of education), making it an economic driver.
3. This category covers government transfers for income maintenance, medical public assistance, and unemployment benefits.
4. This category comprises mostly government benefits for veterans.
5. The earnings of county residents who work outside the county are an in-flow of household income. The earnings of non-county residents who work in the county are an out-flow. This amount in this category is the net effect of the two income flows.

Sources: Estimates by Lloyd Levy Consulting LLC. For methodology see Appendix 2, Data and Methods.

Economic drivers are analyzed in terms of broad types of activity that bring money into a county, for example, “Manufacturing” or “Agriculture”. Driver definitions are flexible and can be redefined using local knowledge. In some economies a driver may be a single large employer. Other drivers are not “industries” at all but are clusters of businesses that market to related types of customers, as is the case with tourism. And some drivers are just flows of income from outside sources that support resident households, providing these households with income that they can spend locally. When they do spend locally, the non-labor income is translated into local jobs.

The importance of the “Government Operations” driver, which contributes 30 percent of total employment, and the “Household Non-Labor and Commuter Income” driver, which contributes 21 percent, distinguishes the Montezuma County economy. An underlying characteristic linking the two drivers may be the presence within the county of the Ute Mountain Ute Reservation. Tribal government and the Tribal population benefit from Federal transfer receipts that augment these drivers. Drivers include:

- Agriculture (476), mining (83), utilities (30) and manufacturing (410) exports contributed 999 direct basic jobs and 932 supporting jobs – totaling 1,931 jobs (15% of total employment) for a ratio of 1.93 total jobs per basic job;
- All new construction except for second homes, consisting mostly of construction of private residences, contributed 1,053 direct basic jobs and 654 supporting jobs – totaling 1,707 jobs (13% of total employment) for a ratio of 1.62 total jobs per basic job;
- Other “outside” demand for trade and services contributed 643 direct basic jobs and 417 supporting jobs – totaling 1,060 jobs (19% of total employment) for a ratio of 1.38 total jobs per basic job. The industries in this economic driver, often referred to as the Regional Trade and Services driver, include Real Estate and Rental, Other Services, Trade, Professional, Scientific and Technical Services, and Administrative Services. This category is further delineated on page 39.
- Government operations at all levels of government contributed 628 direct basic jobs and 117 supporting jobs – totaling 745 jobs (8% of total employment) for a ratio of 1.65 total jobs per basic job; and
- Household non-labor & commuter income, mostly consisting of household property income and withdrawals from savings, contributed 2,018 direct basic jobs and 806 supporting jobs – totaling 2,824 total jobs (21% of total employment) for a ratio of 1.40 total jobs per basic job.

The Second Homes Driver made a small but significant contribution to the Montezuma County economy, creating 406 direct basic jobs, 181 supporting jobs and 587 total jobs, a 4 percent share of total employment.

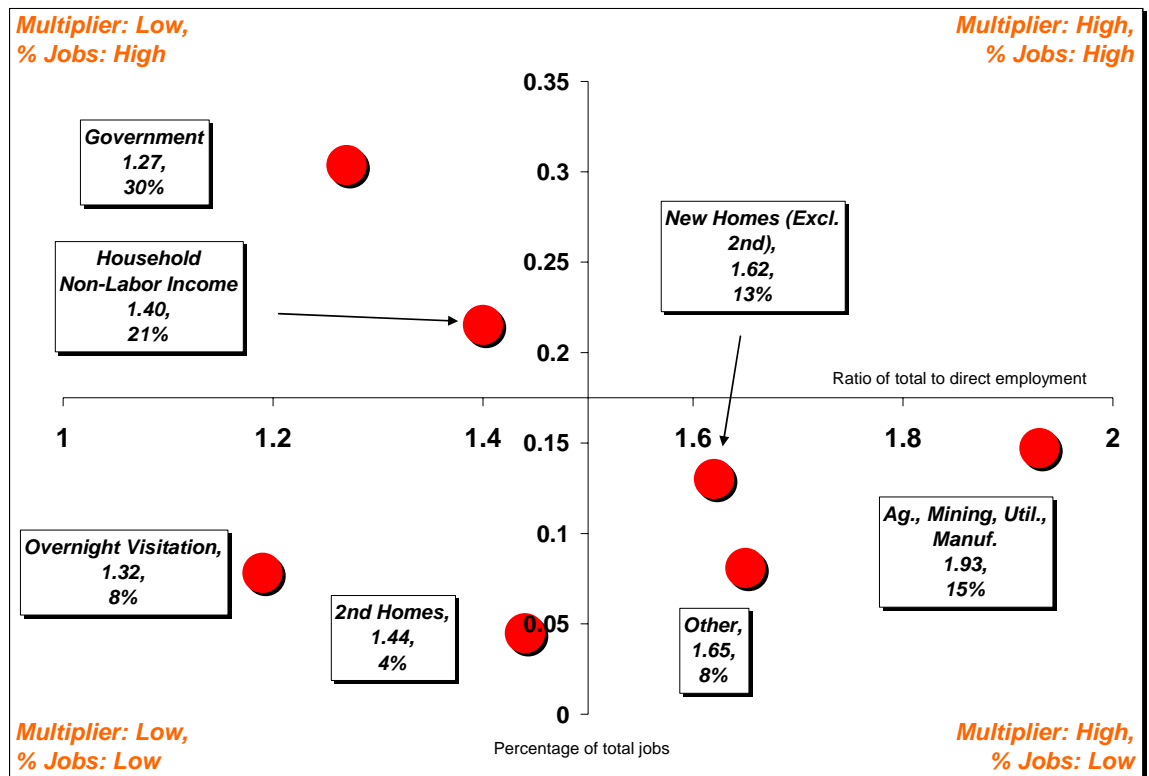
The same characteristics that attract second home development also attract tourists/visitors to Montezuma County for overnight stays. This driver created 774 direct basic jobs, 251 supporting jobs and 1,025 jobs (8% of total county employment, total to basic employment ratio of 1.32). The attractions that create a market for visitors to Montezuma County are Mesa Verde National Park, Hovenweep National Monument, Ute Mountain Casino & Hotel, and recreation opportunities and scenery found on National Forest and other public parks and land.

ASSETS AND OPPORTUNITIES: MONTEZUMA COUNTY

The analysis of each county’s economic base is complemented by a juxtaposition of several metrics: each economic driver’s share of total employment, its contribution factor, and an inventory of assets. The chart below (Figure 12) depicts the two quantitative attributes simultaneously to illustrate one perspective on the dynamics of the local economy. Some economic drivers have a large presence in the region but may not actually contribute significantly to generating spillover effects (i.e. indirect or induced jobs). On the other hand, some economic drivers represent a small portion of the economy but possess large contribution factors.

While the presentation of this chart may suggest that the ideal economy would contain economic drivers with only higher multipliers, this is never possible. It is, however, possible to identify the drivers that are good candidates for investment or enhancement. That is, to the extent demand side opportunities exist, supply side investment will result in a stronger economy.

Figure 12. Montezuma County



Montezuma County possesses a number of regional natural and economic assets. Among them are the Hovenweep National Monument, Mesa Verde National Park, the Canyon of the Ancients, the Ute Mountain Tribal Park, McPhee Reservoir, and the Dolores River corridor. This setting promotes and encourages hunting, biking, hiking, and other outdoor activities that benefit the region's tourism economic driver. Facilitating the appreciation of these assets is the Trail of the Ancients, and the Telluride to Durango scenic byways.

As mentioned previously, the proximity of these natural attractions to Montezuma County and to each county in Region 9 indicates an opportunity for the entire region to benefit from and collectively market itself as a central destination from which visitors may travel by car to various other national and regional attractions. Visitation and tourism to the parks could also be augmented by visits to the tribal park, the reservation, as well as the tribal facilities (including the restaurants, casino, or Towaoc on the Ute Mountain Reservation).

There are a number of important economic assets in the County as well. Similar to other economies on the Western Slope and southwestern Colorado, Montezuma County possesses deposits of oil and gas, from which a large portion of the local property tax is generated. As in many economies, agriculture, mining, and manufacturing generally contain a high jobs multiplier, indicating their importance to the generation and support for additional jobs in the area.

While oil and gas exploration has been a boom-and-bust driver subject to speculation and available capital, a local economy often seeks to target its promotional investment in other resources and markets that will help maintain economic vitality through the cycles. As such, there has been interest in sand shale, but as with oil and gas exploration, this resource needs capital and investment also for drilling.

The County is also home to several important companies within the construction industry, which creates the potential to capture additional investment of the kind that makes construction the significant economic driver it is at a local level. Further, there are beans, dry land farming, cattle, and alfalfa crops in the region that contribute to the significance of the agricultural economic driver.

APPENDICES

APPENDIX 1. NEW MARKET TAX CREDITS

The New Market Tax Credit (NMTC) program is a Community Development Finance Initiative (CDFI) under the U.S. Department of Treasury. The NMTC program's mission is to support investment by catalyzing private sector investment. The program's design offers tax credits to tax payers who make qualified equity investments that result in the creation of jobs or enhancement of access to capital for small business growth and community development initiatives.

According to information available on CDFI's website, the New Markets Tax Credit program incentivizes private sector capital investment in distressed communities by providing tax credits to taxpayers who make qualified equity investments (QEIs) in designated Community Development Entities (CDEs). There are, however, several steps in the qualification and eligibility process before a community may consider applying for new market tax credits. An entity must be qualified as a CDE, which is defined as a domestic corporation or partnership, whose mission it is to serve and provide capital for low-income communities or persons, and which has been certified as a CDE by the CDFI Fund. Furthermore, a CDE must determine eligibility of geographies (i.e. by Census tract) within its boundaries that are eligible for the various programs of the CDFI Fund. According to the data made available by the CDFI Fund Mapping System (CIMS), Census tracts within each of the Region 9 counties are eligible for the NMTC program, as shown in Figure 13.

A CDE may be a municipality, a governmental organization, a private company, or any other organization that "maintains accountability to residents of those communities." After CDE certification, applications for NMTC funding can be made throughout the year in a competitive process. The administration allocates funding annually to CDFI for the NMTC program. Recently, the Obama administration extended and expanded the program in hard-hit communities authorizing \$5 billion in allocations for 2010 and 2011.

Proceeds of NMTC funding can be used for multiple purposes and for developments or community development strategies at various stages of planning or improvement. Loans can be made to qualifying

A few examples of Colorado businesses that have received investment under NMTC program during the period 2005 to 2007 are: a garden retailer in Delta (\$436,000); a retail center in Delta (\$2.1 million); a lawn equipment and snow blower sales and repair shop in Durango (\$278,000); an auto body shop in Grand Junction (\$328,000); a couple restaurants in Commerce City and Denver (\$300,000 and \$225,000, respectively); a restorer of classic cars in Englewood (\$275,000); and a non-profit community center in Pueblo (\$8.5 million).

Of the approximately \$101.6 million in NMTC allocations from 2005 to 2007, only 3.1 percent, or \$3.2 million has gone to Western Slope communities (Durango, Grand Junction, and Delta). Opportunity may exist for communities in Region 9 to capitalize on the NMTC program, because market-oriented applications for funding under the program would present a compelling case for the distribution of allocations in Colorado to be more geographically diverse.

Figure 13.

Census Tracts in Region 9 Counties Eligible for the CDFI Fund New Market Tax Credit program.

County / Tract	NMTC Eligible
Dolores County	
0001.00	Yes
Montezuma County	
9402.00	No
9410.00	Yes
9690.00	Yes
9691.00	Yes
9692.00	Yes
9693.00	Yes
9694.00	Yes
9696.00	Yes
Archuleta County	
9404.00	Yes
9742.00	Yes
9743.00	Yes
9744.00	No
La Plata County	
9402.00	No
9403.00	Yes
9410.00	No
9706.00	No
9707.01	No
9707.02	No
9708.00	No
9709.00	No
9710.00	No
9711.00	Yes

Source: U.S. Dept. of Treasury, CDFI; Economic & Planning Systems

APPENDIX 2. DATA AND METHODS

IMPLAN MODELS

This study used IMPLAN data and software to construct models of each county economy (IMPLAN). IMPLAN multipliers and spreadsheet analyses were then used to quantify the total employment generated by each economic driver in each county. The default employment and other data for the models were purchased from the Minnesota IMPLAN Group, Inc (MIG). MIG is the developer of the IMPLAN system. To improve the analysis, default employment numbers were replaced with 2007 employment numbers from the Colorado State Demography Office (SDO).⁶ The process of replacing default IMPLAN numbers with SDO numbers (known as “benchmarking”) used MIG’s standard procedure.⁷ Figure 14 (following page) contains the employment data that were used to benchmark the model. Mike Retzlaff of Economic Insights of Colorado (and formerly USDA Forest Service Region 2 economist) provided additional data and IMPLAN model enhancements.

DRIVER IDENTIFICATION

Choosing how to specify the economic drivers to analyze in the region reflects the combination of the experience of previous economic base studies and Region 9 Economic Development District’s (Region 9 EDD) interest in targeting important local effects. Similar studies were previously completed in Region 10 and Region 12⁸ and for La Plata County in Region 9. The default specification of drivers to consider was based on those studies, allowing for comparison of these findings with the previous results, especially those regarding second homes. Driver specifications were modified to respond to input from local government expressed during review of initial results.

ESTIMATING FINAL DEMANDS

Final demand is roughly defined as the purchases made by the end-users or ultimate consumers of goods and services. The standard macroeconomic model groups final demands in four institutional categories: consumers, government, capital investment, and net exports. Final demand leads to the sale of local goods and services; local sales, in turn, create direct employment and, because of the multiplier or so-called “ripple effect,” direct employment ultimately creates total employment. This analysis focuses more narrowly on *export* final demand, which is the sum of purchases of a region’s goods and services by end-users funded by income from outside of the local economy.

⁶ The La Plata County analysis was performed in 2008, and the La Plata County IMPLAN model was benchmarked to 2006 estimates of total employment from the Colorado State Demography Office.

⁷ Minnesota IMPLAN Group, Inc. “Process Developed by MIG Inc. to Make Large Scale Changes to a Model’s Employment Data” (available from MIG, Inc., 1725 Tower Drive West, Suite 140, Stillwater, MN 55082).

⁸ The Region 10 study was reported on in “Second Homes and the Economic Base of Four Counties in West Central Colorado: An Economic Drivers Study for Gunnison, Hinsdale, Ouray and San Miguel Counties”(Prepared for the USDA Forest Service, Region 2, in Partnership with the Region 10 League for Economic Assistance and Planning, Inc., September 2006 [available from the Region 10 League]) and the Region 12 study in “The Social and Economic Effects of Second Homes”(Prepared by Linda Venturoni for the Northwest Colorado Council of Governments, June 2004[<http://www.nwc cog.co.us/Second%20Home%20Study/NWCCOG%202ndHome%20Study%20Binder.pdf>]).

Figure 14.

Total Jobs in Archuleta, Dolores, La Plata and Montezuma Counties,

INDUSTRY SECTOR	ARCHULETA COUNTY	DOLORES COUNTY	LA PLATA COUNTY	MONTEZUMA COUNTY
	2007	2007	2006	2007
Agriculture, Forestry, Fishing, Hunting & Related Services	267	236	710	825
Mining, Oil & Gas Extraction, and Support Services	51	13	714	132
Utilities	30	0	121	95
Construction	1,103	101	4,156	1,267
Manufacturing	89	16	728	523
Wholesale Trade	68	20	700	216
Retail Trade	855	77	3,729	1,635
Transportation & Warehousing	30	15	762	211
Information	101	2	538	123
Finance & Insurance	179	7	953	289
Real Estate & Rental Services	507	17	1,328	372
Professional, Scientific & Technical Services	349	67	2,280	553
Management of Companies	1	-	34	16
Administrative & Waste Services, non-governmental	199	35	1,250	347
Educational Services, non-governmental	81	3	395	60
Health & Social Services, non-governmental	289	13	3,090	1,366
Arts, Entertainment & Recreation	146	2	1,065	141
Accommodations & Food Services	734	64	3,465	1,048
Other Personal & Business Services	581	59	1,594	761
Governmental Institutions	639	200	5,513	3,159
TOTAL	6,300	947	33,125	13,138

Notes: Data are from IMPLAN, as adjusted by the State Demography Office, Colorado Department of Local Affairs. Services in the private sector (e.g. private schools) are categorized in non-government industry sectors. Publicly funded services are categorized in the Government sector. IMPLAN industry sectors are consistent with the definitions in the North American Industry Classification System (NAICS) 2002. "Employment" is defined as full- and part-time jobs counted at the location of the establishment reporting the jobs, i.e., at the "place of work". Totals may be off because of rounding of line items.

Sources: Cindy DeGroen, Projections Demographer, Colorado Department of Local Affairs, State Demography Office. For Dolores County and Montezuma County—Email correspondence to Mike Retzlaff, Economic Insights of Colorado, August 10, 2009 (Attachment: R9JobsSeries.xls). For Archuleta County—Email correspondence to Mike Retzlaff, Economic Insights of Colorado, August 25, 2009 (Attachment: Jobs2007.xls).

SECOND HOME-OWNER SPENDING

Final demand related to second homes was estimated as the sum of the spending of existing second-home owners, the amount spent in the study year on second-home purchases, and the real estate commissions earned on sales of second homes. Following the pattern of analyses in Regions 10 and 12 and La Plata County for Region 9, second-home owner spending was estimated by applying an average household income to the number of second homes. Spending was then estimated from total income by applying an income-appropriate disposable income factor, and spending in each county is estimated by applying a factor representing the average amount of time that owners use their second homes in each county. Finally, purchases in the local economy were estimated by spreading the amount across a distribution of household consumption expenditures.

Region 9 EDD's Phase 2 survey provided the data for the average income level per second-home owner household. Multiplying the average by the number of second homes generated total spending. The disposable income factors for Archuleta, Dolores and Montezuma counties were taken from the Bureau of Labor Statistics' 2007 annual report on consumer expenditures⁹ and from the 2004 annual report for La Plata County. The value for high income households with incomes greater than \$150,000 was 0.52 in both sources. The estimate of total disposable income attributed to second homes was simulated using the IMPLAN model's default distribution of household consumption for households with incomes greater than \$150,000. The default distribution found in the IMPLAN model is based on recent data from the Bureau of Labor Statistics and is comparable to data found in the annual report on consumer expenditures. IMPLAN uses a factor of about 1.09 to inflate 2004 dollars to 2007 dollars. The remaining county-specific factors in used to calculate the estimates of second-home owner final demand are presented in Figure 15.

SECOND HOME CONSTRUCTION.

The amount of final demand for second-home capital construction is defined and measured as the value of new second homes put in place in the benchmark year. This impact was assigned to the category of capital investment final demand.

The total amount of non-local investment in second homes was obtained from each county assessor by Information Services, Durango, Colorado. For Archuleta, Dolores and Montezuma counties, properties flagged with a "year built" of 2007 were extracted from the assessor's data file and categorized by structure type. (The same analysis for La Plata County had already been performed on properties flagged with a "year built" of 2006.)

The total value of units by type was taken as the estimate of the amount of investment final demand for the year. The job generation caused by construction of detached, single-family type units was estimated using the IMPLAN model's Sector 33, "New residential 1-unit structures," which corresponds to parts of NAICS Sector 23, "Construction." The job generation caused by construction of condominium-type units was estimated using IMPLAN's Sector 32, "New multi-family residential structures." County specific factors in used to estimate the value of second-home related construction in Archuleta, Dolores and Montezuma counties in 2007 are presented in Figure 15.

⁹ For Archuleta, Dolores and Montezuma counties: U.S. Department of Labor, Bureau of Labor Statistics, Table 2301 Higher income before taxes: Average annual expenditures and characteristics, Consumer Expenditure Survey 2007. Online at <http://www.bls.gov/cex/home.htm> (accessed January 4, 2010). For La Plata County: U.S. Department of Labor, Bureau of Labor Statistics, Consumer Expenditures in 2004, Report 992 (April 2006). Online at <http://www.bls.gov/cex/csxann04.pdf> (accessed April 9, 2008).

Figure 15.

County Specific Factors in Estimating Second-Home Owner Final Demand, New Second Home Construction, and Real Estate Commissions on Second Home Sales in Archuleta, Dolores and La Plata and Montezuma Counties

	ARCHULETA COUNTY 2007	DOLORES COUNTY 2007	LA PLATA COUNTY 2006	MONTEZUMA COUNTY 2007
Residential units in out-of-county ownership	3,285	456	3,621	1,350
Percentage rented full-time	6%	27%	NA ¹⁰	21%
Estimated number of second-home units (net of full-time rentals)	3,088	333	3,621	1,067
Average household income attributed second-home owners	\$164,000	\$167,000	\$217,000	\$236,000
Share of personal consumption expenditure in the county attributed to second-home owner households	25%	27%	31%	28%
Units built for out-of-county owners	98	16	91	25
Improved value (total)	\$36,407,910	\$1,553,435	\$42,631,855	\$7,043,042
Units sold to out-of-county owners	215	15	256	52
Sales value (total)	\$82,964,512	\$16,390,000	\$120,024,400	\$15,574,600

Sources: Estimates of residential units in non resident ownership, second-home units and number and aggregate value of units built and units sold for non-local ownership calculated from county assessor's data by Donna K Graves of Information Services. Other data from "The Social and Economic Effects of second Homes in Southwest Colorado (2006), Research by Donna K. Graves of Information Services," with additional analysis by Lloyd Levy Consulting LLC.

The impact of second-home construction on a county's economy will vary from year to year depending on the pace and value of new construction. In addition, differences in the impact of second home construction from county to county will vary according to differences in the availability of local labor and different levels of reliance on imported construction services.

REAL ESTATE COMMISSIONS ON SECOND HOME SALES

Final demand for real estate brokerage services provided for the sale of second homes is defined and measured as the value of real estate commissions earned on second home sales, identified sales of units to out-of-county buyers. The data were obtained by special request from county assessors and were analyzed by Information Services, Durango, Colorado. The data and analysis are similar to those prepared by private vendors for clients who follow local real estate markets and are considered reliable by the real estate industry. The aggregate value of sales was multiplied by 6 percent, the nominal real estate commission on sales in all counties. The job generation caused by real estate commissions was simulated using the IMPLAN model's Sector 431, "Real estate," which corresponds to NAICS Sector 531, "Real estate." The analysis therefore interprets real estate commissions as one component of the "output," or gross sales value of the services delivered by the real estate industry. County specific factors used to real estate commissions

¹⁰ This adjustment was not made in the study of La Plata County conducted in 2008. Residential units in out-of-county ownership were assumed to be second homes.

on second home sales in Archuleta, Dolores and Montezuma counties in 2007 are presented in Figure 15 (above).

TOURISTS & TRAVEL

The statewide assessment of tourism that this analysis relies on is prepared annually by industry consultant Dean Runyan Associates for the Colorado Tourism Office.¹¹ This final demand estimate was constructed by extrapolating an aggregate spending amount for each county from the tourism employment level reported by Runyan.

A previous test of Runyan data elsewhere in Colorado found that it is a good estimate of the tourism employment in an IMPLAN model, once the model is calibrated to locally verified employment totals.¹² The impact of aggregate tourism spending was simulated by an IMPLAN industry distribution developed by the USDA Forest Service from a national survey.¹³ The distribution assumes expenditure types that are on the high end of the scale for forest recreation, including non-local visitors to national forests, and assumes the use of overnight lodging but not camping (“US_HIGH TOTAL NL OVERNIGHT_TRIP”).

The Montezuma County analysis breaks out the portion of total overnight tourism job generation that is attributable to Mesa Verde and Hovenweep national parks, both of which are located in the county. The analysis follows a procedure developed for the National Park Service¹⁴ and used a spreadsheet model provided for this analysis by the author of the procedure.¹⁵ The model was further adapted for use with the IMPLAN model in Montezuma County.

AGRICULTURE, MINING, UTILITIES AND MANUFACTURING EXPORTS

For the “traditional basic” categories of agriculture, mining, utilities and manufacturing the IMPLAN model provided the estimate of the direct employment, total employment and output (industry sales) originating from exogenous final demand. These data are found in the social accounting matrix (SAM) of the IMPLAN model. A modified version of the SAM that reflects closure of the model for both households and for state and local government was prepared and provided for this study by Mike Retzlaff of Economic Insights of Colorado, Lone Tree, Colorado.

¹¹ Dean Runyan Associates, “The Economic Impact of Travel on Colorado, 1996-2007P.” Prepared for the Colorado Tourism Office, Office of Economic Development and International Trade, Denver, Colorado, June 2008. Online at <http://www.colorado.com/ai/aFinalReport07.pdf> (accessed July 18, 2010).

¹² Retzlaff, M. and D. T. Taylor, “Assessing National Forest Recreation Estimates using Tourism and IMPLAN” (presented at the joint Mid-Continent Regional Science Association 37th Annual Conference and IMPLAN National User's Conference, 6th Biennial Conference, Indianapolis, Indiana, June 2006 [available from the authors]).

¹³ Compare to Stynes, D.J. and E.M. White, “Spending Profiles for National Forest Recreation Visitors by Activity” (http://www.fs.fed.us/recreation/programs/nvum/spending_profiles_2006.pdf [7/22/07]). The institutional array supplied in the IMPLAN model and used for this analysis is based on profiles in this report (Retzlaff, M., Economist, Region 2, USDA Forest Service. Personal communication, 7/19/07).

¹⁴ See Daniel J. Stynes, “National Park Visitor Spending and Payroll Impacts, 2007.” Prepared for the National Park Service Social Science Program. Prepared by the Department of Community, Agriculture, Recreation and Resource Studies, Michigan State University. September 2008. Online at http://www.nature.nps.gov/socialscience/pdf/MGM2_CY07.pdf (accessed July 15, 2010).

¹⁵ The spreadsheet model provided by Daniel J. Stynes to Economic Insights of Colorado, LLC, contains 2007 and 2008 data for all Colorado National Parks and is available upon request.

HOUSEHOLD BASIC INCOME

Household income sources that are independent of the regional economy are an important source of final demand. For this analysis, the impact of these income sources are modeled on data extracted from the modified SAM prepared and provided for this study by Mike Retzlaff of Economic Insights of Colorado, Lone Tree, Colorado. Household basic income is categorized by income source in this report. Data were not available enabled an analysis of job generation impacts specifically attributable to households headed by “retirees” or other household-type categories based on labor force status or income level.

OTHER OUTSIDE DEMAND

Total direct and total attributed employment to the other basic category is a balancing entry equal to the difference between employment totals and the estimated values just described. It was not possible to make direct estimates of this category using the data and methods available for this study. However, this driver is presumed to reflect job generation by county firms, which while not otherwise classified in the “economic drivers” scheme, do also trade with or provide services to out-of-county businesses and households. That is, they are also part of the county’s “export base.” Estimates for “other outside demand” are presented here for Archuleta, Dolores and Montezuma Counties. La Plata County is not included as a slightly different analytic method was used, which is not directly comparable.

Other Outside Demand for Trade and Services

Archuleta County - Industry	Total # of Jobs	% of Total Employment
Trade	186	3.0%
Transportation & Warehousing	3	0.0%
Information	33	0.5%
Finance & Insurance	38	0.6%
Real Estate & Rental	329	5.2%
Professional, Scientific & Technical Services	111	1.8%
Administrative Services	82	1.3%
Educational Services	36	0.6%
Health & Social Services	11	0.2%
Lodging & Food Services	24	0.4%
Other Services	259	4.1%
Government Enterprises & Services	18	0.3%
Total	1,130	17.9%

Other Outside Demand for Trade and Services

Dolores County - Industry	Total # of Jobs	% of Total Employment
Trade	39	4.1%
Transportation & Warehousing	3	0.3%
Information	3	0.3%
Finance & Insurance	7	0.7%
Real Estate & Rental	6	0.7%
Professional, Scientific & Technical Services	16	1.7%
Administrative Services	9	1.0%
Health & Social Services	16	1.7%
Other Services	18	1.9%
Government Enterprises & Services	15	1.6%
Total	133	14.0%

Other Outside Demand for Trade and Services

Montezuma County - Industry	Total # of Jobs	% of Total Employment
Trade	312	2.4%
Transportation & Warehousing	25	0.2%
Information	21	0.2%
Finance & Insurance	53	0.4%
Real Estate & Rental	49	0.4%
Professional, Scientific & Technical Services	130	1.0%
Administrative Services	74	0.6%
Health & Social Services	131	1.0%
Other Services	146	1.1%
Government Enterprises & Services	119	0.9%
Total	1,060	8.1%

DIRECT AND TOTAL EMPLOYMENT CONTROL TOTALS

The direct and total employment aggregates that provide the grand totals in Figure 14 (above) are the “control totals” for the analysis. All estimates are constrained to this total. The control totals are the official county employment data published by the Colorado Demography Office. As noted, the IMPLAN models used in the analysis were calibrated to the Colorado Demography Office data (total jobs and jobs by industry). Estimates of “total direct jobs,” which are reported for each county in Figures 2, 5, 8 and 11, were estimated from the IMPLAN models and multipliers. These were prepared and provided for this study by Mike Retzlaff of Economic Insights of Colorado, Lone Tree, Colorado.

MULTIPLIERS

The total effects multipliers used in the preceding analysis are reproduced in Appendix 3 through Appendix 6. These multipliers are the result of modifications to the IMPLAN data and models to correct for minor errors in the software. They modified SAM and multipliers were prepared and provided for this study by Mike Retzlaff of Economic Insights of Colorado, Lone Tree, Colorado.

APPENDIX 3. EMPLOYMENT MULTIPLIERS: ARCHULETA COUNTY, COLORADO

IMPLAN 2007 - Modified for Region 9 Economic Development District of Southwest Colorado, Inc.

IMPLAN Sector	Industry Title	Total Industry Employment ¹⁶	Total Employment Multiplier (Type SAM) ¹⁷
2	Grain farming	1	1.11992
3	Vegetable and melon farming	11	1.72077
6	Greenhouse- nursery- and floriculture product	6	1.43025
10	All other crop farming	42	2.05160
11	Cattle ranching and farming	92	1.84366
12	Dairy cattle and milk production	11	1.39938
13	Poultry and egg production	5	4.22239
14	Animal production- except cattle and poultry	32	1.20703
15	Forestry- forest products- and timber tract p	1	3.62943
18	Commercial hunting and trapping	13	2.58620
19	Support activities for agriculture and forest	53	1.12152
20	Extraction of oil and natural gas	21	1.45536
26	Mining and quarrying sand- gravel- clay- and	18	1.34758
29	Support activities for oil and gas operations	12	1.92128
31	Electric power generation- transmission- and	19	1.81314
32	Natural gas distribution	8	3.56484
33	Water- sewage and other treatment and deliver	3	1.49150
34	Construct new nonresidential commercial and h	4	1.34141
35	Construct new nonresidential manufacturing st	1	1.29079
36	Construct other new nonresidential structures	118	1.35973
37	Construct new residential permanent site sing	704	1.62006
38	Construct other new residential structures	217	1.61520
39	Maint & repair construct of nonresident struc	2	1.32027
40	Maint & repair construct of residential struc	57	1.52487
51	Confectionery manufacturing from purchased ch	1	1.35209
62	Bread and bakery product manufacturing	1	1.31097
71	Breweries	13	1.72000
92	Leather and hide tanning and finishing	7	1.27300
95	Sawmills and wood preservation	2	1.50184

¹⁶ The model calibration for this analysis used data on total employment published by the State Demography Office, Colorado Department of Local Affairs.

¹⁷ Type SAM multipliers predict direct, indirect, and induced effects. The induced effect is based on information in the IMPLAN model's social account matrix (SAM). Induced effects based on the recirculation of income through households and through state and local government are included in these Type SAM multipliers.

APPENDIX 3. EMPLOYMENT MULTIPLIERS: ARCHULETA COUNTY, COLORADO

IMPLAN 2007 - Modified for Region 9 Economic Development District of Southwest Colorado, Inc.

IMPLAN Sector	Industry Title	Total Industry Employment ¹⁶	Total Employment Multiplier (Type SAM) ¹⁷
113	Printing	9	1.15060
161	Ready-mix concrete manufacturing	7	1.58281
186	Plate work and fabricated structural product	13	1.40511
245	Electronic connector manufacturing	12	1.42827
295	Wood kitchen cabinet and countertop manufactu	14	1.39738
313	Office supplies (except paper) manufacturing	6	1.18434
317	All other miscellaneous manufacturing	4	1.17897
319	Wholesale trade businesses	68	1.43387
320	Retail Stores - Motor vehicle and parts	46	1.27778
321	Retail Stores - Furniture and home furnishing	18	1.26922
322	Retail Stores - Electronics and appliances	29	1.18018
323	Retail Stores - Building material and garden	176	1.23339
324	Retail Stores - Food and beverage	167	1.19290
325	Retail Stores - Health and personal care	44	1.18291
326	Retail Stores - Gasoline stations	56	1.26982
327	Retail Stores - Clothing and clothing accesso	15	1.10968
328	Retail Stores - Sporting goods- hobby- book a	51	1.12202
329	Retail Stores - General merchandise	35	1.12676
330	Retail Stores - Miscellaneous	72	1.09441
331	Retail Nonstores - Direct and electronic sale	146	1.25333
335	Transport by truck	23	1.39543
338	Scenic and sightseeing transportation and sup	7	1.27077
341	Newspaper publishers	24	1.31070
345	Software publishers	5	1.83202
346	Motion picture and video industries	17	1.66666
347	Sound recording industries	3	4.67234
348	Radio and television broadcasting	2	4.10594
350	Internet publishing and broadcasting	16	1.47044
351	Telecommunications	34	2.03881
354	Monetary authorities and depository credit in	74	1.46911
355	Nondepository credit intermediation and relat	10	1.54536
356	Securities- commodity contracts- investments-	27	1.79435
357	Insurance carriers	21	2.18511
358	Insurance agencies- brokerages- and related a	47	1.51109
360	Real estate establishments	442	1.36806
361	Imputed rental activity for owner-occupied dw	-	0.00000
363	General and consumer goods rental except vide	15	1.25936

APPENDIX 3. EMPLOYMENT MULTIPLIERS: ARCHULETA COUNTY, COLORADO

IMPLAN 2007 - Modified for Region 9 Economic Development District of Southwest Colorado, Inc.

IMPLAN Sector	Industry Title	Total Industry Employment ¹⁶	Total Employment Multiplier (Type SAM) ¹⁷
364	Video tape and disc rental	43	1.35493
365	Commercial and industrial machinery and equip	4	2.34474
366	Lessors of nonfinancial intangible assets	3	1.18430
367	Legal services	41	1.45206
368	Accounting- tax preparation- bookkeeping- and	110	1.38725
369	Architectural- engineering- and related servi	54	1.34973
371	Custom computer programming services	11	1.26812
372	Computer systems design services	10	1.67351
374	Management- scientific- and technical consult	4	1.58522
375	Environmental and other technical consulting	3	1.44796
376	Scientific research and development services	5	1.60451
377	Advertising and related services	13	1.39184
378	Photographic services	3	1.53080
379	Veterinary services	82	1.23527
380	All other miscellaneous professional- scienti	13	2.28715
381	Management of companies and enterprises	1	1.61994
382	Employment services	3	1.43668
383	Travel arrangement and reservation services	9	1.79767
386	Business support services	18	1.23453
387	Investigation and security services	10	1.62355
388	Services to buildings and dwellings	143	1.17646
389	Other support services	8	2.23782
390	Waste management and remediation services	8	1.29215
393	Other private educational services	81	1.13770
394	Offices of physicians- dentists- and other he	146	1.26209
396	Medical and diagnostic labs and outpatient an	13	1.30590
398	Nursing and residential care facilities	52	1.14514
399	Child day care services	46	1.16387
400	Individual and family services	17	1.12219
401	Community food- housing- and other relief ser	15	1.16654
405	Independent artists- writers- and performers	19	1.10933
406	Museums- historical sites- zoos- and parks	2	1.27335
407	Fitness and recreational sports centers	14	1.13225
409	Amusement parks- arcades- and gambling indust	52	1.20211
410	Other amusement and recreation industries	59	1.17191
411	Hotels and motels- including casino hotels	209	1.24176
412	Other accommodations	10	1.35493

APPENDIX 3. EMPLOYMENT MULTIPLIERS: ARCHULETA COUNTY, COLORADO

IMPLAN 2007 - Modified for Region 9 Economic Development District of Southwest Colorado, Inc.

IMPLAN Sector	Industry Title	Total Industry Employment ¹⁶	Total Employment Multiplier (Type SAM) ¹⁷
413	Food services and drinking places	515	1.15044
414	Automotive repair and maintenance- except car	83	1.23592
416	Electronic and precision equipment repair and	1	1.34264
417	Commercial and industrial machinery and equip	3	1.27291
418	Personal and household goods repair and maint	19	1.28147
419	Personal care services	87	1.14332
421	Dry-cleaning and laundry services	50	1.09267
422	Other personal services	109	1.54656
424	Grantmaking- giving- and social advocacy orga	69	1.36306
425	Civic- social- professional- and similar orga	79	1.24885
426	Private household operations	81	1.03095
427	US Postal Service	18	1.36531
430	* Not unique commod (S&LG passenger transit)	12	1.36200
431	* Not unique commod (S&LG electricity)	3	1.38649
432	Other state and local government enterprises	41	1.60445
437	* Special (S&LG Non-Ed Emp & Payroll)	265	1.15980
438	* Special (S&LG Ed Emp & Payroll)	257	1.15537
439	* Special (Federal Non-Military Emp & Payroll)	43	1.28208
		6,300	

APPENDIX 4. EMPLOYMENT MULTIPLIERS: DOLORES COUNTY, COLORADO

IMPLAN 2007 - Modified for Region 9 Economic Development District of Southwest Colorado, Inc.

IMPLAN Sector	Industry Title	Total Industry Employment ¹⁸	Total Employment Multiplier (Type SAM) ¹⁹
2	Grain farming	47	1.12850
6	Greenhouse- nursery- and floriculture product	7	1.35835
10	All other crop farming	35	1.77402
11	Cattle ranching and farming	50	1.67558
13	Poultry and egg production	10	1.77705
14	Animal production- except cattle and poultry	62	1.11858
19	Support activities for agriculture and forest	25	1.05264
20	Extraction of oil and natural gas	2	2.14294
25	Mining and quarrying stone	5	1.32738
26	Mining and quarrying sand- gravel- clay- and	6	1.36680
34	Construct new nonresidential commercial and h	13	1.32350
35	Construct new nonresidential manufacturing st	2	1.23281
36	Construct other new nonresidential structures	15	1.34098
37	Construct new residential permanent site sing	47	1.48058
38	Construct other new residential structures	14	1.47039
39	Maint & repair construct of nonresident struc	6	1.26928
40	Maint & repair construct of residential struc	4	1.38821
59	Animal (except poultry) slaughtering- renderi	3	2.08451
187	Ornamental and architectural metal products m	6	1.24570
295	Wood kitchen cabinet and countertop manufactu	1	1.25813
317	All other miscellaneous manufacturing	6	1.22252
319	Wholesale trade businesses	20	1.25395
320	Retail Stores - Motor vehicle and parts	17	1.15997
321	Retail Stores - Furniture and home furnishing	4	1.02359
323	Retail Stores - Building material and garden	3	1.07922
324	Retail Stores - Food and beverage	4	1.07179
326	Retail Stores - Gasoline stations	33	1.06968
330	Retail Stores - Miscellaneous	4	1.01990

¹⁸ The model calibration for this analysis used data on total employment published by the State Demography Office, Colorado Department of Local Affairs.

¹⁹ Type SAM multipliers predict direct, indirect, and induced effects. The induced effect is based on information in the IMPLAN model's social account matrix (SAM). Induced effects based on the recirculation of income through households and through state and local government are included in these Type SAM multipliers.

APPENDIX 4. EMPLOYMENT MULTIPLIERS: DOLORES COUNTY, COLORADO

IMPLAN 2007 - Modified for Region 9 Economic Development District of Southwest Colorado, Inc.

IMPLAN Sector	Industry Title	Total Industry Employment ¹⁸	Total Employment Multiplier (Type SAM) ¹⁹
331	Retail Nonstores - Direct and electronic sale	12	1.12415
335	Transport by truck	12	1.32416
339	Couriers and messengers	2	1.06783
340	Warehousing and storage	1	1.14725
341	Newspaper publishers	1	1.18681
342	Periodical publishers	1	1.61375
354	Monetary authorities and depository credit in	7	1.24000
360	Real estate establishments	12	1.13824
361	Imputed rental activity for owner-occupied dw	0	0.00000
362	Automotive equipment rental and leasing	5	2.89094
367	Legal services	6	1.27479
369	Architectural- engineering- and related servi	18	1.17110
371	Custom computer programming services	7	1.20132
373	Other computer related services- including fa	24	1.59964
375	Environmental and other technical consulting	12	1.38489
388	Services to buildings and dwellings	35	1.12305
391	Private elementary and secondary schools	3	1.05190
394	Offices of physicians- dentists- and other he	13	1.21367
402	Performing arts companies	1	1.02487
407	Fitness and recreational sports centers	0	1.03346
409	Amusement parks- arcades- and gambling indust	1	1.17941
411	Hotels and motels- including casino hotels	11	1.19897
412	Other accommodations	14	1.22155
413	Food services and drinking places	39	1.11614
414	Automotive repair and maintenance- except car	7	1.12388
416	Electronic and precision equipment repair and	2	1.22914
419	Personal care services	21	1.07775
423	Religious organizations	19	1.11351
426	Private household operations	10	1.01579
427	US Postal Service	9	1.19515
432	Other state and local government enterprises	17	1.58935
437	* Special (S&LG Non-Ed Emp & Payroll)	103	1.06961
438	* Special (S&LG Ed Emp & Payroll)	62	1.07391
439	* Special (Federal Non-Military Emp & Payroll)	4	1.11583
440	* Special (Federal Military Emp & Payroll)	5	1.09264
	Total	947	

APPENDIX 5. EMPLOYMENT MULTIPLIERS: LA PLATA COUNTY, COLORADO

IMPLAN 2006 – Modified for Region 9 Economic Development District of Southwest Colorado, Inc.

IMPLAN Sector	Industry Title	Total Industry Employment ²⁰	Total Employment Multiplier (Type SAM) ²¹
2	Grain farming	5	1.08938
5	Fruit farming	4	1.54294
6	Greenhouse and nursery production	9	1.38885
10	All other crop farming	95	1.44432
11	Cattle ranching and farming	289	1.68584
12	Poultry and egg production	5	1.83430
13	Animal production- except cattle and poultry	151	1.16906
14	Logging	73	2.09643
17	Hunting and trapping	2	2.12718
18	Agriculture and forestry support activities	78	1.21803
19	Oil and gas extraction	362	4.31220
20	Coal mining	60	4.60536
23	Gold- silver- and other metal ore mining	1	1.87803
25	Sand- gravel- clay- and refractory mining	39	1.82265
27	Drilling oil and gas wells	5	4.74528
28	Support activities for oil and gas operations	242	1.63302
29	Support activities for other mining	5	2.40106
30	Power generation and supply	85	2.56770
31	Natural gas distribution	24	7.62257
32	Water- sewage and other systems	12	1.58804
33	New residential 1-unit structures- all	1,478	2.08272
34	New multifamily housing structures- all	334	1.79141
35	New residential additions and alterations-all	174	2.02244
37	Manufacturing and industrial buildings	69	1.60779
38	Commercial and institutional buildings	1,065	1.74877
39	Highway- street- bridge- and tunnel construct	184	1.66996

²⁰ The model calibration for this analysis used data on total employment published by the State Demography Office, Colorado Department of Local Affairs.

²¹ Type SAM multipliers predict direct, indirect, and induced effects. The induced effect is based on information in the IMPLAN model's social account matrix (SAM). Induced effects based on the recirculation of income through households and through state and local government are included in these Type SAM multipliers.

APPENDIX 5. EMPLOYMENT MULTIPLIERS: LA PLATA COUNTY, COLORADO

IMPLAN 2006 – Modified for Region 9 Economic Development District of Southwest Colorado, Inc.

IMPLAN Sector	Industry Title	Total Industry Employment ²⁰	Total Employment Multiplier (Type SAM) ²¹
40	Water- sewer- and pipeline construction	126	1.81018
41	Other new construction	367	1.72760
42	Maintenance and repair of farm and nonfarm re	57	1.82987
43	Maintenance and repair of nonresidential buil	168	1.91359
44	Maintenance and repair of highways- streets-	39	1.62830
45	Other maintenance and repair construction	95	1.55662
58	Confectionery manufacturing from purchased ch	200	2.42110
67	Animal- except poultry- slaughtering	9	9.60454
80	Coffee and tea manufacturing	2	3.68289
84	All other food manufacturing	1	2.12046
85	Soft drink and ice manufacturing	35	3.01552
86	Breweries	11	4.20252
101	Textile bag and canvas mills	5	1.40824
107	Cut and sew apparel manufacturing	19	1.63045
112	Sawmills	2	2.70284
116	Engineered wood member and truss manufacturin	17	1.46188
117	Wood windows and door manufacturing	2	1.55774
119	Other millwork- including flooring	17	1.76070
120	Wood container and pallet manufacturing	5	1.45445
139	Commercial printing	52	1.32958
160	Pharmaceutical and medicine manufacturing	2	2.93566
192	Ready-mix concrete manufacturing	47	1.98921
193	Concrete block and brick manufacturing	15	1.97716
232	Prefabricated metal buildings and components	20	1.85545
236	Sheet metal work manufacturing	29	1.60943
237	Ornamental and architectural metal work manuf	1	1.47919
243	Machine shops	5	1.59200
255	Miscellaneous fabricated metal product manufa	2	1.69068
269	All other industrial machinery manufacturing	17	1.86288
273	Other commercial and service industry machine	30	1.94340
302	Electronic computer manufacturing	0	0.00000
303	Computer storage device manufacturing	1	2.91220
305	Other computer peripheral equipment manufactu	1	2.71766
306	Telephone apparatus manufacturing	0	0.00000
307	Broadcast and wireless communications equipme	0	0.00000

APPENDIX 5. EMPLOYMENT MULTIPLIERS: LA PLATA COUNTY, COLORADO

IMPLAN 2006 – Modified for Region 9 Economic Development District of Southwest Colorado, Inc.

IMPLAN Sector	Industry Title	Total Industry Employment ²⁰	Total Employment Multiplier (Type SAM) ²¹
308	Other communications equipment manufacturing	0	0.00000
309	Audio and video equipment manufacturing	0	0.00000
310	Electron tube manufacturing	0	0.00000
311	Semiconductors and related device manufacturi	1	5.48609
312	All other electronic component manufacturing	1	1.91258
313	Electromedical apparatus manufacturing	0	0.00000
314	Search- detection- and navigation instruments	1	2.37876
315	Automatic environmental control manufacturing	0	0.00000
316	Industrial process variable instruments	0	0.00000
317	Totalizing fluid meters and counting devices	0	0.00000
318	Electricity and signal testing instruments	0	0.00000
319	Analytical laboratory instrument manufacturin	0	0.00000
320	Irradiation apparatus manufacturing	0	0.00000
321	Watch- clock- and other measuring and control	0	0.00000
322	Software reproducing	0	0.00000
323	Audio and video media reproduction	0	0.00000
324	Magnetic and optical recording media manufact	0	0.00000
325	Electric lamp bulb and part manufacturing	0	0.00000
326	Lighting fixture manufacturing	0	0.00000
327	Electric housewares and household fan manufac	0	0.00000
328	Household vacuum cleaner manufacturing	0	0.00000
333	Electric power and specialty transformer manu	0	0.00000
334	Motor and generator manufacturing	0	0.00000
335	Switchgear and switchboard apparatus manufact	0	0.00000
336	Relay and industrial control manufacturing	0	0.00000
337	Storage battery manufacturing	0	0.00000
338	Primary battery manufacturing	0	0.00000
339	Fiber optic cable manufacturing	0	0.00000
340	Other communication and energy wire manufactu	0	0.00000
341	Wiring device manufacturing	0	0.00000
342	Carbon and graphite product manufacturing	0	0.00000
343	Miscellaneous electrical equipment manufactur	0	0.00000
350	Motor vehicle parts manufacturing	2	1.70038
353	Other aircraft parts and equipment	2	1.39094
354	Guided missile and space vehicle manufacturin	2	2.12029

APPENDIX 5. EMPLOYMENT MULTIPLIERS: LA PLATA COUNTY, COLORADO

IMPLAN 2006 – Modified for Region 9 Economic Development District of Southwest Colorado, Inc.

IMPLAN Sector	Industry Title	Total Industry Employment ²⁰	Total Employment Multiplier (Type SAM) ²¹
355	Propulsion units and parts for space vehicles	0	0.00000
359	Motorcycle- bicycle- and parts manufacturing	4	2.75125
361	All other transportation equipment manufactur	10	2.42887
362	Wood kitchen cabinet and countertop manufactu	41	1.58626
364	Nonupholstered wood household furniture manuf	4	1.54160
365	Metal household furniture manufacturing	8	1.42722
376	Surgical appliance and supplies manufacturing	8	1.84370
377	Dental equipment and supplies manufacturing	3	1.80371
379	Dental laboratories	20	1.68857
380	Jewelry and silverware manufacturing	38	2.02707
381	Sporting and athletic goods manufacturing	2	2.12176
382	Doll- toy- and game manufacturing	2	1.57090
384	Sign manufacturing	5	1.44205
386	Musical instrument manufacturing	8	2.05011
389	Buttons- pins- and all other miscellaneous ma	17	1.54326
390	Wholesale trade	700	2.18306
391	Air transportation	50	1.88229
392	Rail transportation	2	1.65098
393	Water transportation	181	2.26931
394	Truck transportation	124	1.54010
395	Transit and ground passenger transportation	27	1.68432
396	Pipeline transportation	163	7.51730
397	Scenic and sightseeing transportation and sup	67	1.56551
398	Postal service	52	1.38379
399	Couriers and messengers	75	1.41027
400	Warehousing and storage	23	1.65537
401	Motor vehicle and parts dealers	427	2.06060
402	Furniture and home furnishings stores	201	1.58017
403	Electronics and appliance stores	144	1.32098
404	Building material and garden supply stores	463	1.71741
405	Food and beverage stores	644	1.46095
406	Health and personal care stores	132	1.38484
407	Gasoline stations	232	1.36031
408	Clothing and clothing accessories stores	245	1.46667
409	Sporting goods- hobby- book and music stores	283	1.33114

APPENDIX 5. EMPLOYMENT MULTIPLIERS: LA PLATA COUNTY, COLORADO

IMPLAN 2006 – Modified for Region 9 Economic Development District of Southwest Colorado, Inc.

IMPLAN Sector	Industry Title	Total Industry Employment ²⁰	Total Employment Multiplier (Type SAM) ²¹
410	General merchandise stores	478	1.50311
411	Miscellaneous store retailers	276	1.30108
412	Nonstore retailers	203	1.27349
413	Newspaper publishers	138	1.52080
414	Periodical publishers	7	1.81684
415	Book publishers	1	1.55511
416	Database- directory- and other publishers	1	3.69580
417	Software publishers	141	2.76408
418	Motion picture and video industries	73	2.62757
419	Sound recording industries	2	1.34153
420	Radio and television broadcasting	86	2.33122
421	Cable networks and program distribution	2	3.58594
422	Telecommunications	54	2.74796
423	Information services	12	2.76813
424	Data processing services	20	2.20491
425	Nondepository credit intermediation and rela	207	1.95251
426	Securities- commodity contracts- investments	120	1.95774
427	Insurance carriers	70	2.76681
428	Insurance agencies- brokerages- and related	140	1.36980
429	Funds- trusts- and other financial vehicles	21	2.67553
430	Monetary authorities and depository credit in	395	1.95879
431	Real estate	886	2.16808
432	Automotive equipment rental and leasing	60	1.97969
433	Video tape and disc rental	70	1.25213
434	Machinery and equipment rental and leasing	79	2.96497
435	General and consumer goods rental except vide	233	1.51696
437	Legal services	338	1.89494
438	Accounting and bookkeeping services	312	1.69778
439	Architectural and engineering services	839	2.04680
440	Specialized design services	67	1.91234
441	Custom computer programming services	77	1.39795
442	Computer systems design services	51	1.78095
443	Other computer related services- including fa	11	1.82545
444	Management consulting services	134	2.15139
445	Environmental and other technical consulting	174	2.29520

APPENDIX 5. EMPLOYMENT MULTIPLIERS: LA PLATA COUNTY, COLORADO

IMPLAN 2006 – Modified for Region 9 Economic Development District of Southwest Colorado, Inc.

IMPLAN Sector	Industry Title	Total Industry Employment ²⁰	Total Employment Multiplier (Type SAM) ²¹
446	Scientific research and development services	14	1.78034
447	Advertising and related services	60	2.01241
448	Photographic services	39	1.44847
449	Veterinary services	133	1.41764
450	All other miscellaneous professional and tech	31	4.72038
451	Management of companies and enterprises	34	2.08352
452	Office administrative services	73	2.43041
454	Employment services	448	1.24184
455	Business support services	74	1.55276
456	Travel arrangement and reservation services	39	1.79754
457	Investigation and security services	39	1.35990
458	Services to buildings and dwellings	398	1.47481
459	Other support services	122	1.69706
460	Waste management and remediation services	57	2.68201
461	Elementary and secondary schools	102	1.21670
463	Other educational services	293	1.57851
464	Home health care services	3	2.32869
465	Offices of physicians- dentists- and other he	1,118	1.72393
466	Other ambulatory health care services	335	1.96869
467	Hospitals	729	1.75169
468	Nursing and residential care facilities	241	1.51001
469	Child day care services	180	1.25227
470	Social assistance- except child day care serv	484	1.26914
471	Performing arts companies	30	1.27643
472	Spectator sports	9	1.19802
473	Independent artists- writers- and performers	53	1.84063
474	Promoters of performing arts and sports and a	79	1.23277
475	Museums- historical sites- zoos- and parks	27	1.55559
476	Fitness and recreational sports centers	437	1.28608
478	Other amusement- gambling- and recreation ind	431	1.56026
479	Hotels and motels- including casino hotels	761	1.43770
480	Other accommodations	132	1.64898
481	Food services and drinking places	2,572	1.29474
482	Car washes	8	1.60640
483	Automotive repair and maintenance- except car	310	1.46106

APPENDIX 5. EMPLOYMENT MULTIPLIERS: LA PLATA COUNTY, COLORADO

IMPLAN 2006 – Modified for Region 9 Economic Development District of Southwest Colorado, Inc.

IMPLAN Sector	Industry Title	Total Industry Employment ²⁰	Total Employment Multiplier (Type SAM) ²¹
484	Electronic equipment repair and maintenance	62	1.56862
485	Commercial machinery repair and maintenance	56	1.51462
486	Household goods repair and maintenance	23	1.62210
487	Personal care services	308	1.37752
488	Death care services	31	1.31310
489	Drycleaning and laundry services	98	1.28290
490	Other personal services	113	1.99804
491	Religious organizations	81	1.79447
492	Grantmaking and giving and social advocacy or	218	1.52649
493	Civic- social- professional and similar organ	190	1.33686
494	Private households	96	1.15059
503	State & Local Education	3,407	1.28252
504	State & Local Non-Education	1,554	1.40790
505	Federal Military	112	1.36166
506	Federal Non-Military	440	1.99973
508	Inventory valuation adjustment	0	0.00000
509	Owner-occupied dwellings	0	0.00000
	Totals	33,125	

APPENDIX 6. EMPLOYMENT MULTIPLIERS: MONTEZUMA COUNTY, COLORADO

IMPLAN 2007 - Modified for Region 9 Economic Development District of Southwest Colorado, Inc.

IMPLA N Sector	Industry Title	Total Industry Employment ²²	Total Employment Multiplier (Type SAM) ²³
2	Grain farming	33	1.11134
3	Vegetable and melon farming	17	1.46964
4	Fruit farming	10	1.66135
6	Greenhouse- nursery- and floriculture product	14	1.41629
10	All other crop farming	205	1.67098
11	Cattle ranching and farming	340	1.74386
12	Dairy cattle and milk production	2	1.30879
13	Poultry and egg production	2	3.34591
14	Animal production- except cattle and poultry	49	1.17250
16	Commercial logging	69	1.66213
18	Commercial hunting and trapping	3	2.82040
19	Support activities for agriculture and forest	81	1.15316
20	Extraction of oil and natural gas	100	2.72563
24	Mining gold- silver- and other metal ore	4	6.08637
25	Mining and quarrying stone	1	1.73145
29	Support activities for oil and gas operations	27	1.99321
31	Electric power generation- transmission- and	69	2.12673
32	Natural gas distribution	6	4.33034
33	Water- sewage and other treatment and deliver	20	1.55193
34	Construct new nonresidential commercial and h	452	1.50493
35	Construct new nonresidential manufacturing st	58	1.43521
36	Construct other new nonresidential structures	219	1.52314
37	Construct new residential permanent site sing	246	1.94972
38	Construct other new residential structures	76	1.93272
39	Maint & repair construct of nonresident struc	196	1.49576
40	Maint & repair construct of residential struc	20	1.83682
42	Other animal food manufacturing	3	2.48672
43	Flour milling and malt manufacturing	19	3.47085
54	Fruit and vegetable canning- pickling- and dr	7	2.79779

²² The model calibration for this analysis used data on total employment published by the State Demography Office, Colorado Department of Local Affairs.

²³ Type SAM multipliers predict direct, indirect, and induced effects. The induced effect is based on information in the IMPLAN model's social account matrix (SAM). Induced effects based on the recirculation of income through households and through state and local government are included in these Type SAM multipliers.

APPENDIX 6. EMPLOYMENT MULTIPLIERS: MONTEZUMA COUNTY, COLORADO

IMPLAN 2007 - Modified for Region 9 Economic Development District of Southwest Colorado, Inc.

IMPLA N Sector	Industry Title	Total Industry Employment ²²	Total Employment Multiplier (Type SAM) ²³
59	Animal (except poultry) slaughtering- renderi	9	8.23453
71	Breweries	5	3.08470
72	Wineries	5	1.93672
85	All other textile product mills	38	2.02155
95	Sawmills and wood preservation	40	3.15412
99	Wood windows and doors and millwork manufactu	39	2.03570
103	All other miscellaneous wood product manufact	131	1.98271
113	Printing	20	1.30113
121	Industrial gas manufacturing	10	4.10156
153	Pottery- ceramics- and plumbing fixture manuf	32	1.50476
161	Ready-mix concrete manufacturing	42	2.07974
163	Other concrete product manufacturing	8	1.51548
166	Cut stone and stone product manufacturing	1	1.52143
186	Plate work and fabricated structural product	5	1.59491
187	Ornamental and architectural metal products m	5	1.48653
195	Machine shops	16	1.41380
207	Other industrial machinery manufacturing	2	1.56529
283	Motor vehicle parts manufacturing	18	2.09041
295	Wood kitchen cabinet and countertop manufactu	22	1.75599
297	Nonupholstered wood household furniture manuf	1	1.33171
305	Surgical and medical instrument- laboratory a	17	1.82076
310	Jewelry and silverware manufacturing	7	1.22288
311	Sporting and athletic goods manufacturing	5	1.48109
314	Sign manufacturing	5	1.36239
317	All other miscellaneous manufacturing	11	1.34105
319	Wholesale trade businesses	216	1.50750
320	Retail Stores - Motor vehicle and parts	220	1.47507
321	Retail Stores - Furniture and home furnishing	14	1.68796
322	Retail Stores - Electronics and appliances	11	1.21305
323	Retail Stores - Building material and garden	201	1.29177
324	Retail Stores - Food and beverage	251	1.27054
325	Retail Stores - Health and personal care	39	1.33718
326	Retail Stores - Gasoline stations	121	1.28227
327	Retail Stores - Clothing and clothing accesso	118	1.20324
328	Retail Stores - Sporting goods- hobby- book a	43	1.17954
329	Retail Stores - General merchandise	418	0.00000
330	Retail Stores - Miscellaneous	95	1.16446

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IMPLAN 2007 - Modified for Region 9 Economic Development District of Southwest Colorado, Inc.

IMPLA N Sector	Industry Title	Total Industry Employment ²²	Total Employment Multiplier (Type SAM) ²³
331	Retail Nonstores - Direct and electronic sale	104	1.14579
332	Transport by air	12	2.83624
335	Transport by truck	154	1.63700
336	Transit and ground passenger transportation	8	1.19662
337	Transport by pipeline	4	4.77543
338	Scenic and sightseeing transportation and sup	26	1.47293
339	Couriers and messengers	7	1.14037
341	Newspaper publishers	78	1.46867
346	Motion picture and video industries	9	1.51144
350	Internet publishing and broadcasting	5	1.56949
351	Telecommunications	31	2.17932
354	Monetary authorities and depository credit in	152	1.67521
355	Nondepository credit intermediation and relat	42	1.45757
356	Securities- commodity contracts- investments-	36	1.89815
357	Insurance carriers	11	2.31390
358	Insurance agencies- brokerages- and related a	48	1.66816
360	Real estate establishments	288	1.36054
361	Imputed rental activity for owner-occupied dw	-	0.00000
363	General and consumer goods rental except vide	55	1.51378
364	Video tape and disc rental	15	1.33852
365	Commercial and industrial machinery and equip	13	2.64960
366	Lessors of nonfinancial intangible assets	1	1.12476
367	Legal services	84	1.46138
368	Accounting- tax preparation- bookkeeping- and	89	1.37052
369	Architectural- engineering- and related servi	52	1.49999
370	Specialized design services	1	1.68545
371	Custom computer programming services	12	1.38342
372	Computer systems design services	11	1.62839
374	Management- scientific- and technical consult	9	1.48758
375	Environmental and other technical consulting	28	1.68183
376	Scientific research and development services	148	1.62990
377	Advertising and related services	10	1.61499
378	Photographic services	14	1.46578
379	Veterinary services	67	1.33047
380	All other miscellaneous professional- scienti	28	2.12804
381	Management of companies and enterprises	16	2.70990
382	Employment services	26	1.17584

APPENDIX 6. EMPLOYMENT MULTIPLIERS: MONTEZUMA COUNTY, COLORADO

IMPLAN 2007 - Modified for Region 9 Economic Development District of Southwest Colorado, Inc.

IMPLA N Sector	Industry Title	Total Industry Employment ²²	Total Employment Multiplier (Type SAM) ²³
383	Travel arrangement and reservation services	21	1.63728
384	Office administrative services	45	2.03355
386	Business support services	44	1.32086
387	Investigation and security services	10	1.30205
388	Services to buildings and dwellings	106	1.23125
389	Other support services	69	1.60817
390	Waste management and remediation services	26	2.01394
391	Private elementary and secondary schools	1	1.10751
393	Other private educational services	59	1.18109
394	Offices of physicians- dentists- and other he	279	1.42453
395	Home health care services	196	1.19067
396	Medical and diagnostic labs and outpatient an	87	1.41565
397	Private hospitals	352	1.53791
398	Nursing and residential care facilities	228	1.23815
399	Child day care services	41	1.19043
400	Individual and family services	181	1.19773
401	Community food- housing- and other relief ser	2	2.28643
403	Spectator sports companies	7	1.35625
405	Independent artists- writers- and performers	8	1.10938
407	Fitness and recreational sports centers	18	1.61679
408	Bowling centers	11	1.93223
409	Amusement parks- arcades- and gambling indust	93	1.28330
410	Other amusement and recreation industries	4	1.87917
411	Hotels and motels- including casino hotels	296	1.33472
412	Other accommodations	42	1.43598
413	Food services and drinking places	710	1.22183
414	Automotive repair and maintenance- except car	147	1.37505
415	Car washes	20	1.19415
416	Electronic and precision equipment repair and	10	1.42547
417	Commercial and industrial machinery and equip	35	1.34889
418	Personal and household goods repair and maint	12	1.38864
419	Personal care services	98	1.23170
420	Death care services	17	1.46658
421	Dry-cleaning and laundry services	70	1.12695
422	Other personal services	45	1.79345
423	Religious organizations	128	1.28393
425	Civic- social- professional- and similar orga	96	1.26650

APPENDIX 6. EMPLOYMENT MULTIPLIERS: MONTEZUMA COUNTY, COLORADO

IMPLAN 2007 - Modified for Region 9 Economic Development District of Southwest Colorado, Inc.

IMPLA N Sector	Industry Title	Total Industry Employment ²²	Total Employment Multiplier (Type SAM) ²³
426	Private household operations	83	1.02907
427	US Postal Service	52	1.52532
429	Other Federal Government enterprises	68	1.49914
430	* Not unique commod (S&LG passenger transit)	60	1.49480
431	* Not unique commod (S&LG electricity)	15	1.54527
432	Other state and local government enterprises	181	2.01313
437	* Special (S&LG Non-Ed Emp & Payroll)	1,664	1.22119
438	* Special (S&LG Ed Emp & Payroll)	820	1.21567
439	* Special (Federal Non-Military Emp & Payroll)	238	1.49977
440	* Special (Federal Military Emp & Payroll)	61	1.22638
	Total	13,138	