IV. Buena Vista City

Buena Vista is a rural city in the Shenandoah Valley. According to the Local Composite Index it is a low fiscal capacity ($LCI_{1996\text{-}98}$ - 0.2418) school division. Buena Vista, typical of many small rural cities in the Commonwealth, exhibits relatively small increases in the absolute value of its indicator bases and standardization units, thus, it experiences significant percentage fluctuations in its net biennial change rate percentages.

Local to State Ratio Net Biennial Change Rate.

$(TPV/ADM)_{Buena\ Vista}$ / $(TPV/ADM)_{State}$ (Table 4.41)

For the first five Periods the State Net Biennial Change Rate dampened, either completely (Periods I - III) or incompletely (Periods IV and V), the corresponding Local Net Biennial Change Rate. In Period VI the Local to State Ratio exhibited complete enhancement due to the negative State Net Biennial Change Rate, which was lower than that of the locality. The steadily declining $ADM_{Buena\ Vista}$ contributed to the synthetic enhancement within the Local Net Biennial Change Rate.

$(TPV/POP)_{Buena\ Vista}$ / $(TPV/POP)_{State}$ (Table 4.42)

The TPV/POP Local to State Ratio exhibited variable Net Biennial Change Rates. The TPV/ADM exhibited first, a dampened effect, and then, an enhanced one. The first five periods the State Net Biennial Change Rate dampened the Local Net Change Rate, either completely (Periods II - IV) or incompletely (Periods I and V). The incomplete dampening in Period I was the smallest (1.172%). Periods II-IV exhibited the typical volatility pattern of complete dampening characteristic of localities whose Net Biennial Change Rate lags behind the State Mean rate. A significant difference occurred in Period III, when the percentage due to the loss in $ADM_{Buena\ Vista}$ was larger than the decrease in $TPV_{Buena\ Vista}$. This phenomenon produced the synthetic form of complete dampening volatility (H1). In Period VI the Local Net Biennial Change Rate was enhanced completely through the effects of a *negative* State Net Biennial Change Rate that was lower than that of the local rate.

TABLE 4.41. $(TPV/ADM)_{Buena\ Vista}$ Local to State Ratio Net Biennial Change Rate, Difference, and Volatility, Biennia 1984-86 through 1996-98

	Period	Local Net Biennial Change Rate (Percentage)	-	State Net Biennial Change Rate (Percentage)	=	Local to State Ratio Net Biennial Change Rate (Percentage)	Difference in the Local to State Ratio	Volatility Type[1]
I	84-86 to 86-88	11.174	-	14.722	=	-3.548	-0.0168	Type B3
II	86-88 to 88-90	12.755	-	15.386	=	-2.630	-0.0120	Type B1
III	88-90 to 90-92	9.729	-	24.250	=	-14.521	-0.0646	Type H1
IV	90-92 to 92-94	32.348	-	32.286	=	0.0632	0.0003	Type A1
V	92-94 to 94-96	16.824	-	6.510	=	10.314	0.0393	Type A1
VI	94-96 to 96-98	14.731	-	-2.103	=	16.833	0.0707	Type D1

[1]Refer to Appendix C in this volume and the appropriate section in Volume II: Technical Appendix.

TABLE 4.42. $(TPV/POP)_{Buena\ Vista}$ Local to State Ratio Net Biennial Change Rate, Difference, and Volatility, Biennia 1984-86 through 1996-98

	Period	Local Net Biennial Change Rate (Percentage)	-	State Net Biennial Change Rate (Percentage)	=	Local to State Ratio Net Biennial Change Rate (Percentage)	Difference in the Local to State Ratio	Volatility Type[1]
I	84-86 to 86-88	11.276	-	10.104	=	1.172	0.0062	Type A1
II	86-88 to 88-90	10.840	-	12.825	=	-1.986	-0.0107	Type B1
III	88-90 to 90-92	5.499	-	21.253	=	-15.753	-0.0829	Type H1
IV	90-92 to 92-94	25.057	-	27.895	=	-2.838	-0.0126	Type B2
V	92-94 to 94-96	7.818	-	6.261	=	1.557	0.0067	Type A2
VI	94-96 to 96-98	13.641	-	-2.765	=	16.406	0.0717	Type D1

[1]Refer to Appendix C in this volume and the appropriate section in Volume II: Technical Appendix.

(AGI/ADM)$_{Buena\ Vista}$ / (AGI/ADM)$_{State}$ (Table 4.43)

For every Period the State Net Biennial Change Rate dampened the Local Net Biennial Change Rate, either completely (II, III, and VI) or incompletely (I, IV, and V). Unlike many localities in the Commonwealth, the Adjusted Gross Income *decreased* for two Periods (II and IV) and produced different types of volatility.[115] In Period II the $AGI_{Buena\ Vista}$ loss was almost equivalent to the $ADM_{Buena\ Vista}$ decrease, which produced a negligible Local Net Biennial Change Rate. Compared with a 16.020% State Net Biennial Change Rate the Local to State Ratio for Buena Vista was dampened by approximately that amount. For Period V the $AGI_{Buena\ Vista}$ loss was evaluated with a 7.734% $ADM_{Buena\ Vista}$ decrease, which increased the Local proportion significantly. Unlike Period II, the State Net Biennial Change Rate was only one-fourth its magnitude for the former Period. Thus, the Local to State Ratio increased - synthetically incompletely dampening the local rate.

(AGI/POP)$_{Buena\ Vista}$ / (AGI/POP)$_{State}$ (Table 4.44)

The AGI/POP Local to State Ratio exhibited a trend similar to that of the AGI/ADM discussed above. The major differences occurred in the magnitude of the Local Net Biennial Change Rate. The Local Net Biennial Change Rates for $(AGI/ADM)_{Buena\ Vista}$ were always positive, the Local Net Biennial Change Rates for $(AGI/POP)_{Buena\ Vista}$ were positive for four Periods (I, III, IV, and VI) and negative for two (II and V). The greatest percentage of decrease in the Local to State Ratio occurs in these situations.

Whereas the $ADM_{Buena\ Vista}$ decreased each Period, the $POP_{Buena\ Vista}$ decreased for all, except two Periods (IV and V). These decreases provided enhancement *within* the Net Local Biennial Change Rate. However, they were not large enough to overcome the counter-effect of the Net State Biennial Change Rate.

[115] Refer to the appropriate sections in Volume II: Technical Appendix for specific percentages of AGI gain/loss and ADM gain/loss from which the Net Local Biennial Change Rates are calculated.

TABLE 4.43. $(AGI/ADM)_{Buena\ Vista}$ Local to State Ratio Net Biennial Change Rate, Difference, and Volatility, Biennia 1984-86 through 1996-98

	Period	Local Net Biennial Change Rate (Percentage)	-	State Net Biennial Change Rate (Percentage)	=	Local to State Ratio Net Biennial Change Rate (Percentage)	Difference in the Local to State Ratio	Volatility Type[1]
I	84-86 to 86-88	35.544	-	22.243	=	13.301	0.0787	Type A3
II	86-88 to 88-90	0.013	-	16.033	=	-16.020	-0.1075	Type E1
III	88-90 to 90-92	20.030	-	20.372	=	-0.343	-0.0019	Type B1
IV	90-92 to 92-94	16.086	-	10.296	=	5.790	0.0325	Type A1
V	92-94 to 94-96	6.708	-	4.515	=	2.193	0.0130	Type F2
VI	94-96 to 96-98	4.721	-	8.183	=	-3.461	-0.0210	Type B1

[1]Refer to Appendix C in this volume and the appropriate section in Volume II: Technical Appendix.

TABLE 4.44. $(AGI/POP)_{Buena\ Vista}$ Local to State Ratio Net Biennial Change Rate, Difference, and Volatility, Biennia 1984-86 through 1996-98

	Period	Local Net Biennial Change Rate (Percentage)	-	State Net Biennial Change Rate (Percentage)	=	Local to State Ratio Net Biennial Change Rate (Percentage)	Difference in the Local to State Ratio	Volatility Type[1]
I	84-86 to 86-88	35.669	-	16.824	=	18.845	0.1249	Type A1
II	86-88 to 88-90	-1.687	-	13.778	=	-15.464	-0.1218	Type E1
III	88-90 to 90-92	15.403	-	17.182	=	-1.779	-0.0118	Type B2
IV	90-92 to 92-94	8.690	-	6.968	=	2.723	0.0178	Type A2
V	92-94 to 94-96	-0.518	-	4.401	=	-5.919	-0.0398	Type E4
VI	94-96 to 96-98	3.727	-	7.542	=	-3.815	-0.0241	Type B1

[1]Refer to Appendix C in this volume and the appropriate section in Volume II: Technical Appendix.

(TRS/ADM)$_{Buena\ Vista}$ / (TRS/ADM)$_{State}$ (Table 4.45)

For Periods I - IV, the State Net Biennial Change Rate dampened the Local to State Ratio. Period V exhibited incomplete dampening (synthetic) in the Local to State Ratio. This decrease (-0.756%) was attributable to a negative State Net Biennial Change Rate (-1.464%) that was, itself synthetically derived due to a faster ADM_{State} than TRS_{State} increase. Thus, although the $TRS_{Buena\ Vista}$ had decreased (-9.307%), the decrease in the Local to State Ratio Net Biennial Change Rate was smaller (-0.756%).[116]

Period VI exhibited a $TRS_{Buena\ Vista}$ decrease that was completely dampened synthetically by the larger loss in $ADM_{Buena\ Vista}$. However, the larger State Net Biennial Change Rate completely dampened the Local to State Ratio.

(TRS/POP)$_{Buena\ Vista}$ / (TRS/POP)$_{State}$ (Table 4.46)

Its volatility pattern was similar to that the TRS/ADM as discussed above. Similarly, the loss in $TRS_{BuenaVista}$ largely produced the negative Local Net Biennial Change Rate for Biennium V (-9.758) effectively *enhanced* the declining (but not negative) Local Net Biennial Change Rate to produce a Local to State Ratio Net Biennial Change Rate (-8.759%).

[116] Refer to the appropriate sections in the Volume II: Technical Appendix for a review of these figures.

TABLE 4.45. $(TRS/ADM)_{Buena\ Vista}$ Local to State Ratio Net Biennial Change Rate, Difference, and Volatility, Biennia 1984-86 through 1996-98

	Period	Local Net Biennial Change Rate (Percentage)	-	State Net Biennial Change Rate (Percentage)	=	Local to State Ratio Net Biennial Change Rate (Percentage)	Difference in the Local to State Ratio	Volatility Type[1]
I	84-86 to 86-88	13.359	-	19.284	=	-5.925	-0.0380	Type B3
II	86-88 to 88-90	18.836	-	25.512	=	-6.676	-0.0402	Type B1
III	88-90 to 90-92	16.824	-	16.635	=	0.189	0.0011	Type A1
IV	90-92 to 92-94	8.986	-	9.402	=	-0.416	-0.0023	Type B1
V	92-94 to 94-96	-2.220	-	-1.464	=	-0.756	-0.0042	Type I3
VI	94-96 to 96-98	1.231	-	9.656	=	-8.424	-0.0469	Type H1

[1]Refer to Appendix C in this volume and the appropriate section in Volume II: Technical Appendix.

TABLE 4.46. $(TRS/POP)_{Buena\ Vista}$ Local to State Ratio Net Biennial Change Rate, Difference, and Volatility, Biennia 1984-86 through 1996-98

	Period	Local Net Biennial Change Rate (Percentage)	-	State Net Biennial Change Rate (Percentage)	=	Local to State Ratio Net Biennial Change Rate (Percentage)	Difference in the Local to State Ratio	Volatility Type[1]
I	84-86 to 86-88	13.464	-	14.785	=	-1.321	-0.0905	Type B1
II	86-88 to 88-90	16.817	-	22.874	=	-6.058	-0.0429	Type B1
III	88-90 to 90-92	12.321	-	13.576	=	-1.255	-0.0083	Type B1
IV	90-92 to 92-94	2.981	-	6.285	=	-3.304	-0.0217	Type B2
V	92-94 to 94-96	-9.758	-	-1.124	=	-8.634	-0.0548	Type I4
VI	94-96 to 96-98	0.270	-	9.030	=	-8.759	-0.0508	Type E1

[1]Refer to Appendix C in this volume and the appropriate section in Volume II: Technical Appendix.

Local Composite Index Net Biennial Change Rate. (Table 4.47)

The Buena Vista City Local Composite Index[117] value exhibited patterns of volatile behavior that appeared to correspond with the three LCI change trends discussed in Chapter 1. For Period I, unlike many low fiscal capacity localities, the $LCI_{Buena\ Vista}$ increased five percent, which is not characteristic of the near zero change of Balanced Change. However, the relatively higher Local Net Biennial Change Rate (22.318% for Buena Vista versus 16.810% for the State) may be a function of the extremely small size of the Buena Vista Local indicator bases,[118] rather than a significant fiscal capacity amount of increase.

Divergent Change appeared to occur in Periods II and III in which the Buena Vista County LCI declined (-9.332% and -6.999%, respectively). The third trend, Convergent Change, appeared to emerge in Periods VI - VI during which the LCI increased from 1.699% to 4.230%.

In Period IV the TPV/ADM and TPV/POP Local to State Ratios exhibited enhanced change, while four Local to State Ratios exhibited incompletely dampened change, and another exhibited completely dampened change.

Initially, it may appear that the ratio structure through the dampening effects of the denominator on the numerator favorably inhibits LCI increases. In all, but two of the thirty-six examples, the Local to State Ratio Net Biennial Change Rate was smaller than the Local Net Biennial Change Rate alone.[119]

The decreasing standardization units, $ADM_{Buena\ Vista}$ and $POP_{Buena\ Vista}$, tended to synthetically increase the Local Standardized Indicator.[120] The $ADM_{Buena\ Vista}$ decreased every Period from 1.801% to 7.389%, which was added "synthetically" to the indicator change rate.[121].

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[117] The Local Composite Index is the weighted sum of the Local to State Ratios. Recall that each Local to State Ratio is composed of the sum of the Local Net Biennial Change and the State Net Biennial Change.

[118] The TPV and AGI bases increased for Period I. The TPV base increased $9 million for a Biennial Change Rate of approximately 9.6%. However, this same dollar amount is equivalent to less than one-eighth of one percent of $AGI_{Carroll,}$ another low fiscal capacity jurisdiction. The $AGI_{Buena\ Vista}$ increased 33.674%, however, this increase was only $11 million additional to the $AGI_{Buena\ Vista}$ revenue stream. This percentage is relatively high, because when compared with another low fiscal capacity locality $AGI_{Carroll}$ the $11 million is equivalent to 8.52%.

[119] This pattern was exactly the same as Carroll County in which the only two Local Net Biennial Change Rates that were larger than their respective Local to State Ratio Net Biennial Change Rates. These two Local Rates were TPV/ADM and TPV/POP for Period VI.

[120] Given a hypothetical constant indicator value in the Standardized Indicator numerator, a decrease in the denominator (ADM or POP) would allow the Standardized Indicator to become larger.

For the Buena Vista City LCI calculation there are three significant concerns:

- the synthetic change rate effects due to decreasing ADM and/or POP,
- extremely small Indicator and Standardized Indicator values such that a shift of a small amount of entities creates a large percentage change,
- the negligible influence of small magnitude of Indicator and Standardized Indicator values on the large aggregate (mean) State values, and
- the subordination of Buena Vista's independent fiscal capacity measurement to the rationalized structure of the LCI formula.

[121] For detailed analyses of the magnitude of synthetic change to the Local Net Biennial Change Rate and to the Local to State Ratio Net Biennial Change Rate, refer to the appropriate section in Volume II: Technical Appendix.

TABLE 4.47. Local Composite Index Values, Net Biennial Change Rate, and Local and State Percentages, Buena Vista City, 1984-86 through 1996-98 Biennia

	Period	$LCI_{initial}$	LCI_{final}	Net LCI Biennial Change Rate		Percentage of Change Attributable to Local Factors	Percentage of Change Attributable to State Factors
				LCI_{final} - $LCI_{initial}$	**% of $LCI_{initial}$**		
I	1984-86 to 1986-88	0.2796	0.2947	0.0151	5.401	57.038	42.962
II	1986-88 to 1988-90	0.2947	0.2672	-0.0275	-9.332[2]	29.198	70.802
III	1988-90 to 1990-92	0.2672	0.2485	-0.0187	-6.999[2]	39.713	60.287
IV	1990-92 to 1992-94	0.2485	0.2526	0.0041	1.699[3]	52.226	47.774
V	1992-94 to 1994-96	0.2526	0.2577	0.0051	2.019[3]	59.070	40.930
VI	1994-96 to 1996-98	0.2577	0.2686	0.0109	4.230[3]	67.640	32.360

[2] Divergent Change - Low fiscal capacity localities experienced decreases in their LCI values and high fiscal capacity localities experienced increases in their LCI values.
[3] Convergent Change - Low fiscal capacity localities experienced increases in their LCI values and high fiscal capacity experienced decreases in their LCI values.