THE COST OF RURAL COMMUNITY SERVICES IN WYOMING

Introduction

Many areas of the Rocky Mountain region have experienced rapid population growth in recent years. Much of this growth has been associated with an influx of in-migrants from outside the region. While population growth for the State of Wyoming was 6.0 percent between 1990 and 1998, this growth was not evenly distributed. For example the population in Teton and Sublette Counties increased by 28.6 percent and 18.5 percent, respectively, between 1990 and 1998. Much of this growth has occurred in rural areas of these counties. In Teton County 62.9 percent of the total population increase between 1990 and 1998 was in non-incorporated areas of the county. In Sublette County 76.1 percent of the total population increase between 1990 and 1998 was in non-incorporated areas of the county.

Teton and Sublette Counties have also experienced a decrease in agricultural lands during this time period. The Census of Agriculture (U.S. Department of Commerce, 1992 and U.S. Department of Agriculture, 1997) reports a 9,937 acre decrease in agricultural land for Teton County between 1992 and 1997 and a 975 acre decrease in agricultural land for Sublette County between 1992 and 1997.

The average cost per person for county government was also relatively higher in Teton and Sublette Counties. The Cost of Maintaining County Government in Wyoming (Wyoming Department of Audit, Public Funds, 1999) indicates that while the average cost for county government in Wyoming was $559 per person in 1998, the average cost for Teton and Sublette Counties was $1,844 per person and $1,659 per person respectively. These two counties had the highest average cost per person of any county in the state in 1998. They also had the highest proportion of rural residents of any county in the state (Teton 58.7 percent, Sublette 54.6 percent).

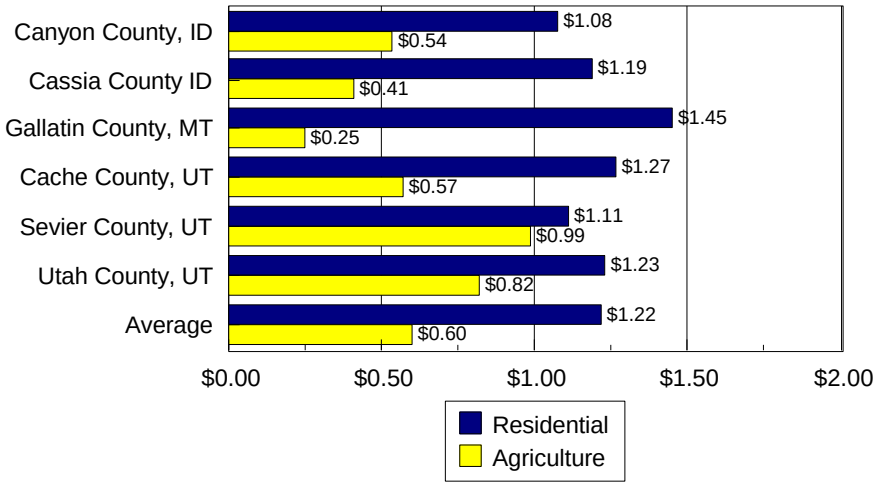
The combination of rapid population growth, loss of agricultural land, and higher costs for community services in Teton and Sublette Counties and elsewhere in the Rock Mountain region has raised concerns that other counties in Wyoming may be facing similar situations in the future. These concerns relate to the potential change in the social structure of local communities, the loss of agriculture as an economic base, the loss of open space on private land, and increased cost of community services. As a result of these concerns, there has been increased interest in costs of community services studies in Wyoming. Cost of community services studies typically compare the costs and revenues to county governments and public schools for agricultural land with other types of land use such as residential development.

Previous Research

The American Farmland Trust (AFT) has been a leader in the development of cost of community services studies. AFT (1999) reports that more than 58 communities have

been studied over the past decade. Six of these communities were in the Rocky Mountain region. These six include Canyon and Cassia Counties in Idaho, Gallatin County in Montana, Cache, Sevier, and Utah Counties in Utah. Figure 1 compares the results from the six studies conducted in the Rocky Mountain region in terms of the ratio of cost of community services per dollar of revenue for county government and public schools in the six counties. Although there is substantial variation, in all cases the cost of community services exceeds revenues for residential land use. On average, residential development cost county government and public schools $1.22 for every $1.00 of revenue. For agriculture production, in all cases the cost of community services is less than revenue. On average, agricultural production cost county government and public schools $.0.60 for every $1.00 of revenue.

Figure 1.
Cost of Community Services Per Dollar of Revenue
For County Government and Public Schools



Methodology

This analysis differs from the AFT methodology in that it used a statistical model that predicted county government revenues and expenditures based on assessed valuation, acres of agricultural land, rural population, urban population, and personal income. This model was used to allocated costs and revenues for county government between land use types. The time frame covered was 1993 to 1998. Data for the model came from the County Finance Report prepared for the Tax Reform 2000 Committee by the Wyoming Department of Audit (1999). A statistical model was use because it was felt that it allowed greater flexibility in analysis, could be used to make projects and forecasts, and was somewhat less arbitrary in the allocation of costs than the AFT approach.

The effects of land use on school district revenues and expenditures were also considered in the analysis. School district revenues were allocated by land use type based on the source of the funds. School district expenditures were considered a residential expense. Rural residential school expenditures were based on the proportion of the population that was living in rural areas with an adjustment for higher transportation costs. The data for public schools came from Statistical Report Series No. 3: Wyoming Public Schools Fund Accounting and Reporting (1992-93 through 1997-98) from the Wyoming Department of Education. The analysis focuses on comparing the costs and revenues to county government and school districts from agricultural production with that for rural residential development on a statewide basis.

Results

Agricultural Production

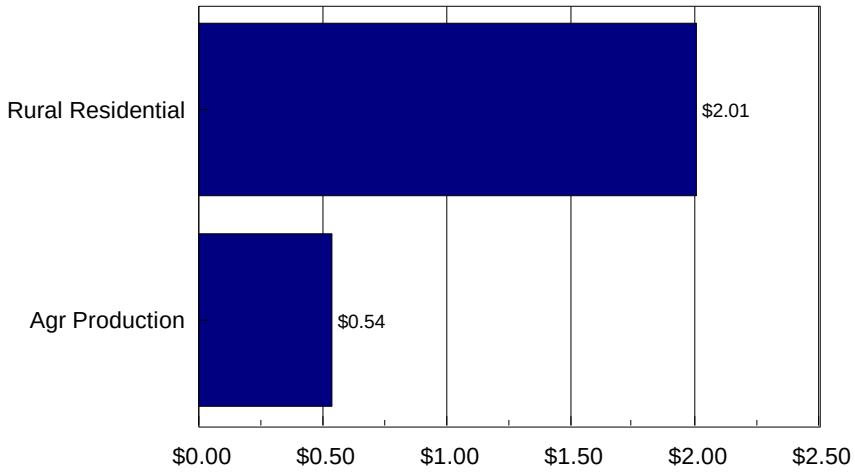
The results indicate that total county government revenue from agricultural production in Wyoming has averaged $20.6 million per year between 1993 and 1998 (Table 1). This represents an average of $0.80 per acre. On the expenditure side, the total cost of agricultural production to county government in Wyoming has averaged $20.1 million between 1993 and 1998 or an about $0.79 per acre. These results indicate that agricultural production is close to a break-even proposition for county government in Wyoming with revenues slightly exceeding costs on average. However, agricultural production also pays taxes to support local school districts. Between 1993 and 1998, total school district revenue from agricultural production has averaged $16.7 million per year or an about of $0.65 per acre (Table 1). On the expenditure side, since school district expenditures are considered a residential cost, agricultural production does not directly increase school costs. Combining county government and school district indicates that agricultural production in Wyoming has averaged $37.3 million per year in total revenue between 1993 and 1998 or about $1.45 per acre. At the same time it has cost county government and school districts $20.1 million per year or about $0.79 per acre. These results indicate that agricultural production costs county government and school districts in Wyoming about $0.54 for every $1.00 of revenue (Figure 2).

Rural Residential Development

For rural residential development, total county government revenue in Wyoming has averaged $33.7 million per year between 1993 and 1998 (Table 1). This represents an average of $246.49 per rural resident. The total cost of rural residential development to county government has averaged $42.3 million per year between 1993 and 1998 or about $309.30 per rural resident. These results indicate that rural residential development represents a net loss to county government in Wyoming with costs exceeding revenues by 25 percent on average. Rural residential development also pays taxes to support school districts. Between 1993 and 1998, total school district revenue from rural residential development has average $28.8 million per year or about $209.79 per rural resident (Table 1). On the expenditure side, the total cost of rural residential development to school districts has averaged $83.3 million or about $608.26 per rural resident.

Combining county government and school districts indicates that rural residential development in Wyoming has averaged $62.5 million per year in revenue between 1993 and 1998 or about $456.27 per rural resident. At the same time, it has cost county government and school districts $125.7 million per year or about $917.56 per rural resident. These results indicate that rural residential development costs county government and schools in Wyoming about $2.01 for every dollar of revenue (Figure 2).

Figure 2.
Cost of Rural Community Services Per Dollar of Revenue For Wyoming



Conversion of Agriculture Land

The Census of Agriculture indicates that the average size of an agricultural operation in Wyoming was 3,781 acres with an estimated market value of $808,346 in 1997. If this operation were to be subdivided in 35-acre lots it would result in 108 new residential lots. Assuming an average household size of 2.59 people, these lots would house 280 new rural residents when developed. Based on the model estimates, the conversion of this agriculture operation to a rural residential development would increase county government revenue for an average county in Wyoming by $65,053 per year. However, the conversion would increase county government costs for an average county in Wyoming by $82,527 per year. As a result, county government would realize a net loss of -$17,474 per year from the conversion. If this annual loss were capitalized at a 6 percent rate it would mean that up to $291,233 could be paid to retain the operation in agricultural production. While this amount would not be enough to purchase the operation outright, it would be enough to buy at least a portion of the development rights for the land.

Summary and Conclusions

The results indicate that on average agricultural production in Wyoming more than pays for itself in terms of both county government and school district costs. The estimated cost-revenue ratio for agricultural production in Wyoming is comparable to the results found in other parts of the Rocky Mountain region.

The results also indicate that on average rural residential development in Wyoming does not pay for itself in terms of either county government or school district costs. Revenues are higher for rural residential development, but the higher costs of rural residential development more than offset this difference. The estimated cost-revenue ratio for Wyoming is somewhat higher than those reported for other parts of the Rocky Mountain region. Part of this difference may be explain by the fact that the other studies did not differentiate between urban and rural residential land use as was done in this study. Presumably rural residences represent higher costs to county government and school districts than urban residences. As a result the cost-revenue ratio for rural residences would be higher than that for the combined urban and rural residences.

Finally, the results indicate that the conversion of a typical agricultural operation to a rural residential development results in a net loss in revenue for an average county in Wyoming. This suggests that it may be worthwhile to consider purchasing the development rights to the land in order to retain it in agricultural production.

It is important to note that the results above are only averages and are not representative of any specific development in Wyoming. The results for a specific development could vary substantially depending on the number of school children, the assessed valuation of the properties, and the level of services provided.

The analysis also does not consider the interrelationship between land uses. For example, if a residential development provides housing for workers that are necessary for local businesses to operate, then the combined revenues from the residential development and the business operations to county government and school districts may in some cases cover the costs. One advantage of using the statistical model for the analysis is that it provides the flexibility to evaluate such alternative scenarios.

Table 1. Cost of Rural Community Services in Wyoming

Agricultural Lands

	1993	1994	1995	1996	1997	1998	Average
County Revenue	$20,263,088	$20,534,274	$21,211,253	$20,339,351	$20,429,331	$20,709,435	$20,581,122
School Revenue	$14,314,124	$16,247,093	$18,534,852	$17,608,426	$16,639,635	$16,743,934	$16,681,344
Total Revenue	$34,577,213	$36,781,367	$39,746,104	$37,947,777	$37,068,966	$37,453,369	$37,262,466
County Costs	$19,878,416	$19,718,949	$20,594,407	$20,906,627	$20,334,456	$19,379,768	$20,135,437
School Costs	$0	$0	$0	$0	$0	$0	$0
Total Costs	$19,878,416	$19,718,949	$20,594,407	$20,906,627	$20,334,456	$19,379,768	$20,135,437
Cost/Revenue	0.575	0.536	0.518	0.551	0.549	0.517	0.540
Acres	25,827,428	25,254,439	25,298,075	25,802,491	25,850,998	25,736,438	
Per Acre County Rev	$0.78	$0.81	$0.84	$0.79	$0.79	$0.80	$0.80
Per Acre School Rev	$0.55	$0.64	$0.73	$0.68	$0.64	$0.65	$0.65
Per Acre Total Rev	$1.34	$1.46	$1.57	$1.47	$1.43	$1.46	$1.45
Per Acre County Cost	$0.77	$0.78	$0.81	$0.81	$0.79	$0.75	$0.79
Per Acre School Cost	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Per Acre Total Cost	$0.77	$0.78	$0.81	$0.81	$0.79	$0.75	$0.79

Rural Residential

County Revenue	$33,210,460	$33,654,923	$34,764,466	$33,335,451	$33,482,925	33,942,005	$33,731,705
School Revenue	$21,402,231	$24,780,057	$28,865,562	$32,033,165	$31,889,399	33,585,869	$28,759,381
Total Revenue	$54,612,690	$58,434,981	$63,630,028	$65,368,616	$65,372,324	$67,527,875	$62,491,085
County Costs	$41,787,810	$41,452,582	$43,292,943	$43,949,284	$42,746,483	40,739,566	$42,328,112
School Costs	$72,225,169	$62,838,248	$87,144,046	$86,361,180	$97,458,819	94,077,201	$83,350,777
Total Costs	$114,012,980	$104,290,830	$130,436,989	$130,310,464	$140,205,302	$134,816,767	$125,678,889
Cost/Revenue	2.088	1.785	2.050	1.993	2.145	1.996	2.011
Rural Population	133,636	135,758	137,483	138,001	137,925	138,357	
Per Capita County Rev	$248.51	$247.90	$252.86	$241.56	$242.76	$245.32	$246.49
Per Capita School Rev	$160.15	$182.53	$209.96	$232.12	$231.21	$242.75	$209.79
Total Revenue	$408.67	$430.43	$462.82	$473.68	$473.97	$488.07	$456.27
Per Capita County Cost	$312.70	$305.34	$314.90	$318.47	$309.93	$294.45	$309.30
Per Capita School Cost	$540.46	$462.87	$633.85	$625.80	$706.61	$679.96	$608.26
Total Cost	$853.16	$768.21	$948.75	$944.27	$1,016.53	$974.41	$917.56

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