



2015 Real Property Ratio Summary Statistics Report



Direct questions and comments regarding this report to
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Each year the Department of Revenue Property Tax Division (DOR) gathers real property sales data from all 39 counties in the State of Washington. Sales, occurring from May 1, 2014, thru April 30, 2015, are determined to be either valid or invalid based on criteria set out in WAC 458-53-070 and WAC 458-53-080. The data from the valid sales is analyzed to determine the general level of assessment and the level of uniformity. Each county's results are broken down by property type and shown in this report. Other than requiring assessment at 100 percent of market value, Washington has not established appraisal performance standards in state law or by administrative rule. However, the International Association of Assessing Officers (IAAO) suggests performance standards for both the level and uniformity of assessments. This report focuses on three recognized IAAO standards, and two additional statistical measures of vertical equity. The standards promulgated by the IAAO include median ratio, coefficient of dispersion (COD), and price related differential (PRD). Other metrics that measure vertical equity are quintile mean ratios (QMR) and vertical equity index (VEI).

It should be noted this report includes all valid sales with no additional trimming of outliers. This report gives the results of each statistical analysis with no consideration given to the number of observations. For this report no binomial test or 'bootstrap' analysis was completed to determine the level of confidence in the results. In many cases, with the limited number of observations, it cannot be said with certainty that the standard was or was not met.

The median ratio is a measure of the level of assessment. A ratio is calculated for each sale by dividing the assessed value by the sales price. The median ratio is the middle ratio, meaning that half the properties have a ratio greater than the median ratio and half have ratios less than the median ratio. The IAAO standard suggests the median ratio for the jurisdiction being reviewed should be between .90 and 1.10 which on a percentage basis is between 90 and 110 percent.

COD is the most common measure of horizontal uniformity used in the assessment community. COD is referred to as a measure of horizontal uniformity because it measures uniformity across the data being reviewed without influences from the value of the properties. It measures, on average, how far each individual ratio is from the median ratio. A smaller COD indicates more uniform assessment. IAAO offers the following guidance for CODs by property types and or other neighborhood influences.

General Property Class	Jurisdiction Size/Profile/Market Activity	COD Range
Residential improved (single family dwelling , condominiums, manuf. Housing, 2-4 family units)	Very large jurisdictions/densely populated/newer properties/active markets	5.0 to 10.0
	Large to mid-sized jurisdictions/older & newer properties/less active markets	5.0 to 15.0
	Rural or small jurisdictions/older properties/depressed market areas	5.0 to 20.0
Income-producing properties (commercial, industrial, apartments)	Very large jurisdictions/densely populated/newer properties/active markets	5.0 to 15.0
	Large to mid-sized jurisdictions/older & newer properties/less active markets	5.0 to 20.0
	Rural or small jurisdictions/older properties/depressed market areas	5.0 to 25.0
Residential vacant land	Very large jurisdictions/rapid development/active markets	5.0 to 15.0
	Large to mid-sized jurisdictions/slow development/less active markets	5.0 to 20.0
	Rural or small jurisdictions/little development/depressed markets	5.0 to 25.0
Other (non-agriculture) vacant land	Very large jurisdictions/rapid development/active markets	5.0 to 20.0
	Large to mid-sized jurisdictions/slow development/less active markets	5.0 to 25.0
	Rural or small jurisdictions/little development/depressed markets	5.0 to 30.0

IAAO states that “CODs lower than five (5.0) may indicate sales chasing or non-representative samples.” The above chart and quote are from the April 2013 volume of IAAO Standards on Ratio Studies pages 33-37. Although the goal is to assess ‘all’ properties at 100 percent of market value, IAAO believes that due to the many factors of a real estate transaction, it is improbable that assessed values will be within the tight range of the sales price needed to achieve a COD of less than five. IAAO therefore, believes a COD of less than five could be a result of the selective reappraisal of sold properties.

The PRD is a measure of the vertical uniformity of the assessment of properties at different price levels. PRD is a statistic used to measure whether high-value properties and low-value properties are assessed at the same ratio to market value. The PRD is calculated by dividing the mean ratio by the weighted mean ratio. A PRD of 1.00 indicates uniform assessment between high and low value properties. A PRD greater than 1.00 indicates that higher valued properties are assessed at a lower ratio to market than lower valued properties. A PRD of less than 1.00 indicates that lower valued properties are assessed at a lower ratio to market than higher valued properties. IAAO suggests the PRD should fall between .98 and 1.03.

The sum of the sales price and a sum of the assessed value has been included in this report for informational purposes. The number of observations (number of sales) are shown in this report and should be considered when reviewing the statistical measure. The number of observations can help determine the reliability of the results, as the greater the number of observations the less influence a single outlier will have on the results.

On the pages that follow are each county’s results for the above mentioned measures. First are the overall county wide results including all property types. This is followed by each county’s results broken down by four general property types, and then each county’s results broken down by single family residential (residential) and all other property types (non-residential).

Statistics by County

	Frequency	Adj Sale Price	Assessed	Ratio	Weighted Mean	Ratio		
County	N	SUM	SUM	MEAN	MEAN	Median	PRD	COD
Adams	190	\$24,746,188	\$23,437,800	97.16	94.71	95.27	1.03	16.62
Asotin	369	\$62,977,903	\$61,837,455	101.27	98.19	96.20	1.03	17.61
Benton	3497	\$840,721,394	\$779,597,410	94.60	92.73	93.74	1.02	8.44
Chelan	1476	\$396,827,236	\$342,625,836	88.25	86.34	89.07	1.02	14.87
Clallam	1237	\$281,167,756	\$260,388,617	95.07	92.61	93.91	1.03	13.79
Clark	7264	\$2,186,351,557	\$2,123,546,375	98.90	97.13	97.73	1.02	9.31
Columbia	67	\$8,542,192	\$8,566,730	101.09	100.29	100.56	1.01	3.23
Cowlitz	1741	\$415,469,168	\$396,395,970	95.55	95.41	93.34	1.00	15.51
Douglas	685	\$150,269,838	\$137,557,000	94.05	91.54	91.54	1.03	14.16
Ferry	163	\$13,542,582	\$14,445,200	122.04	106.67	107.78	1.14	33.16
Franklin	1195	\$244,947,359	\$218,345,900	92.01	89.14	92.22	1.03	9.21
Garfield	50	\$5,071,324	\$4,973,151	99.95	98.06	99.75	1.02	9.73
Grant	1114	\$193,350,176	\$168,759,155	91.33	87.28	91.75	1.05	12.40
Grays Harbor	1019	\$128,297,014	\$123,753,500	97.73	96.46	97.40	1.01	15.42
Island	1471	\$459,955,198	\$449,211,197	98.73	97.66	98.23	1.01	8.38
Jefferson	690	\$172,840,238	\$162,958,140	95.89	94.28	96.36	1.02	9.21
King	7460	\$4,978,923,136	\$4,588,173,241	97.31	92.15	96.60	1.06	11.36
Kitsap	3811	\$1,215,036,079	\$1,085,453,028	91.47	89.34	90.24	1.02	11.51
Kittitas	1053	\$268,126,851	\$227,443,920	89.80	84.83	87.10	1.06	17.23
Klickitat	370	\$64,896,427	\$57,759,420	93.22	89.00	93.87	1.05	14.48
Lewis	992	\$149,726,422	\$140,758,000	99.72	94.01	95.07	1.06	19.77
Lincoln	242	\$26,446,691	\$21,247,120	81.96	80.34	81.15	1.02	24.42
Mason	1007	\$188,035,943	\$185,824,415	103.31	98.82	101.02	1.05	17.63
Okanogan	738	\$104,101,761	\$94,294,300	92.88	90.58	92.02	1.03	21.05
Pacific	596	\$76,877,232	\$71,044,500	96.74	92.41	95.06	1.05	16.30
Pend Oreille	307	\$43,352,544	\$40,888,425	100.82	94.32	97.47	1.07	20.49
Pierce	10512	\$3,255,091,606	\$2,922,201,900	91.66	89.77	90.81	1.02	8.99
San Juan	321	\$146,238,487	\$133,302,740	94.81	91.15	93.97	1.04	13.08
Skagit	1977	\$553,454,998	\$510,055,462	94.70	92.16	93.87	1.03	11.49
Skamania	175	\$35,582,066	\$32,114,400	96.82	90.25	93.02	1.07	16.92
Snohomish	11723	\$4,402,839,049	\$4,175,956,200	96.15	94.85	95.91	1.01	7.96
Spokane	6381	\$1,395,404,429	\$1,328,439,470	96.20	95.20	95.53	1.01	6.03
Stevens	643	\$108,496,652	\$100,952,720	98.64	93.05	95.49	1.06	16.95
Thurston	3429	\$991,947,902	\$944,013,450	96.41	95.17	95.62	1.01	9.21
Wahkiakum	63	\$9,523,618	\$9,053,100	96.73	95.06	94.46	1.02	18.18
Walla Walla	815	\$179,965,041	\$171,580,870	96.84	95.34	97.76	1.02	5.81
Whatcom	3873	\$1,137,170,359	\$983,121,416	87.82	86.45	86.86	1.02	11.94
Whitman	525	\$147,302,498	\$110,182,715	87.00	74.80	90.12	1.16	17.89
Yakima	2438	\$503,568,385	\$458,893,200	92.16	91.13	91.15	1.01	12.67
Total	81679	\$25,567,185,299	\$23,669,153,448	94.89	92.61	94.32		

Statistics by County by Property Type

	Frequency	Adj. Sale Price	Assessed	Ratio	Ratio		
Property Type	N	SUM	SUM	MEAN	Median	PRD	COD
County = Adams							
Ag/Other	20	\$1,109,644	\$1,026,100	81.78	81.99	0.88	33.25
Comm/Mfg	11	\$1,311,750	\$1,313,200	131.23	97.33	1.31	50.68
Multi Family	1	\$178,200	\$203,300	114.09	114.09	1.00	0.00
SFR	158	\$22,146,594	\$20,895,200	96.62	95.27	1.02	12.32
	190	\$24,746,188	\$23,437,800	97.16	95.27		
County = Asotin							
Ag/Other	24	\$2,061,550	\$1,574,895	97.91	101.87	1.28	25.49
Comm/Mfg	8	\$1,284,030	\$1,030,600	91.18	84.82	1.14	34.12
Multi Family	7	\$1,107,959	\$1,163,700	105.49	104.60	1.00	6.34
SFR	330	\$58,524,364	\$58,068,260	101.67	96.09	1.02	16.76
	369	\$62,977,903	\$61,837,455	101.27	96.20		
County = Benton							
Ag/Other	24	\$6,649,033	\$5,085,810	99.07	96.00	1.30	19.03
Comm/Mfg	91	\$83,123,457	\$70,510,800	94.18	98.17	1.11	20.69
Multi Family	81	\$41,418,151	\$42,437,550	98.94	95.45	0.97	8.41
SFR	3301	\$709,530,753	\$661,563,250	94.48	93.68	1.01	7.97
	3497	\$840,721,394	\$779,597,410	94.60	93.74		
County = Chelan							
Ag/Other	43	\$8,944,340	\$8,129,345	94.96	93.47	1.04	21.57
Comm/Mfg	49	\$29,673,750	\$24,065,961	81.24	84.09	1.00	21.12
Multi Family	31	\$8,213,939	\$7,376,566	87.13	88.65	0.97	12.91
SFR	1353	\$349,995,207	\$303,053,964	88.32	89.18	1.02	14.42
	1476	\$396,827,236	\$342,625,836	88.25	89.07		
County = Clallam							
Ag/Other	190	\$15,816,022	\$15,586,717	101.88	98.26	1.03	18.83
Comm/Mfg	31	\$27,911,978	\$25,753,247	89.71	90.77	0.97	15.70
Multi Family	18	\$6,889,806	\$6,455,546	95.45	98.23	1.02	10.68
SFR	998	\$230,549,950	\$212,593,107	93.94	93.04	1.02	12.63
	1237	\$281,167,756	\$260,388,617	95.07	93.91		
County = Clark							
Ag/Other	274	\$52,357,375	\$46,047,232	95.92	94.32	1.09	20.24
Comm/Mfg	104	\$161,400,088	\$142,581,331	91.32	93.24	1.03	19.12
Multi Family	124	\$61,486,698	\$57,790,107	99.19	97.68	1.06	9.27
SFR	6762	\$1,911,107,396	\$1,877,127,705	99.14	97.80	1.01	8.74
	7264	\$2,186,351,557	\$2,123,546,375	98.9	97.73		
SFR = single family residential							

	Frequency	Adj. Sale Price	Assessed	Ratio	Ratio		
Property Type	N	SUM	SUM	MEAN	Median	PRD	COD
County = Columbia							
Ag/Other	4	\$380,160	\$393,300	104.29	101.94	1.01	3.97
Comm/Mfg	4	\$646,016	\$660,810	102.58	100.44	1.00	2.47
Multi Family	1	\$274,725	\$273,250	99.46	99.46	1.00	0.00
SFR	58	\$7,241,291	\$7,239,370	100.80	100.55	1.01	3.22
	67	\$8,542,192	\$8,566,730	101.09	100.56		
County = Cowlitz							
Ag/Other	158	\$18,786,381	\$17,901,230	103.88	99.60	1.09	21.81
Comm/Mfg	53	\$114,282,858	\$119,985,640	92.55	96.66	0.88	20.73
Multi Family	51	\$14,480,762	\$12,651,750	87.13	87.04	1.00	16.13
SFR	1479	\$267,919,167	\$245,857,350	95.06	92.93	1.04	14.37
	1741	\$415,469,168	\$396,695,970	95.55	93.34		
County = Douglas							
Ag/Other	144	\$15,363,416	\$12,392,100	94.91	87.66	1.18	24.59
Comm/Mfg	11	\$2,568,456	\$2,368,400	102.14	93.21	1.11	17.84
Multi Family	8	\$2,511,779	\$2,463,500	96.88	90.85	0.99	14.00
SFR	522	\$129,826,187	\$120,333,000	93.61	91.80	1.01	11.39
	714	\$145,620,997	\$131,516,800	92.99	90.98		
County = Ferry							
Ag/Other	79	\$2,296,802	\$2,535,000	123.85	113.44	1.12	30.64
Comm/Mfg	7	\$1,939,397	\$2,181,000	105.96	106.57	0.94	23.87
SFR	77	\$9,306,383	\$9,729,200	121.63	100.42	1.16	36.45
	161	\$14,090,585	\$15,002,100	111.82	102.43		
County = Franklin							
Ag/Other	91	\$14,657,720	\$11,907,200	81.20	80.16	1.00	23.82
Comm/Mfg	34	\$26,969,580	\$17,984,600	80.78	76.09	1.21	23.78
Multi Family	11	\$2,614,986	\$2,255,100	87.13	90.88	1.01	9.52
SFR	1059	\$200,705,073	\$186,199,000	93.35	92.83	1.01	7.55
	1195	\$244,947,359	\$218,345,900	92.01	92.22		
County = Garfield							
Ag/Other	2	\$102,000	\$82,361	82.47	82.47	1.02	6.67
Comm/Mfg	2	\$139,100	\$131,329	97.06	97.06	1.03	2.99
Multi Family	2	\$200,900	\$184,538	92.55	92.55	1.01	8.86
SFR	44	\$4,629,324	\$4,574,923	101.21	100.31	1.02	9.69
	50	\$5,071,324	\$4,973,151	99.95	99.75		

	Frequency	Adj. Sale Price	Assessed	Ratio	Ratio		
Property Type	N	SUM	SUM	MEAN	Median	PRD	COD
County = Grant							
Ag/Other	31	\$6,640,692	\$4,595,695	90.60	86.65	1.31	26.38
Comm/Mfg	62	\$23,317,441	\$16,509,865	87.64	89.83	1.24	22.90
Multi Family	16	\$2,339,113	\$1,895,050	84.44	89.56	1.04	16.82
SFR	1005	\$161,052,930	\$145,758,545	91.69	91.85	1.01	11.30
	1114	\$193,350,176	\$168,759,155	91.33	91.75		
County = Grays Harbor							
Ag/Other	42	\$2,176,020	\$1,901,775	91.45	98.77	1.05	19.52
Comm/Mfg	51	\$7,805,116	\$7,666,909	101.24	101.01	1.03	16.19
Multi Family	5	\$479,655	\$507,282	106.96	100.89	1.01	9.56
SFR	921	\$117,836,223	\$113,677,534	97.78	96.97	1.01	15.17
	1019	\$128,297,014	\$123,753,500	97.73	97.40		
County = Island							
Ag/Other	118	\$12,696,895	\$12,528,707	102.00	101.01	1.03	11.01
Comm/Mfg	17	\$8,862,901	\$7,616,202	93.36	92.01	1.09	11.48
Multi Family	33	\$9,473,534	\$8,969,238	96.08	97.71	1.01	6.37
SFR	1303	\$428,921,868	\$420,097,050	98.57	98.20	1.01	8.08
	1471	\$459,955,198	\$449,211,197	98.73	98.23		
County = Jefferson							
Ag/Other	111	\$8,904,434	\$8,584,275	97.87	98.68	1.02	12.57
Comm/Mfg	11	\$1,309,275	\$1,315,328	97.48	99.40	0.97	7.71
Multi Family	3	\$689,288	\$627,202	88.09	89.69	0.97	5.62
SFR	565	\$161,937,241	\$152,431,335	95.51	96.15	1.01	8.47
	690	\$172,840,238	\$162,958,140	95.89	96.36		
County = King							
Ag/Other	630	\$289,342,673	\$265,425,331	99.38	99.22	1.08	20.26
Comm/Mfg	430	\$1,095,892,201	\$896,170,743	90.84	92.36	1.11	16.52
Multi Fam	2709	\$1,803,555,520	\$1,707,799,272	97.76	96.97	1.03	10.10
SFR	3691	\$1,790,132,742	\$1,718,777,895	97.39	96.42	1.01	10.07
	7460	\$4,978,923,136	\$4,588,173,241	97.31	96.60		
County = Kitsap							
Ag/Other	216	\$28,901,729	\$24,187,910	94.57	93.11	1.13	23.32
Comm/Mfg	66	\$51,713,581	\$42,617,090	89.05	89.78	1.08	21.99
Multi Family	56	\$15,391,952	\$14,129,620	94.23	91.91	1.03	16.65
SFR	3473	\$1,119,028,817	\$1,004,518,408	91.28	90.2	1.02	10.44
	3811	\$1,215,036,079	\$1,085,453,028	91.47	90.24		

	Frequency	Adj. Sale Price	Assessed	Ratio	Ratio		
Property Type	N	SUM	SUM	MEAN	Median	PRD	COD
County = Kittitas							
Ag/Other	244	\$31,248,778	\$25,331,760	89.88	87.01	1.11	26.06
Comm/Mfg	22	\$18,037,105	\$16,446,420	94.46	91.26	1.04	19.06
Multi Family	7	\$3,132,855	\$2,778,730	89.15	87.40	1.01	7.27
SFR	780	\$215,708,113	\$182,887,010	89.65	87.10	1.06	14.48
	1053	\$268,126,851	\$227,443,920	89.80	87.10		
County = Klickitat							
Ag/Other	110	\$10,872,805	\$8,539,050	90.61	92.74	1.15	18.18
Comm/Mfg	12	\$2,915,303	\$2,622,310	96.51	93.68	1.07	18.73
Multi Family	2	\$485,100	\$470,700	97.06	97.06	1.00	0.23
SFR	246	\$50,623,219	\$46,127,360	94.19	94.06	1.03	12.76
	370	\$64,896,427	\$57,759,420	93.22	93.87		
County = Lewis							
Ag/Other	136	\$15,954,187	\$14,567,100	102.97	96.23	1.13	31.92
Comm/Mfg	22	\$3,717,874	\$3,437,900	103.36	96.27	1.12	20.76
Multi Family	18	\$3,503,495	\$3,515,700	103.96	100.04	1.04	17.77
SFR	816	\$126,550,866	\$119,237,300	98.99	94.95	1.05	17.66
	992	\$149,726,422	\$140,758,000	99.72	95.07		
County = Lincoln							
Ag/Other	63	\$7,303,426	\$5,569,740	77.82	77.03	1.02	24.81
Comm/Mfg	10	\$955,349	\$772,000	86.74	87.71	1.07	31.65
Multi Family	1	\$173,250	\$80,000	46.18	46.18	1.00	0.00
SFR	168	\$18,014,666	\$14,825,380	83.45	83.81	1.01	23.15
	242	\$26,446,691	\$21,247,120	81.96	81.15		
County = Mason							
Ag/Other	171	\$10,268,939	\$10,316,975	108.69	109.63	1.08	24.47
Comm/Mfg	19	\$12,438,360	\$10,561,595	97.36	96.27	1.15	20.53
Multi Family	7	\$781,605	\$906,055	114.18	119.4	0.98	12.11
SFR	810	\$164,547,039	\$164,039,790	102.22	100.21	1.03	15.68
	1007	\$188,035,943	\$185,824,415	103.31	101.02		
County = Okanogan							
Ag/Other	254	\$20,662,017	\$18,091,100	90.40	91.36	1.03	26.08
Comm/Mfg	31	\$7,461,448	\$6,840,600	98.58	96.84	1.08	20.27
Multi Family	8	\$1,100,138	\$1,016,800	98.68	95.67	1.07	18.55
SFR	445	\$74,878,158	\$68,345,800	93.79	91.63	1.03	18.32
	738	\$104,101,761	\$94,294,300	92.88	92.02		

	Frequency	Adj. Sale Price	Assessed	Ratio	Ratio		
Property Type	N	SUM	SUM	MEAN	Median	PRD	COD
County = Pacific							
Ag/Other	81	\$3,496,713	\$3,330,300	99.64	97.03	1.05	17.88
Comm/Mfg	30	\$8,854,437	\$7,527,000	101.03	103.35	1.19	26.11
Multi Family	6	\$907,605	\$895,800	100.34	99.37	1.02	4.13
SFR	479	\$63,618,477	\$59,291,400	95.93	94.33	1.03	15.32
	596	\$76,877,232	\$71,044,500	96.74	95.06		
County = Pend Oreille							
Ag/Other	87	\$5,682,455	\$5,605,564	104.92	101.01	1.06	25.38
Comm/Mfg	16	\$2,847,066	\$2,458,546	94.10	95.57	1.09	15.91
Multi Family	5	\$796,610	\$845,242	106.96	101.15	1.01	6.51
SFR	199	\$34,026,413	\$31,979,073	99.41	95.75	1.06	18.82
	307	\$43,352,544	\$40,888,425	100.82	97.47		
County = Pierce							
Ag/Other	367	\$56,496,841	\$49,647,300	94.08	91.67	1.07	19.72
Comm/Mfg	165	\$253,920,970	\$211,539,200	92.98	92.47	1.12	18.19
Multi Family	221	\$203,843,283	\$174,754,500	93.06	92.21	1.09	10.06
SFR	9759	\$2,740,830,512	\$2,486,260,900	91.51	90.75	1.01	8.39
	10512	\$3,255,091,606	\$2,922,201,900	91.66	90.81		
County = San Juan							
Ag/Other	22	\$4,922,181	\$4,742,300	99.14	98.89	1.03	10.90
Comm/Mfg	11	\$5,115,825	\$4,799,420	93.30	90.96	0.99	16.33
Multi Family	1	\$326,700	\$334,980	102.53	102.53	1.00	0.00
SFR	287	\$135,873,781	\$123,426,040	94.51	93.84	1.04	13.07
	321	\$146,238,487	\$133,302,740	94.81	93.97		
County = Skagit							
Ag/Other	21	\$3,479,380	\$3,460,300	105.36	104.62	1.06	19.24
Comm/Mfg	88	\$47,359,694	\$41,498,362	94.73	94.40	1.08	13.46
Multi Fam	29	\$8,101,269	\$7,274,600	91.42	90.15	1.02	12.13
SFR	1839	\$494,514,655	\$457,822,200	94.63	93.78	1.02	11.23
	1977	\$553,454,998	\$510,055,462	94.70	93.87		
County = Skamania							
Ag/Other	35	\$2,855,358	\$3,020,000	110.41	107.92	1.04	20.22
Comm/Mfg	13	\$2,612,320	\$2,587,600	99.27	94.44	1.00	9.41
Multi Family	1	\$190,000	\$195,000	102.63	102.63	1.00	0.00
SFR	126	\$29,924,388	\$26,311,800	92.74	90.53	1.05	14.84
	175	\$35,582,066	\$32,114,400	96.82	93.02		

	Frequency	Adj. Sale Price	Assessed	Ratio	Ratio		
Property Type	N	SUM	SUM	MEAN	Median	PRD	COD
County = Snohomish							
Ag/Other	287	\$98,991,361	\$80,481,700	86.18	83.07	1.06	28.13
Comm/Mfg	154	\$257,258,168	\$223,421,500	92.36	93.96	1.06	13.97
Multi Family	208	\$163,839,938	\$152,443,900	95.58	94.01	1.03	10.31
SFR	11074	\$3,882,749,582	\$3,719,609,100	96.48	95.99	1.01	7.34
	11723	\$4,402,839,049	\$4,175,956,200	96.15	95.91		
County = Spokane							
Ag/Other	502	\$102,777,320	\$95,710,190	97.45	96.97	1.05	12.31
Comm/Mfg	151	\$93,157,057	\$87,984,080	95.52	96.23	1.01	7.38
Multi Family	197	\$51,753,411	\$49,727,000	98.15	97.16	1.02	7.93
SFR	5531	\$1,147,716,641	\$1,095,018,200	96.04	95.39	1.01	5.33
	6381	\$1,395,404,429	\$1,328,439,470	96.20	95.53		
County = Stevens							
Ag/Other	109	\$5,959,683	\$5,539,542	103.81	100.82	1.12	20.39
Comm/Mfg	23	\$6,834,785	\$6,504,187	106.71	102.10	1.12	16.86
Multi Family	6	\$1,953,765	\$1,804,385	94.00	93.05	1.02	10.82
SFR	505	\$93,748,419	\$87,104,606	97.22	94.23	1.05	15.91
	643	\$108,496,652	\$100,952,720	98.64	95.49		
County = Thurston							
Ag/Other	122	\$12,401,142	\$12,016,150	100.43	98.08	1.04	19.79
Comm/Mfg	58	\$98,596,645	\$86,891,900	95.53	94.68	1.08	15.73
Multi Family	50	\$26,322,252	\$24,636,750	89.92	89.81	0.96	12.49
SFR	3199	\$854,627,863	\$820,468,650	96.38	95.67	1.00	8.60
	3429	\$991,947,902	\$944,013,450	96.41	95.62		
County = Wahkiakum							
Ag/Other	23	\$1,826,475	\$1,782,800	98.58	96.81	1.01	21.71
Comm/Mfg	1	\$162,000	\$196,000	120.99	120.99	1.00	0.00
Multi Family	3	\$500,500	\$438,000	86.72	83.54	0.99	13.04
SFR	36	\$7,034,643	\$6,636,300	95.70	93.04	1.01	15.65
	63	\$9,523,618	\$9,053,100	96.73	94.46		
County = Walla Walla							
Ag/Other	61	\$10,079,896	\$7,780,880	89.82	87.34	1.16	18.18
Comm/Mfg	15	\$12,475,009	\$11,343,220	95.01	98.98	1.04	13.26
Multi Family	11	\$2,426,755	\$2,154,830	97.18	96.18	1.09	16.70
SFR	728	\$154,983,381	\$150,301,940	97.46	97.82	1.00	4.52
	815	\$179,965,041	\$171,580,870	96.84	97.76		

	Frequency	Adj. Sale Price	Assessed	Ratio	Ratio		
Property Type	N	SUM	SUM	MEAN	Median	PRD	COD
County = Whatcom							
Ag/Other	381	\$64,151,412	\$54,995,669	89.35	87.98	1.04	19.17
Comm/Mfg	110	\$62,614,295	\$53,667,729	90.56	87.98	1.06	17.15
Multi Family	76	\$38,316,610	\$31,134,901	87.30	86.67	1.07	10.70
SFR	3306	\$972,088,042	\$843,323,117	87.56	86.79	1.01	10.93
	3873	\$1,137,170,359	\$983,121,416	87.82	86.86		
County = Whitman							
Ag/Other	5	\$1,684,931	\$1,237,248	76.00	79.62	1.04	19.79
Comm/Mfg	15	\$2,832,786	\$1,521,115	76.07	69.89	1.42	40.62
Multi Family	32	\$48,367,787	\$26,031,135	84.57	88.74	1.57	12.87
SFR	473	\$94,416,994	\$81,393,217	87.63	90.39	1.02	17.64
	525	\$147,302,498	\$110,182,715	87.00	90.12		
County = Yakima							
Ag/Other	240	\$35,810,135	\$31,596,300	86.76	86.55	0.98	26.52
Comm/Mfg	131	\$84,460,107	\$76,267,550	93.59	92.18	1.04	15.09
Multi Family	81	\$16,224,630	\$13,712,700	85.85	85.54	1.02	11.96
SFR	1986	\$367,073,513	\$337,316,650	92.98	91.37	1.01	10.93
	2438	\$503,568,385	\$458,893,200	92.16	91.15		
State Total	81498	\$25,437,668,639	\$23,538,636,838	94.94			

Statistics by County by Residential and Non-Residential

Property Class	Frequency (N)	Adj. Sale Price	Assessed	Weighted	Ratio	PRD	COD
		SUM	SUM	MEAN	Median		
County = Adams							
Non-Residential	32	\$2,599,594	\$2,542,600	99.79	94.41	1.02	38.22
Residential	158	\$22,146,594	\$20,895,200	96.62	95.27	1.02	12.32
	190	\$24,746,188	\$23,437,800	97.16	95.27		
County = Asotin							
Non-Residential	39	\$4,453,539	\$3,769,195	97.89	102.72	1.16	22.97
Residential	330	\$58,524,364	\$58,068,260	101.67	96.09	1.02	16.76
	369	\$62,977,903	\$61,837,455	101.27	96.09		
County = Benton							
Non-Residential	196	\$131,190,641	\$118,034,160	96.75	96.36	1.08	15.65
Residential	3301	\$709,530,753	\$661,563,250	94.48	93.68	1.01	7.97
	3497	\$840,721,394	\$779,597,410	94.6	93.68		
County = Chelan							
Non-Residential	123	\$46,832,029	\$39,571,872	87.52	87.80	1.04	19.79
Residential	1353	\$349,995,207	\$303,053,964	88.32	89.18	1.02	14.42
	1476	\$396,827,236	\$342,625,836	88.25	89.18		
County = Clallam							
Non-Residential	239	\$50,617,806	\$47,795,510	99.81	97.78	1.06	17.86
Residential	998	\$230,549,950	\$212,593,107	93.94	93.04	1.02	12.63
	1237	\$281,167,756	\$260,388,617	95.07	93.04		
County = Clark							
Non-Residential	502	\$275,244,161	\$246,418,670	95.78	95.63	1.07	17.22
Residential	6762	\$1,911,107,396	\$1,877,127,705	99.14	97.80	1.01	8.74
	7264	\$2,186,351,557	\$2,123,546,375	98.90	97.80		
County = Columbia							
Non-Residential	9	\$1,300,901	\$1,327,360	102.99	100.63	1.01	3.30
Residential	58	\$7,241,291	\$7,239,370	100.80	100.55	1.01	3.22
	67	\$8,542,192	\$8,566,730	101.09	100.55		
County = Cowlitz							
Non-Residential	262	\$147,550,001	\$150,538,620	98.33	96.68	0.96	21.20
Residential	1479	\$267,919,167	\$245,857,350	95.06	92.93	1.04	14.37
	1741	\$415,469,168	\$396,395,970	95.55	92.93		
County = Douglas							
Non-Residential	163	\$20,443,651	\$17,224,000	95.49	88.61	1.13	23.49
Residential	522	\$129,826,187	\$120,333,000	93.61	91.80	1.01	11.39
	685	\$150,269,838	\$137,557,000	94.05	91.80		

		Adj. Sale Price	Assessed	Weighted	Ratio		
Property Class	Frequency (N)	SUM	SUM	MEAN	Median	PRD	COD
County = Ferry							
Non-Residential	86	\$4,236,199	\$4,716,000	122.40	113.05	1.10	30.15
Residential	77	\$9,306,383	\$9,729,200	121.63	100.42	1.16	36.45
	163	\$13,542,582	\$14,445,200	122.04	113.05		
County = Franklin							
Non-Residential	136	\$44,242,286	\$32,146,900	81.58	80.50	1.12	22.61
Residential	1059	\$200,705,073	\$186,199,000	93.35	92.83	1.01	7.55
	1195	\$244,947,359	\$218,345,900	92.01	92.83		
County = Garfield							
Non-Residential	6	\$442,000	\$398,228	90.69	91.07	1.01	8.34
Residential	44	\$4,629,324	\$4,574,923	101.21	100.31	1.02	9.69
	50	\$5,071,324	\$4,973,151	99.95	100.31		
County = Grant							
Non-Residential	109	\$32,297,246	\$23,000,610	88.01	89.52	1.24	22.83
Residential	1005	\$161,052,930	\$145,758,545	91.69	91.85	1.01	11.30
	1114	\$193,350,176	\$168,759,155	91.33	91.85		
County = Grays Harbor							
Non-Residential	98	\$10,460,791	\$10,075,966	97.33	101.01	1.01	17.1
Residential	921	\$117,836,223	\$113,677,534	97.78	96.97	1.01	15.17
	1019	\$128,297,014	\$123,753,500	97.73	96.97		
County = Island							
Non-Residential	168	\$31,033,330	\$29,114,147	99.96	99.61	1.07	10.59
Residential	1303	\$428,921,868	\$420,097,050	98.57	98.20	1.01	8.08
	1471	\$459,955,198	\$449,211,197	98.73	98.20		
County = Jefferson							
Non-Residential	125	\$10,902,997	\$10,526,805	97.60	98.68	1.01	12.11
Residential	565	\$161,937,241	\$152,431,335	95.51	96.15	1.01	8.47
	690	\$172,840,238	\$162,958,140	95.89	96.15		
County = King							
Non-Residential	3769	\$3,188,790,394	\$2,869,395,346	97.24	96.79	1.08	12.62
Residential	3691	\$1,790,132,742	\$1,718,777,895	97.39	96.42	1.01	10.07
	7460	\$4,978,923,136	\$4,588,173,241	97.31	96.79		
County = Kitsap							
Non-Residential	338	\$96,007,262	\$80,934,620	93.44	91.31	1.11	22.22
Residential	3473	\$1,119,028,817	\$1,004,518,408	91.28	90.20	1.02	10.44
	3811	\$1,215,036,079	\$1,085,453,028	91.47	90.20		

		Adj. Sale Price	Assessed	Weighted	Ratio		
Property Class	Frequency (N)	SUM	SUM	MEAN	Median	PRD	COD
County = Kittitas							
Non-Residential	273	\$52,418,738	\$44,556,910	90.23	87.23	1.06	25.06
Residential	780	\$215,708,113	\$182,887,010	89.65	87.10	1.06	14.48
	1053	\$268,126,851	\$227,443,920	89.80	87.10		
County = Klickitat							
Non-Residential	124	\$14,273,208	\$11,632,060	91.29	93.26	1.12	17.93
Residential	246	\$50,623,219	\$46,127,360	94.19	94.06	1.03	12.76
	370	\$64,896,427	\$57,759,420	93.22	94.06		
County = Lewis							
Non-Residential	176	\$23,175,556	\$21,520,700	103.12	97.05	1.11	28.95
Residential	816	\$126,550,866	\$119,237,300	98.99	94.95	1.05	17.66
	992	\$149,726,422	\$140,758,000	99.72	94.95		
County = Lincoln							
Non-Residential	74	\$8,432,025	\$6,421,740	78.60	78.57	1.03	26.12
Residential	168	\$18,014,666	\$14,825,380	83.45	83.81	1.01	23.15
	242	\$26,446,691	\$21,247,120	81.96	83.81		
County = Mason							
Non-Residential	197	\$23,488,904	\$21,784,625	107.79	105.82	1.16	24.60
Residential	810	\$164,547,039	\$164,039,790	102.22	100.21	1.03	15.68
	1007	\$188,035,943	\$185,824,415	103.31	100.21		
County = Okanogan							
Non-Residential	293	\$29,223,603	\$25,948,500	91.49	92.35	1.03	25.22
Residential	445	\$74,878,158	\$68,345,800	93.79	91.63	1.03	18.32
	738	\$104,101,761	\$94,294,300	92.88	91.63		
County = Pacific							
Non-Residential	117	\$13,258,755	\$11,753,100	100.03	98.39	1.13	19.62
Residential	479	\$63,618,477	\$59,291,400	95.93	94.33	1.03	15.32
	596	\$76,877,232	\$71,044,500	96.74	94.33		
County = Pend Oreille							
Non-Residential	108	\$9,326,131	\$8,909,352	103.41	100.41	1.08	23.31
Residential	199	\$34,026,413	\$31,979,073	99.41	95.75	1.06	18.82
	307	\$43,352,544	\$40,888,425	100.82	95.75		
County = Pierce							
Non-Residential	753	\$514,261,094	\$435,941,000	93.54	92.01	1.10	16.55
Residential	9759	\$2,740,830,512	\$2,486,260,900	91.51	90.75	1.01	8.39
	10512	\$3,255,091,606	\$2,922,201,900	91.66	90.75		

		Adj. Sale Price	Assessed	Weighted	Ratio		
Property Class	Frequency (N)	SUM	SUM	MEAN	Median	PRD	COD
County = San Juan							
Non-Residential	34	\$10,364,706	\$9,876,700	97.35	98.89	1.02	12.25
Residential	287	\$135,873,781	\$123,426,040	94.51	93.84	1.04	13.07
	321	\$146,238,487	\$133,302,740	94.81	93.84		
County = Skagit							
Non-Residential	138	\$58,940,343	\$52,233,262	95.65	95.00	1.08	14.89
Residential	1839	\$494,514,655	\$457,822,200	94.63	93.78	1.02	11.23
	1977	\$553,454,998	\$510,055,462	94.70	93.78		
County = Skamania							
Non-Residential	49	\$5,657,678	\$5,802,600	107.30	102.5	1.05	18.26
Residential	126	\$29,924,388	\$26,311,800	92.74	90.53	1.05	14.84
	175	\$35,582,066	\$32,114,400	96.82	90.53		
County = Snohomish							
Non-Residential	649	\$520,089,467	\$456,347,100	90.66	91.53	1.03	18.72
Residential	11074	\$3,882,749,582	\$3,719,609,100	96.48	95.99	1.01	7.34
	11723	\$4,402,839,049	\$4,175,956,200	96.15	95.99		
County = Spokane							
Non-Residential	850	\$247,687,788	\$233,421,270	97.27	96.68	1.03	10.45
Residential	5531	\$1,147,716,641	\$1,095,018,200	96.04	95.39	1.01	5.33
	6381	\$1,395,404,429	\$1,328,439,470	96.20	95.39		
County = Stevens							
Non-Residential	138	\$14,748,233	\$13,848,114	103.87	100.78	1.11	19.53
Residential	505	\$93,748,419	\$87,104,606	97.22	94.23	1.05	15.91
	643	\$108,496,652	\$100,952,720	98.64	94.23		
County = Thurston							
Non-Residential	230	\$137,320,039	\$123,544,800	96.91	94.09	1.08	17.90
Residential	3199	\$854,627,863	\$820,468,650	96.38	95.67	1.00	8.60
	3429	\$991,947,902	\$944,013,450	96.41	95.67		
County = Wahkiakum							
Non-Residential	27	\$2,488,975	\$2,416,800	98.09	96.81	1.01	21.17
Residential	36	\$7,034,643	\$6,636,300	95.70	93.04	1.01	15.65
	63	\$9,523,618	\$9,053,100	96.73	93.04		
County = Walla Walla							
Non-Residential	87	\$24,981,660	\$21,278,930	91.65	92.22	1.08	17.23
Residential	728	\$154,983,381	\$150,301,940	97.46	97.82	1.00	4.52
	815	\$179,965,041	\$171,580,870	96.84	97.82		

		Adj. Sale Price	Assessed	Weighted	Ratio		
Property Class	Frequency (N)	SUM	SUM	MEAN	Median	PRD	COD
County = Whatcom							
Non-Residential	567	\$165,082,317	\$139,798,299	89.31	87.80	1.05	17.67
Residential	3306	\$972,088,042	\$843,323,117	87.56	86.79	1.01	10.93
	3873	\$1,137,170,359	\$983,121,416	87.82	86.79		
County = Whitman							
Non-Residential	52	\$52,885,504	\$28,789,498	81.29	87.36	1.49	20.01
Residential	473	\$94,416,994	\$81,393,217	87.63	90.39	1.02	17.64
	525	\$147,302,498	\$110,182,715	87.00	90.39		
County = Yakima							
Non-Residential	452	\$136,494,872	\$121,576,550	88.57	88.69	0.99	20.62
Residential	1986	\$367,073,513	\$337,316,650	92.98	91.37	1.01	10.93
	2438	\$503,568,385	\$458,893,200	92.16	91.37		
Total	81679	\$25,567,185,299	\$23,669,153,448				

Like the PRD; QMR and VEI are means of looking at vertical uniformity. QMR is calculated by first arraying the data in order (lowest to highest) by market value. Then the data is divided in to five equal groups (quintiles). Then, an average ratio is calculated for each quintile. Looking at the ratio for each quintile, you can visually see if there is a difference in the ratio of each value range. The closer these quintile ratios are, the better the vertical equity.

VEI is a method of scoring the QMR results. Noted assessment expert, J. Wayne Moore proposed computing a VEI using quintile ratios as Dr. Moore believes “VEI may be more sensitive to differences in vertical equity than the PRD.” The VEI is calculated by subtracting the lowest quintile ratio from the highest quintile ratio. Then, the results are divided by the average of all five quintile ratios and the results are multiplied by 100.

$$((\text{Maximum Quintile Ratio} - \text{Minimum Quintile Ratio}) / \text{Avg. Quintile Ratio}) * 100$$

As a guideline, VEI values above 14.0 indicate vertical inequity; values between 14.0 and 7.0 indicate acceptable vertical equity; values below 7.0 indicate good vertical equity, with those below 3.5 indicating excellent vertical equity¹.

The following tables show the QMR and VEI for residential (single family dwelling) and non-residential (all other types) properties in each county.

¹ Property Tax Equity Implications of Assessment Capping and Homestead Exemptions for Owner-Occupied Single-Family Housing. Journal of Property tax Assessment & Administration, Volume 5, Issue 3

QMR and VEI for Residential and Non-Residential by County

2015 Real Property Quintile Ratio and VEI

County=Adams Property Class=Residential	
Quintile	Mean
Quintile_1	109.75
Quintile_2	92.59
Quintile_3	93.70
Quintile_4	92.09
Quintile_5	95.46
VEI (Vertical Equity Index)	18.26

County=Adams Property Class=Non-Residential	
Quintile	Mean
Quintile_1	131.75
Quintile_2	89.54
Quintile_3	80.32
Quintile_4	100.35
Quintile_5	98.59
VEI (Vertical Equity Index)	51.37

County=Asotin Property Class=Residential	
Quintile	Mean
Quintile_1	115.37
Quintile_2	100.10
Quintile_3	97.72
Quintile_4	94.59
Quintile_5	100.64
VEI (Vertical Equity Index)	20.44

County=Asotin Property Class=Non-Residential	
Quintile	Mean
Quintile_1	109.44
Quintile_2	106.34
Quintile_3	94.46
Quintile_4	98.93
Quintile_5	81.71
VEI (Vertical Equity Index)	28.25

County=Benton Property Class=Residential	
Quintile	Mean
Quintile_1	101.04
Quintile_2	93.40
Quintile_3	92.49
Quintile_4	92.60
Quintile_5	92.86
VEI (Vertical Equity Index)	9.05

County=Benton Property Class=Non-Residential	
Quintile	Mean
Quintile_1	102.83
Quintile_2	101.50
Quintile_3	93.60
Quintile_4	95.45
Quintile_5	90.23
VEI (Vertical Equity Index)	13.03

2015 Real Property Quintile Ratio and VEI

County=Chelan Property Class=Residential		County=Chelan Property Class=Non-Residential	
Quintile	Mean	Quintile	Mean
Quintile_1	95.80	Quintile_1	97.28
Quintile_2	86.23	Quintile_2	87.32
Quintile_3	87.00	Quintile_3	84.43
Quintile_4	86.97	Quintile_4	82.77
Quintile_5	85.60	Quintile_5	86.13
VEI (Vertical Equity Index)	11.55	VEI (Vertical Equity Index)	16.57

County=Clallam Property Class=Residential		County=Clallam Property Class=Non-Residential	
Quintile	Mean	Quintile	Mean
Quintile_1	100.62	Quintile_1	102.77
Quintile_2	93.17	Quintile_2	112.97
Quintile_3	93.43	Quintile_3	101.51
Quintile_4	92.06	Quintile_4	93.50
Quintile_5	90.50	Quintile_5	88.95
VEI (Vertical Equity Index)	10.77	VEI (Vertical Equity Index)	24.03

County=Clark Property Class=Residential		County=Clark Property Class=Non-Residential	
Quintile	Mean	Quintile	Mean
Quintile_1	104.47	Quintile_1	108.16
Quintile_2	97.87	Quintile_2	98.93
Quintile_3	98.16	Quintile_3	91.80
Quintile_4	97.85	Quintile_4	91.66
Quintile_5	97.34	Quintile_5	88.62
VEI (Vertical Equity Index)	7.19	VEI (Vertical Equity Index)	20.39

County=Columbia Property Class=Residential		County=Columbia Property Class=Non-Residential	
Quintile	Mean	Quintile	Mean
Quintile_1	101.61	Quintile_1	99.94
Quintile_2	103.95	Quintile_2	105.07
Quintile_3	100.06	Quintile_3	100.63
Quintile_4	99.06	Quintile_4	105.72
Quintile_5	99.35	Quintile_5	99.86
VEI (Vertical Equity Index)	4.85	VEI (Vertical Equity Index)	5.73

2015 Real Property Quintile Ratio and VEI

County=Cowlitz Property Class=Residential		County=Cowlitz Property Class=Non-Residential	
Quintile	Mean	Quintile	Mean
Quintile_1	108.51	Quintile_1	119.31
Quintile_2	94.61	Quintile_2	98.74
Quintile_3	92.96	Quintile_3	92.78
Quintile_4	90.10	Quintile_4	91.24
Quintile_5	89.11	Quintile_5	89.74
VEI (Vertical Equity Index)	20.41	VEI (Vertical Equity Index)	30.06

County=Douglas Property Class=Residential		County=Douglas Property Class=Non-Residential	
Quintile	Mean	Quintile	Mean
Quintile_1	96.41	Quintile_1	101.74
Quintile_2	95.05	Quintile_2	104.13
Quintile_3	92.50	Quintile_3	103.18
Quintile_4	93.85	Quintile_4	86.26
Quintile_5	90.27	Quintile_5	81.38
VEI (Vertical Equity Index)	6.56	VEI (Vertical Equity Index)	23.86

County=Ferry Property Class=Residential		County=Ferry Property Class=Non-Residential	
Quintile	Mean	Quintile	Mean
Quintile_1	186.77	Quintile_1	163.82
Quintile_2	111.97	Quintile_2	121.31
Quintile_3	102.15	Quintile_3	113.30
Quintile_4	108.57	Quintile_4	109.81
Quintile_5	95.23	Quintile_5	104.28
VEI (Vertical Equity Index)	75.69	VEI (Vertical Equity Index)	48.60

County=Franklin Property Class=Residential		County=Franklin Property Class=Non-Residential	
Quintile	Mean	Quintile	Mean
Quintile_1	94.04	Quintile_1	80.98
Quintile_2	93.22	Quintile_2	79.91
Quintile_3	95.31	Quintile_3	80.38
Quintile_4	93.52	Quintile_4	87.35
Quintile_5	90.64	Quintile_5	79.59
VEI (Vertical Equity Index)	5.00	VEI (Vertical Equity Index)	9.50

2015 Real Property Quintile Ratio and VEI

County=Garfield Property Class=Residential		County=Garfield Property Class=Non-Residential	
Quintile	Mean	Quintile	Mean
Quintile_1	110.79	Quintile_1	99.97
Quintile_2	99.84	Quintile_2	87.97
Quintile_3	100.46	Quintile_3	88.86
Quintile_4	99.62	Quintile_4	84.34
Quintile_5	95.19	Quintile_5	94.16
VEI (Vertical Equity Index)	15.42	VEI (Vertical Equity Index)	17.16

County=Grant Property Class=Residential		County=Grant Property Class=Non-Residential	
Quintile	Mean	Quintile	Mean
Quintile_1	96.33	Quintile_1	103.58
Quintile_2	89.98	Quintile_2	95.75
Quintile_3	91.01	Quintile_3	90.22
Quintile_4	91.56	Quintile_4	82.09
Quintile_5	89.57	Quintile_5	68.51
VEI (Vertical Equity Index)	7.37	VEI (Vertical Equity Index)	39.84

County=Grays Harbor Property Class=Residential		County=Grays Harbor Property Class=Non-Residential	
Quintile	Mean	Quintile	Mean
Quintile_1	99.71	Quintile_1	94.18
Quintile_2	99.18	Quintile_2	104.20
Quintile_3	98.85	Quintile_3	90.39
Quintile_4	95.51	Quintile_4	102.58
Quintile_5	95.69	Quintile_5	94.41
VEI (Vertical Equity Index)	4.30	VEI (Vertical Equity Index)	14.21

County=Island Property Class=Residential		County=Island Property Class=Non-Residential	
Quintile	Mean	Quintile	Mean
Quintile_1	101.80	Quintile_1	109.08
Quintile_2	97.10	Quintile_2	103.49
Quintile_3	97.34	Quintile_3	97.72
Quintile_4	98.57	Quintile_4	96.71
Quintile_5	98.05	Quintile_5	92.53
VEI (Vertical Equity Index)	4.77	VEI (Vertical Equity Index)	16.57

2015 Real Property Quintile Ratio and VEI

County=Jefferson Property Class=Residential	
Quintile	Mean
Quintile_1	99.11
Quintile_2	96.33
Quintile_3	95.79
Quintile_4	93.63
Quintile_5	92.65
VEI (Vertical Equity Index)	6.76

County=Jefferson Property Class=Non-Residential	
Quintile	Mean
Quintile_1	105.05
Quintile_2	102.26
Quintile_3	88.89
Quintile_4	93.29
Quintile_5	99.25
VEI (Vertical Equity Index)	16.53

County=King Property Class=Residential	
Quintile	Mean
Quintile_1	101.99
Quintile_2	96.80
Quintile_3	96.72
Quintile_4	96.34
Quintile_5	95.13
VEI (Vertical Equity Index)	7.04

County=King Property Class=Non-Residential	
Quintile	Mean
Quintile_1	105.29
Quintile_2	98.77
Quintile_3	96.98
Quintile_4	95.38
Quintile_5	89.77
VEI (Vertical Equity Index)	15.96

County=Kitsap Property Class=Residential	
Quintile	Mean
Quintile_1	96.57
Quintile_2	89.79
Quintile_3	90.15
Quintile_4	90.77
Quintile_5	89.13
VEI (Vertical Equity Index)	8.15

County=Kitsap Property Class=Non-Residential	
Quintile	Mean
Quintile_1	103.02
Quintile_2	98.66
Quintile_3	97.39
Quintile_4	85.03
Quintile_5	82.79
VEI (Vertical Equity Index)	21.66

County=Kittitas Property Class=Residential	
Quintile	Mean
Quintile_1	103.55
Quintile_2	91.67
Quintile_3	86.89
Quintile_4	82.78
Quintile_5	83.45
VEI (Vertical Equity Index)	23.16

County=Kittitas Property Class=Non-Residential	
Quintile	Mean
Quintile_1	107.83
Quintile_2	96.84
Quintile_3	87.91
Quintile_4	76.02
Quintile_5	82.69
VEI (Vertical Equity Index)	35.24

2015 Real Property Quintile Ratio and VEI

County=Klickitat Property Class=Residential	
Quintile	Mean
Quintile_1	106.40
Quintile_2	94.14
Quintile_3	90.62
Quintile_4	89.20
Quintile_5	90.42
VEI (Vertical Equity Index)	18.27

County=Klickitat Property Class=Non-Residential	
Quintile	Mean
Quintile_1	102.02
Quintile_2	95.65
Quintile_3	90.10
Quintile_4	88.58
Quintile_5	80.76
VEI (Vertical Equity Index)	23.25

County=Lewis Property Class=Residential	
Quintile	Mean
Quintile_1	119.12
Quintile_2	99.27
Quintile_3	94.05
Quintile_4	91.75
Quintile_5	91.03
VEI (Vertical Equity Index)	28.36

County=Lewis Property Class=Non-Residential	
Quintile	Mean
Quintile_1	133.24
Quintile_2	108.95
Quintile_3	93.09
Quintile_4	93.36
Quintile_5	87.92
VEI (Vertical Equity Index)	43.87

County=Lincoln Property Class=Residential	
Quintile	Mean
Quintile_1	96.92
Quintile_2	78.33
Quintile_3	78.76
Quintile_4	80.25
Quintile_5	83.39
VEI (Vertical Equity Index)	22.26

County=Lincoln Property Class=Non-Residential	
Quintile	Mean
Quintile_1	89.59
Quintile_2	74.59
Quintile_3	82.24
Quintile_4	68.20
Quintile_5	79.11
VEI (Vertical Equity Index)	27.16

County=Mason Property Class=Residential	
Quintile	Mean
Quintile_1	110.37
Quintile_2	101.75
Quintile_3	101.04
Quintile_4	101.05
Quintile_5	96.86
VEI (Vertical Equity Index)	13.22

County=Mason Property Class=Non-Residential	
Quintile	Mean
Quintile_1	116.60
Quintile_2	121.34
Quintile_3	108.25
Quintile_4	99.91
Quintile_5	92.90
VEI (Vertical Equity Index)	26.38

2015 Real Property Quintile Ratio and VEI

County=Okanogan Property Class=Residential	
Quintile	Mean
Quintile_1	103.44
Quintile_2	93.91
Quintile_3	90.38
Quintile_4	89.10
Quintile_5	92.35
VEI (Vertical Equity Index)	15.28

County=Okanogan Property Class=Non-Residential	
Quintile	Mean
Quintile_1	99.04
Quintile_2	88.38
Quintile_3	85.69
Quintile_4	98.07
Quintile_5	85.92
VEI (Vertical Equity Index)	14.60

County=Pacific Property Class=Residential	
Quintile	Mean
Quintile_1	106.99
Quintile_2	100.23
Quintile_3	90.00
Quintile_4	90.63
Quintile_5	91.78
VEI (Vertical Equity Index)	17.71

County=Pacific Property Class=Non-Residential	
Quintile	Mean
Quintile_1	99.18
Quintile_2	109.76
Quintile_3	100.14
Quintile_4	93.56
Quintile_5	97.23
VEI (Vertical Equity Index)	16.20

County=Pend Oreille Property Class=Residential	
Quintile	Mean
Quintile_1	120.40
Quintile_2	97.98
Quintile_3	93.85
Quintile_4	91.74
Quintile_5	93.06
VEI (Vertical Equity Index)	28.83

County=Pend Oreille Property Class=Non-Residential	
Quintile	Mean
Quintile_1	122.82
Quintile_2	108.29
Quintile_3	88.42
Quintile_4	103.73
Quintile_5	94.27
VEI (Vertical Equity Index)	33.23

County=Pierce Property Class=Residential	
Quintile	Mean
Quintile_1	94.90
Quintile_2	90.90
Quintile_3	90.91
Quintile_4	90.96
Quintile_5	89.89
VEI (Vertical Equity Index)	5.47

County=Pierce Property Class=Non-Residential	
Quintile	Mean
Quintile_1	103.40
Quintile_2	94.27
Quintile_3	91.25
Quintile_4	91.52
Quintile_5	87.05
VEI (Vertical Equity Index)	17.49

2015 Real Property Quintile Ratio and VEI

County=San Juan Property Class=Residential	
Quintile	Mean
Quintile_1	103.00
Quintile_2	91.95
Quintile_3	95.20
Quintile_4	92.59
Quintile_5	89.69
VEI (Vertical Equity Index)	14.09

County=San Juan Property Class=Non-Residential	
Quintile	Mean
Quintile_1	109.40
Quintile_2	92.72
Quintile_3	105.07
Quintile_4	90.67
Quintile_5	90.61
VEI (Vertical Equity Index)	19.23

County=Skagit Property Class=Residential	
Quintile	Mean
Quintile_1	100.61
Quintile_2	95.31
Quintile_3	92.79
Quintile_4	92.83
Quintile_5	91.53
VEI (Vertical Equity Index)	9.60

County=Skagit Property Class=Non-Residential	
Quintile	Mean
Quintile_1	101.54
Quintile_2	95.65
Quintile_3	98.02
Quintile_4	91.36
Quintile_5	91.77
VEI (Vertical Equity Index)	10.64

County=Skamania Property Class=Residential	
Quintile	Mean
Quintile_1	111.38
Quintile_2	95.31
Quintile_3	87.51
Quintile_4	84.97
Quintile_5	84.75
VEI (Vertical Equity Index)	28.70

County=Skamania Property Class=Non-Residential	
Quintile	Mean
Quintile_1	117.59
Quintile_2	117.82
Quintile_3	107.07
Quintile_4	98.39
Quintile_5	99.87
VEI (Vertical Equity Index)	17.97

County=Snohomish Property Class=Residential	
Quintile	Mean
Quintile_1	98.55
Quintile_2	96.86
Quintile_3	96.37
Quintile_4	95.64
Quintile_5	94.96
VEI (Vertical Equity Index)	3.72

County=Snohomish Property Class=Non-Residential	
Quintile	Mean
Quintile_1	95.05
Quintile_2	87.77
Quintile_3	95.72
Quintile_4	88.06
Quintile_5	86.69
VEI (Vertical Equity Index)	9.96

2015 Real Property Quintile Ratio and VEI

County=Spokane Property Class=Residential	
Quintile	Mean
Quintile_1	98.81
Quintile_2	96.29
Quintile_3	95.48
Quintile_4	94.67
Quintile_5	94.98
VEI (Vertical Equity Index)	4.31

County=Spokane Property Class=Non-Residential	
Quintile	Mean
Quintile_1	102.54
Quintile_2	97.27
Quintile_3	96.01
Quintile_4	96.98
Quintile_5	93.53
VEI (Vertical Equity Index)	9.26

County=Stevens Property Class=Residential	
Quintile	Mean
Quintile_1	116.24
Quintile_2	98.32
Quintile_3	91.02
Quintile_4	92.63
Quintile_5	88.05
VEI (Vertical Equity Index)	28.99

County=Stevens Property Class=Non-Residential	
Quintile	Mean
Quintile_1	110.77
Quintile_2	116.58
Quintile_3	105.65
Quintile_4	97.47
Quintile_5	88.59
VEI (Vertical Equity Index)	26.96

County=Thurston Property Class=Residential	
Quintile	Mean
Quintile_1	98.80
Quintile_2	95.11
Quintile_3	95.05
Quintile_4	96.79
Quintile_5	96.15
VEI (Vertical Equity Index)	3.89

County=Thurston Property Class=Non-Residential	
Quintile	Mean
Quintile_1	110.40
Quintile_2	93.09
Quintile_3	92.86
Quintile_4	94.87
Quintile_5	93.32
VEI (Vertical Equity Index)	18.10

County=Wahkiakum Property Class=Residential	
Quintile	Mean
Quintile_1	107.22
Quintile_2	91.31
Quintile_3	90.19
Quintile_4	103.30
Quintile_5	87.28
VEI (Vertical Equity Index)	20.80

County=Wahkiakum Property Class=Non-Residential	
Quintile	Mean
Quintile_1	97.58
Quintile_2	97.79
Quintile_3	96.78
Quintile_4	104.03
Quintile_5	94.59
VEI (Vertical Equity Index)	9.62

2015 Real Property Quintile Ratio and VEI

County=Walla Walla Property Class=Residential	
Quintile	Mean
Quintile_1	98.42
Quintile_2	97.73
Quintile_3	98.07
Quintile_4	97.10
Quintile_5	96.00
VEI (Vertical Equity Index)	2.48

County=Walla Walla Property Class=Non-Residential	
Quintile	Mean
Quintile_1	108.42
Quintile_2	88.20
Quintile_3	81.13
Quintile_4	88.83
Quintile_5	92.03
VEI (Vertical Equity Index)	29.75

County=Whatcom Property Class=Residential	
Quintile	Mean
Quintile_1	91.85
Quintile_2	87.15
Quintile_3	86.56
Quintile_4	86.14
Quintile_5	86.10
VEI (Vertical Equity Index)	6.57

County=Whatcom Property Class=Non-Residential	
Quintile	Mean
Quintile_1	94.41
Quintile_2	89.40
Quintile_3	86.53
Quintile_4	89.59
Quintile_5	86.66
VEI (Vertical Equity Index)	8.82

County=Whitman Property Class=Residential	
Quintile	Mean
Quintile_1	90.72
Quintile_2	87.52
Quintile_3	86.25
Quintile_4	86.56
Quintile_5	87.13
VEI (Vertical Equity Index)	5.10

County=Whitman Property Class=Non-Residential	
Quintile	Mean
Quintile_1	83.19
Quintile_2	89.98
Quintile_3	94.03
Quintile_4	77.89
Quintile_5	60.85
VEI (Vertical Equity Index)	40.87

County=Yakima Property Class=Residential	
Quintile	Mean
Quintile_1	100.53
Quintile_2	92.05
Quintile_3	91.39
Quintile_4	90.00
Quintile_5	90.92
VEI (Vertical Equity Index)	11.33

County=Yakima Property Class=Non-Residential	
Quintile	Mean
Quintile_1	94.39
Quintile_2	85.88
Quintile_3	82.83
Quintile_4	89.05
Quintile_5	90.68
VEI (Vertical Equity Index)	13.05

The following tables show the mean ratio, standard deviation, number of observations (N), and median ratio for each property type statewide.

Statewide by Property Type

Property Type=Ag/Other			
Mean	Std Dev	N	Median
95.81	28.37	5522	94.70

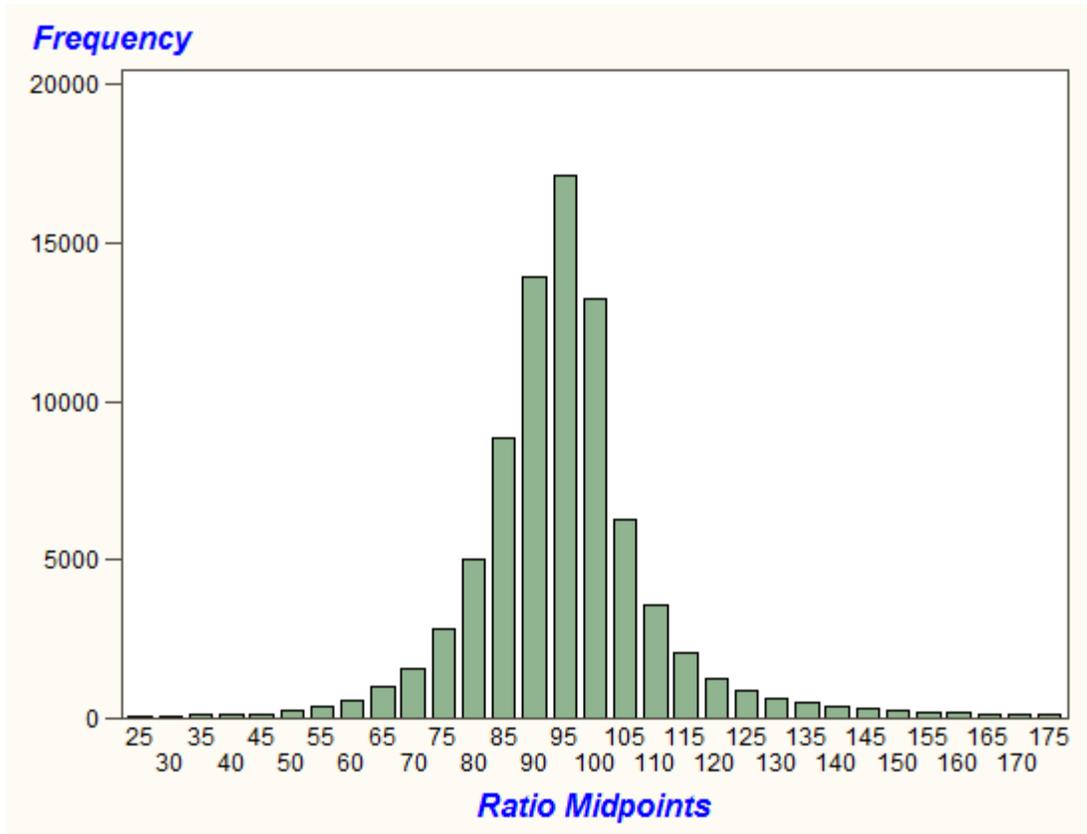
Property Type=Comm/Mfg			
Mean	Std Dev	N	Median
92.89	23.80	2139	94.07

Property Type=Multi Family			
Mean	Std Dev	N	Median
96.50	14.16	4127	95.78

Property Type=SFR			
Mean	Std Dev	N	Median
94.78	14.54	69891	94.24

Another visual indication of horizontal uniformity is a histogram. On a histogram each ratio contributes to the length of a bar representing the range in which the ratio falls. Good uniformity is indicated when the highest bars are near the median (approximately the same number of observations on each side) with the bars decreasing in length the farther they are from the median (forming the shape of a bell). A histogram indicates a good level of assessment when the top of the bell is at or near 100. The following histogram is for all valid real property sales statewide. The graph shows that the top of the bell is in the range of 95, which is consistent with the 94.32 statewide median ratio shown in the table on page 3. The graph, with the tallest bar in the middle, also shows that statewide the level of assessment is uniform horizontally. Horizontal uniformity means uniformity across the data being reviewed without influences from the value of the properties. Vertical uniformity, a measure of uniformity in the level of assessment of properties at different value levels cannot be illustrated on a histogram.

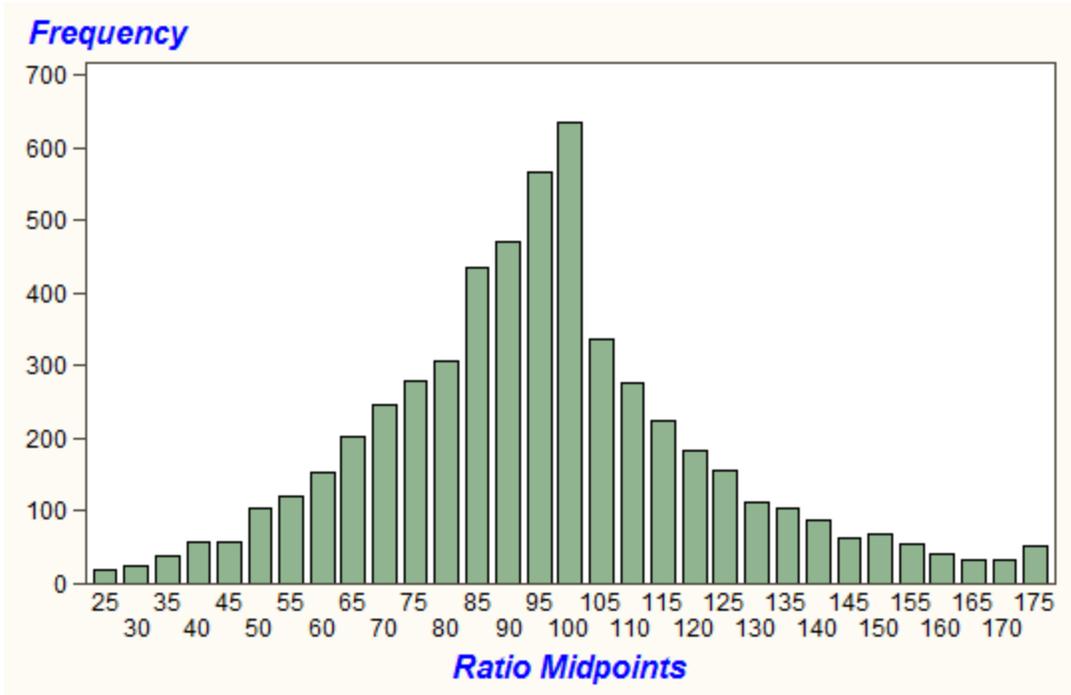
Statewide Ratio Distribution



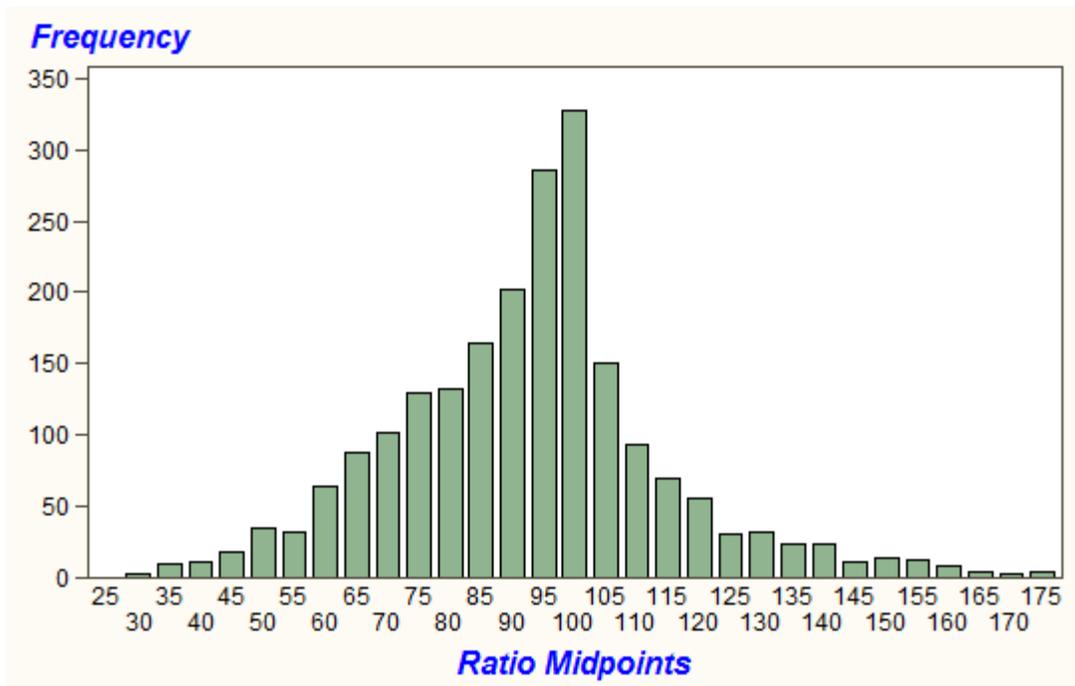
The following four histograms are for each of the four major property types on a statewide basis. They are followed by a histogram for all property types for each county.

Statewide Ratio Distribution by Property Type

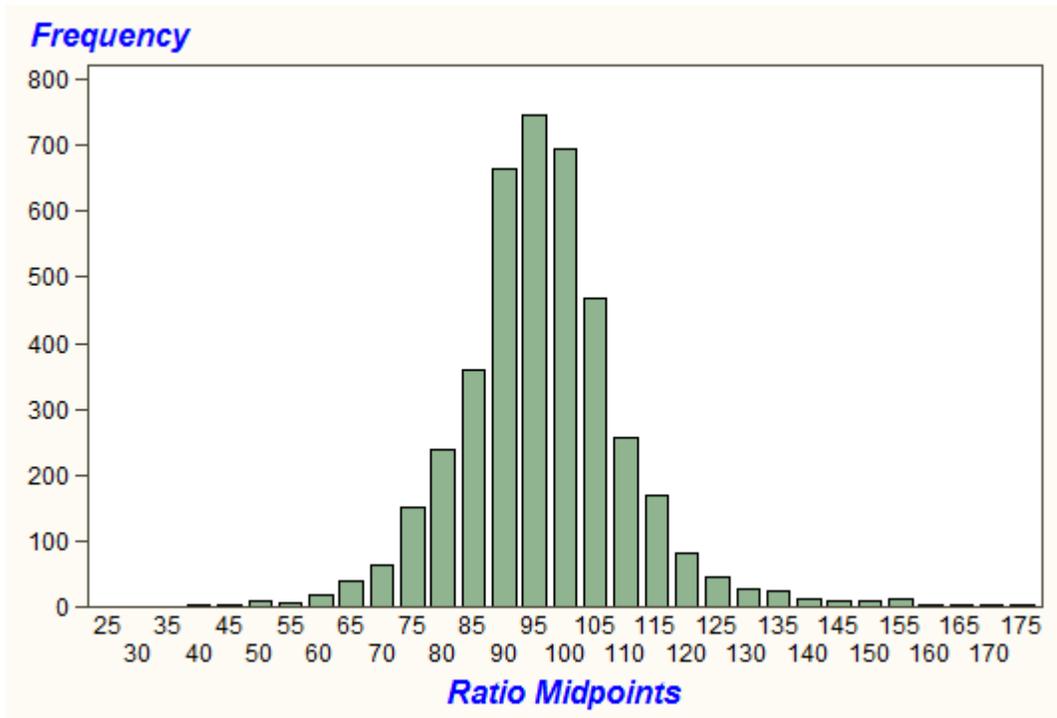
Agricultural/Other



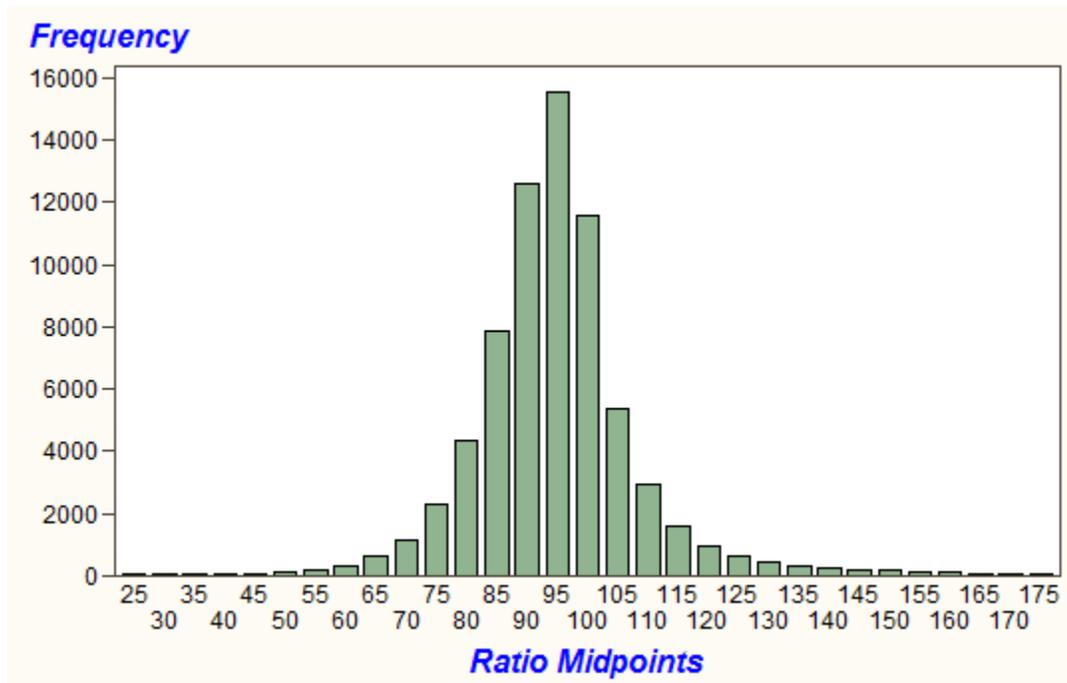
Commercial/Manufacturing



Multi Family

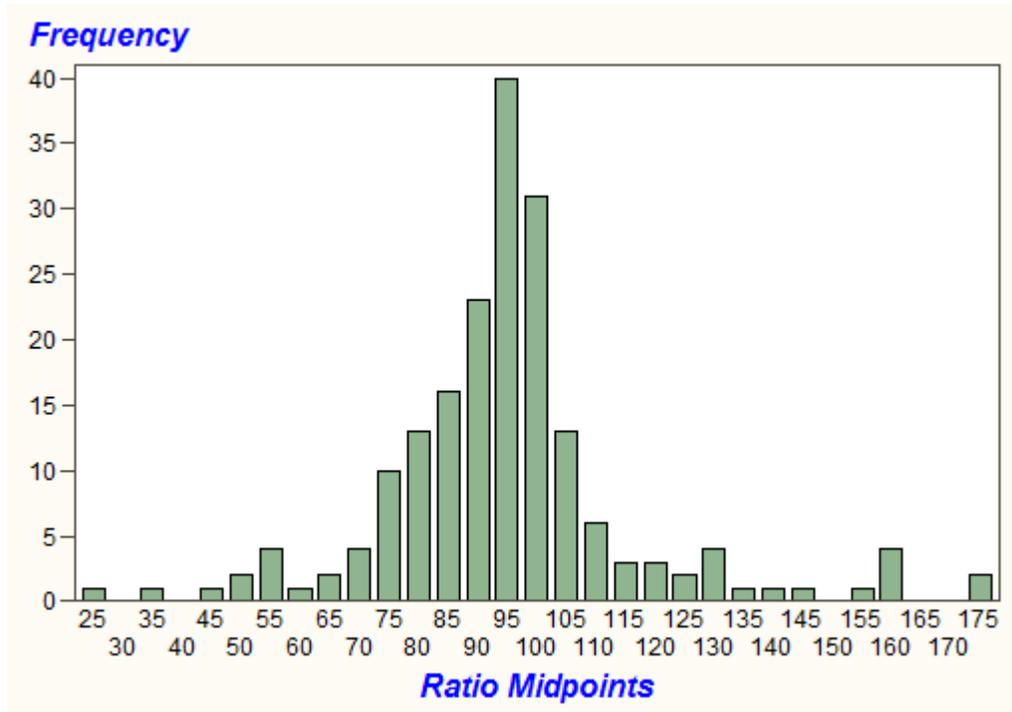


Single Family Residential

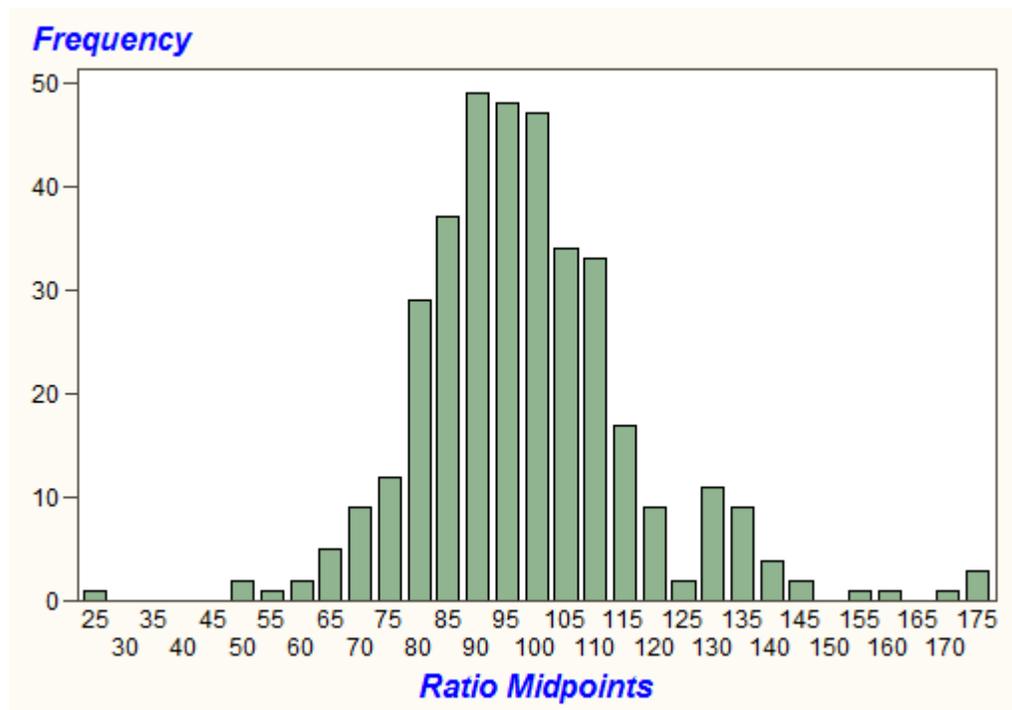


Ratio Distribution by County

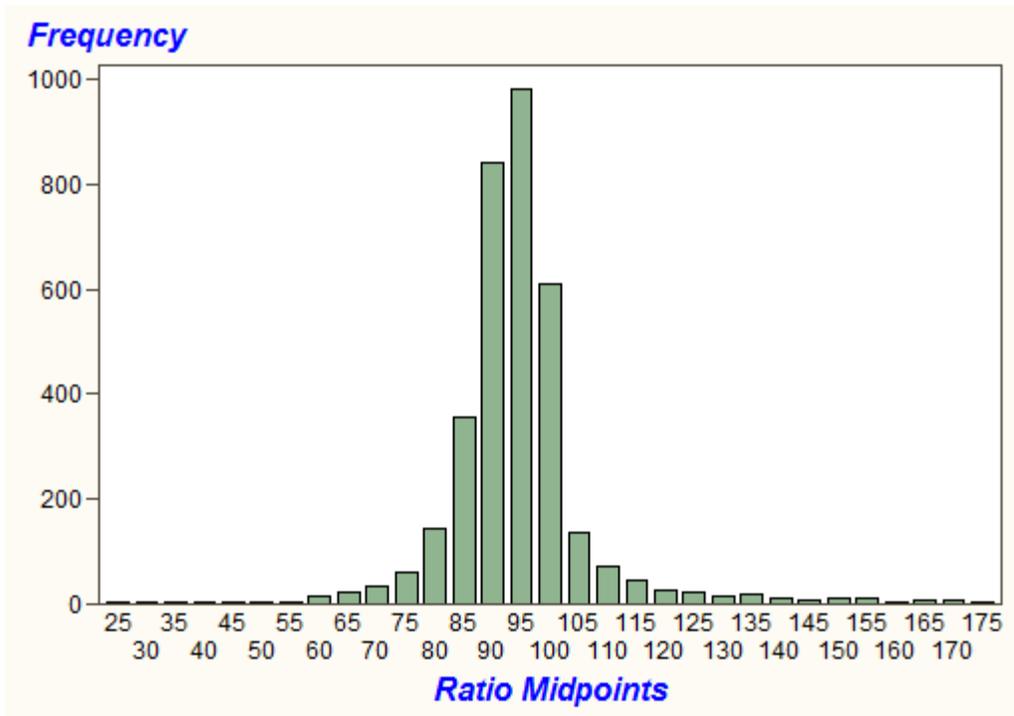
Adams



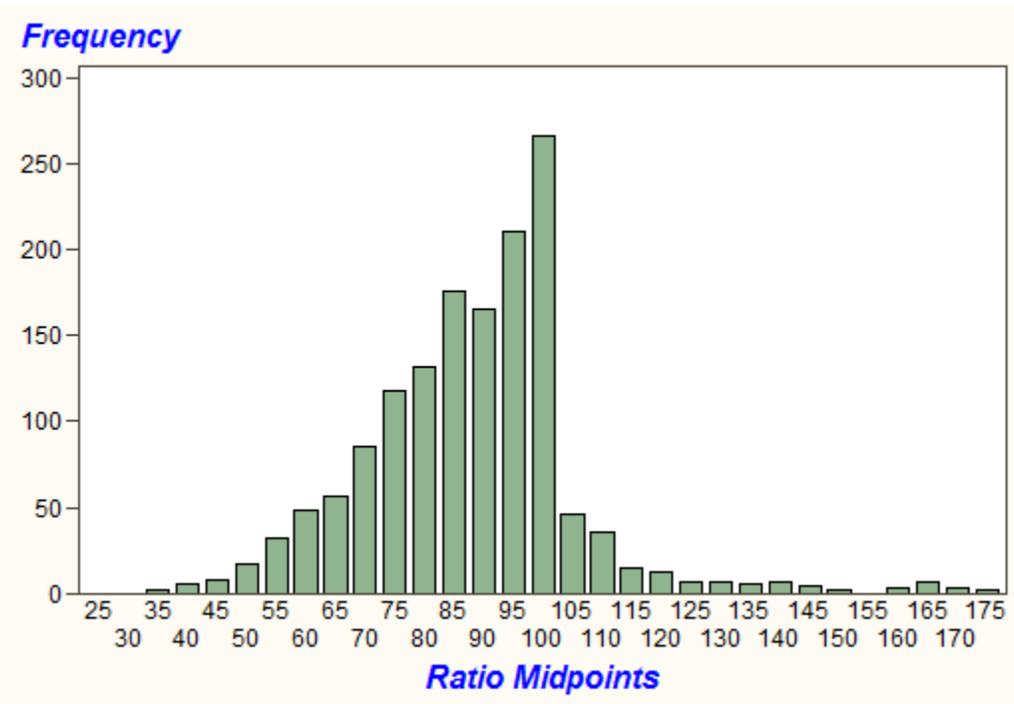
Asotin



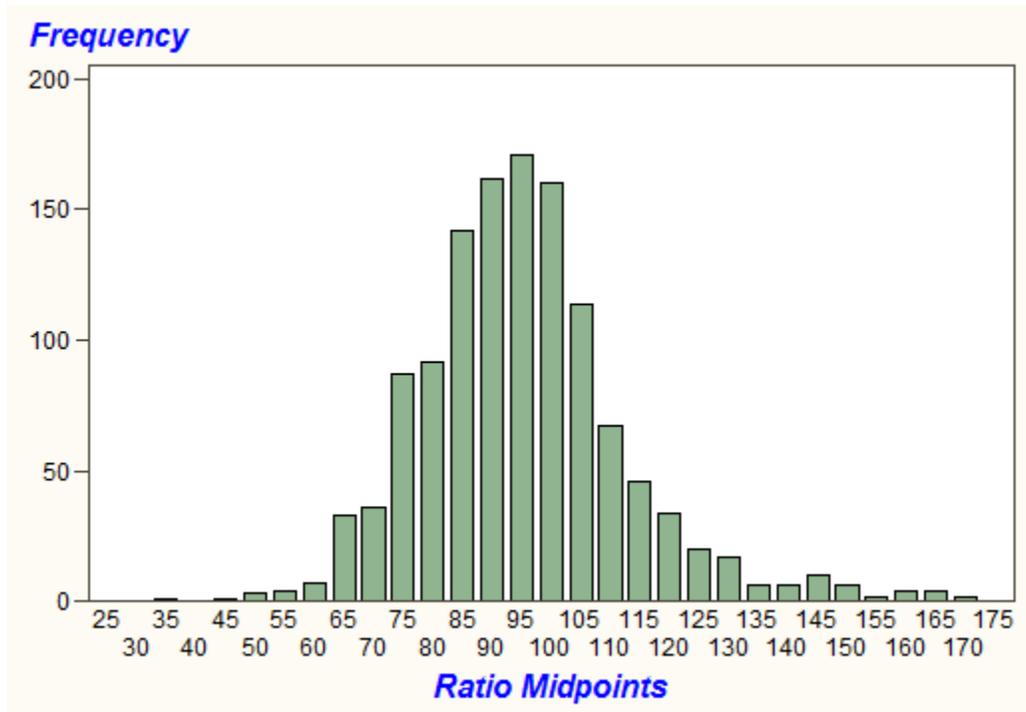
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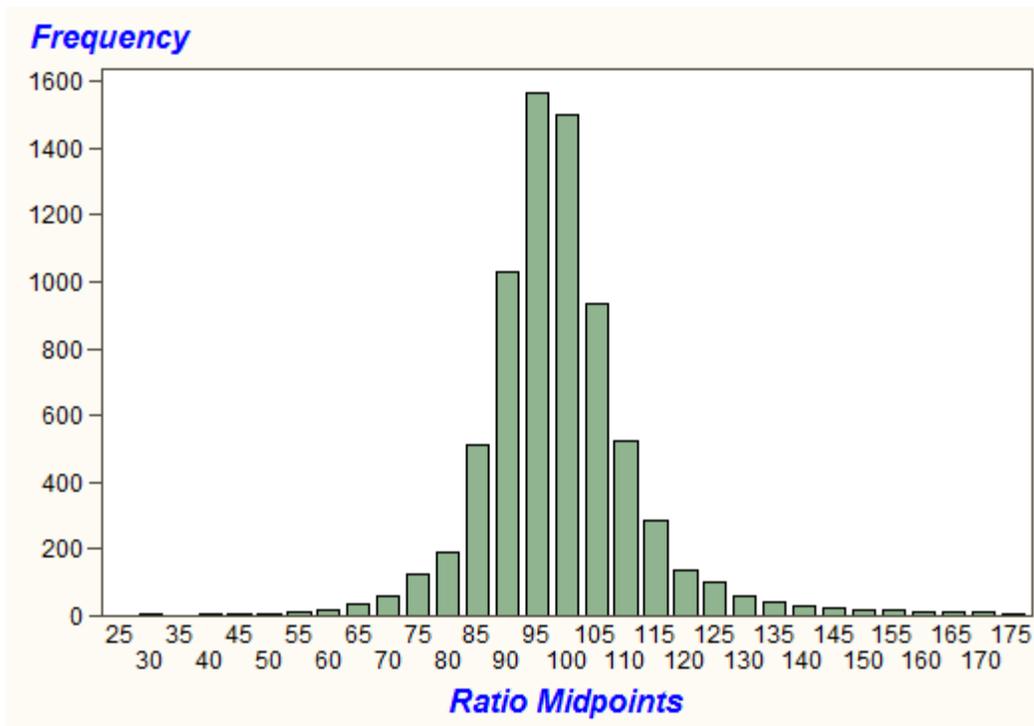
Chelan



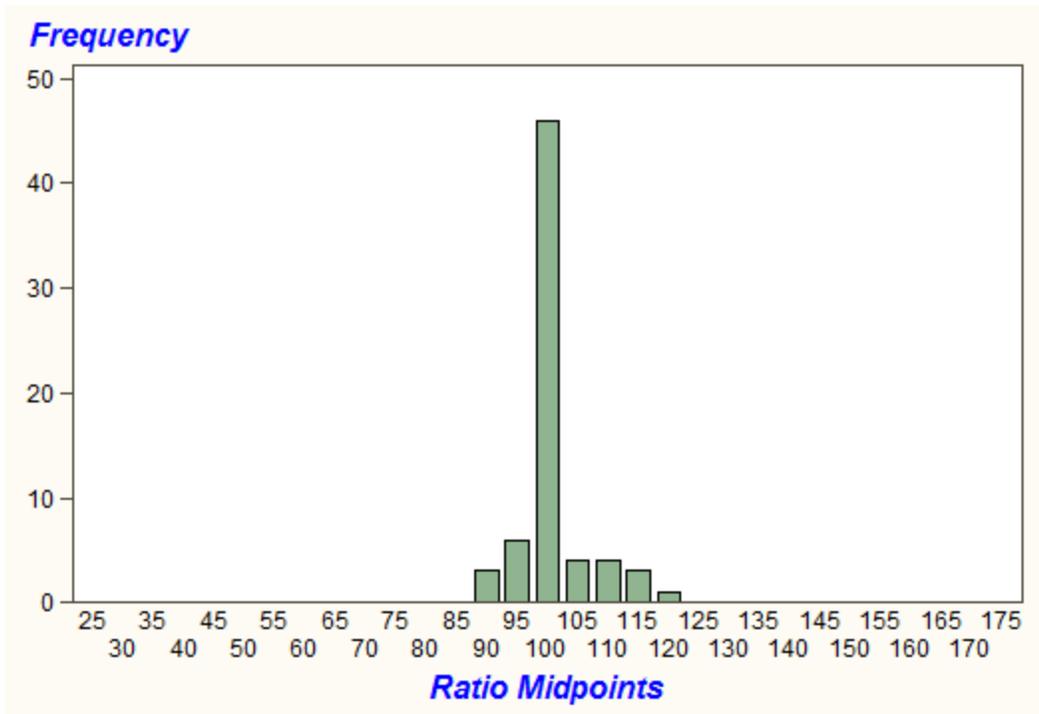
Clallam



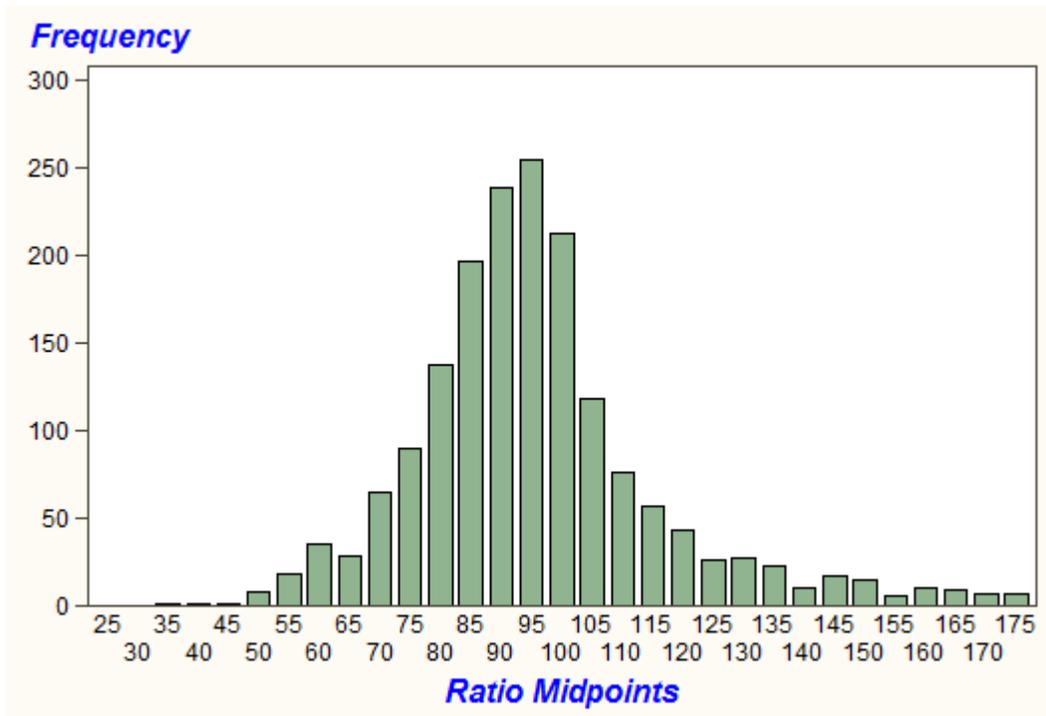
Clark



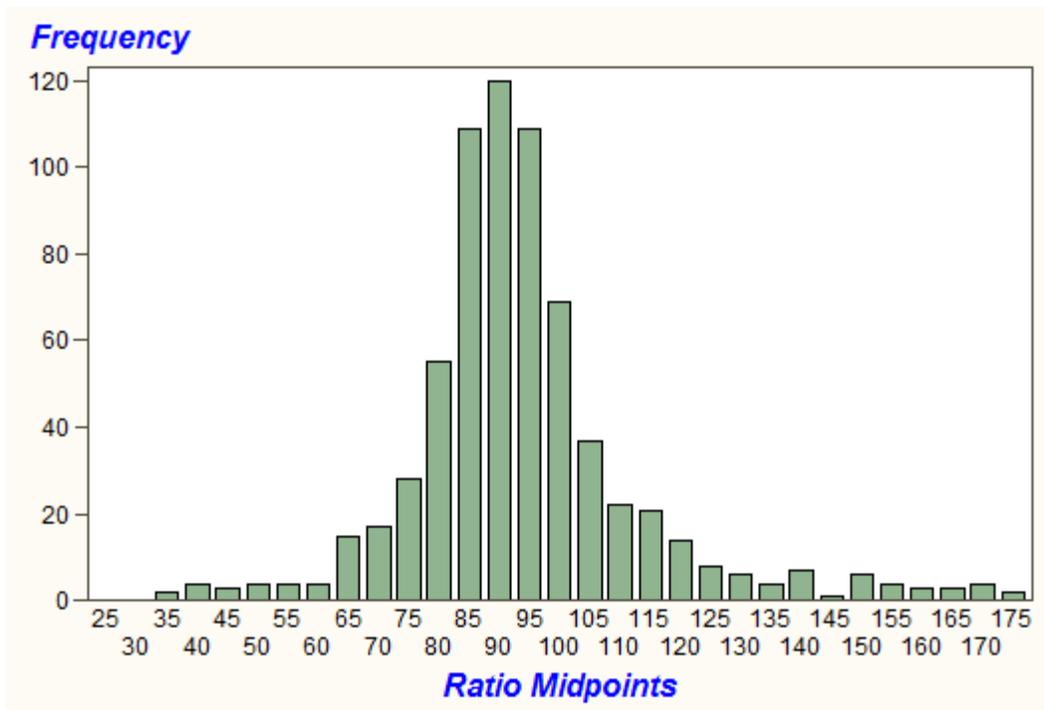
Columbia



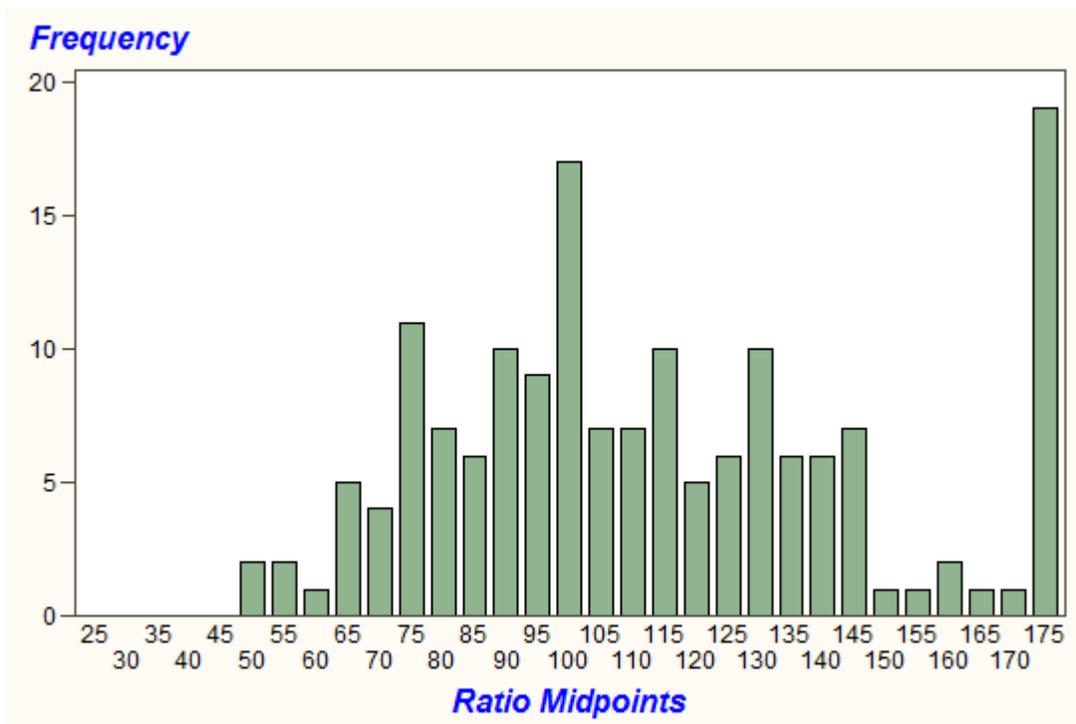
Cowlitz



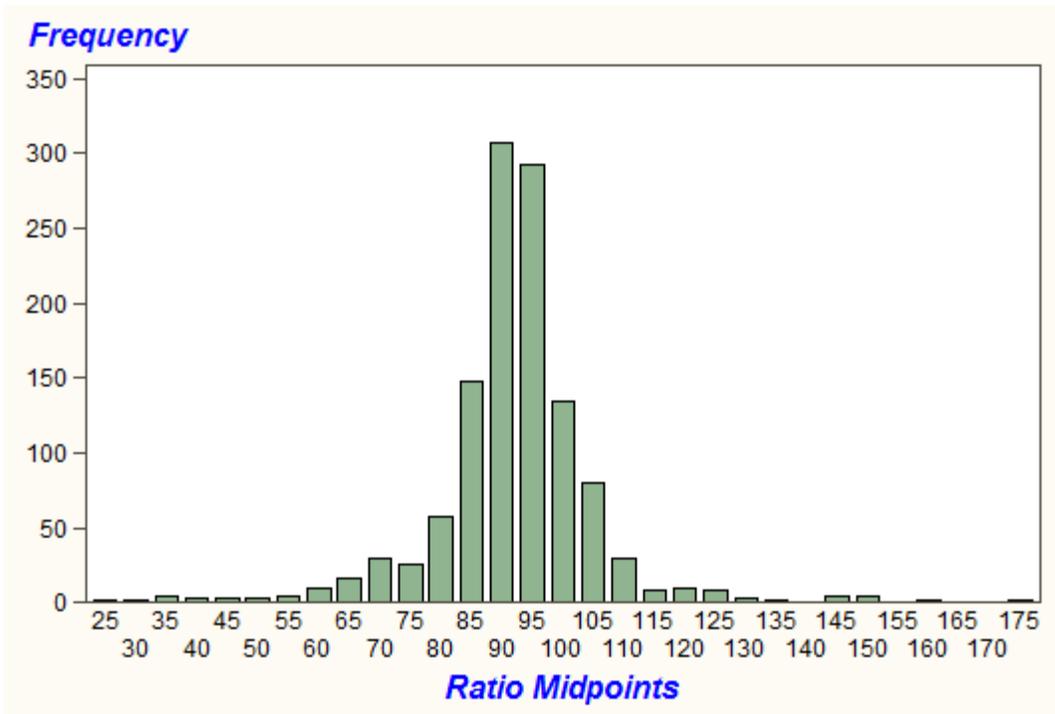
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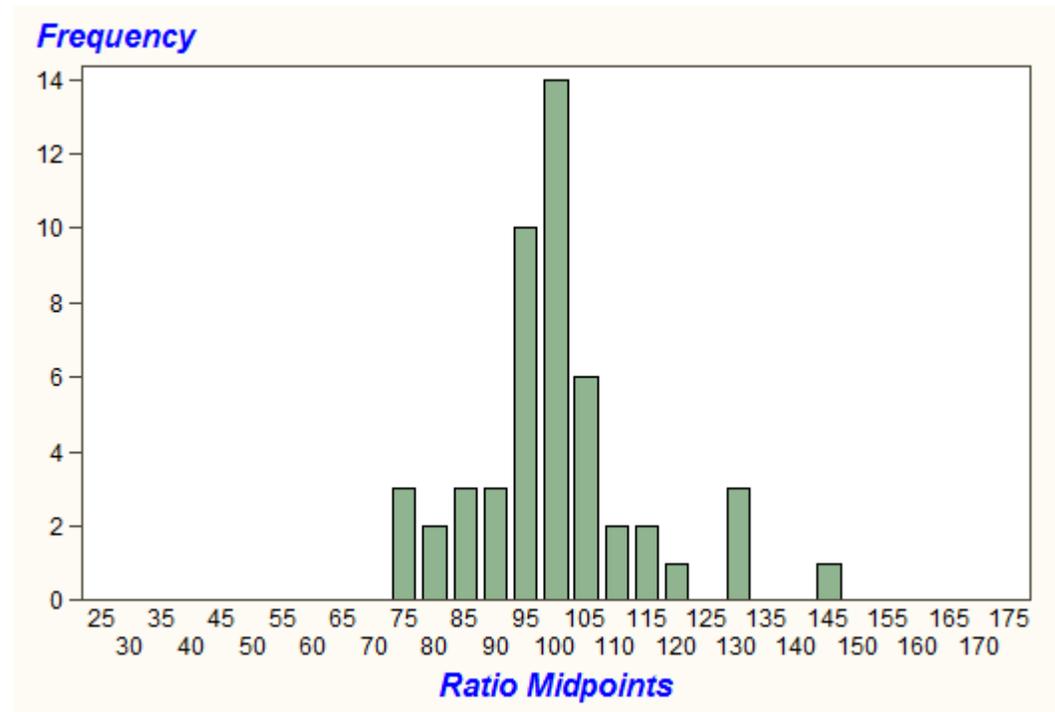
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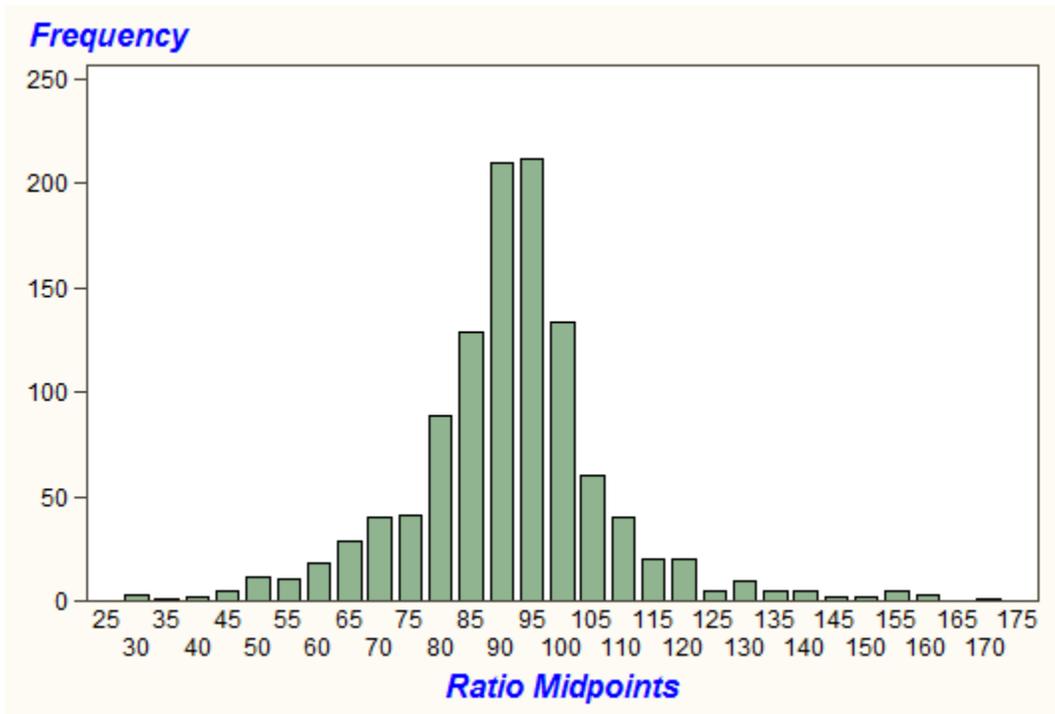
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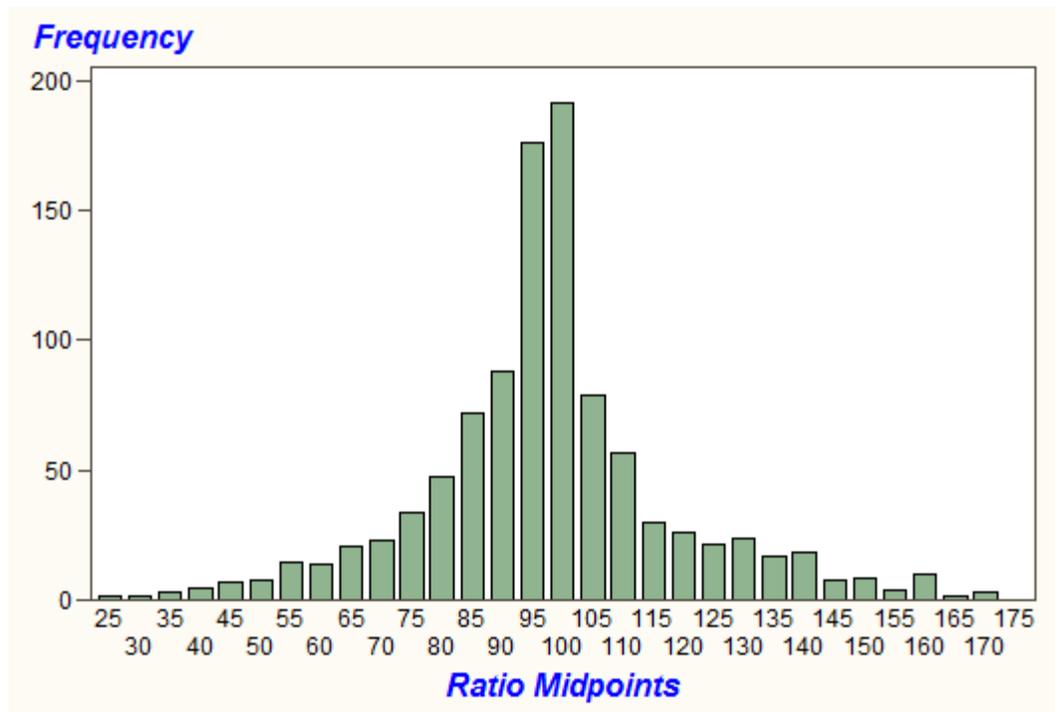
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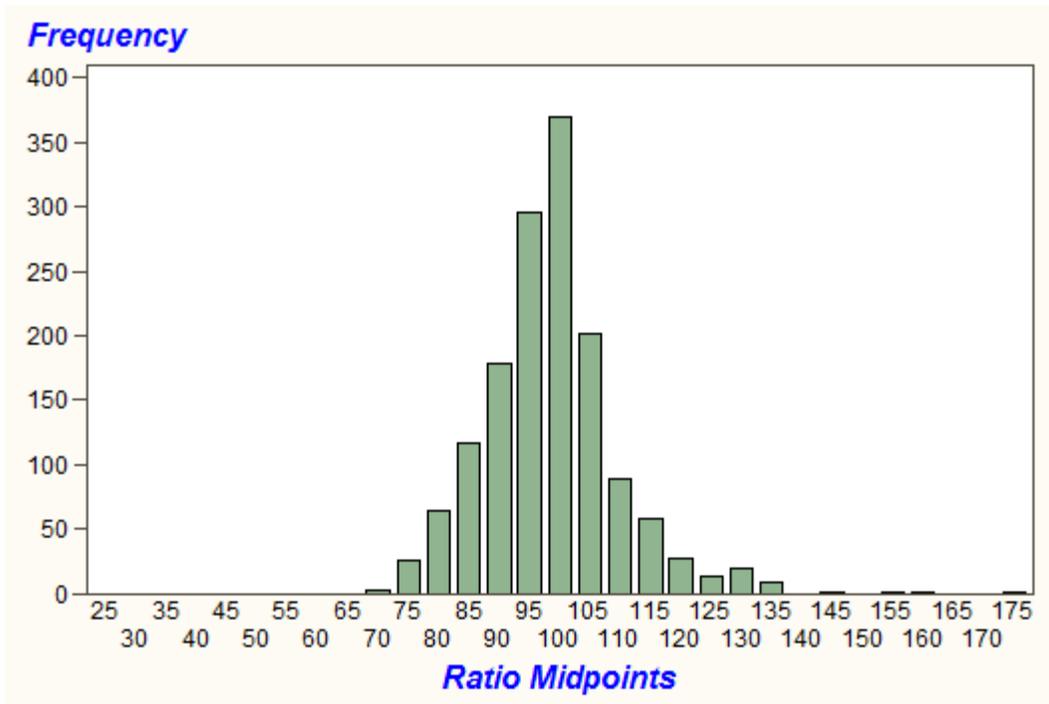
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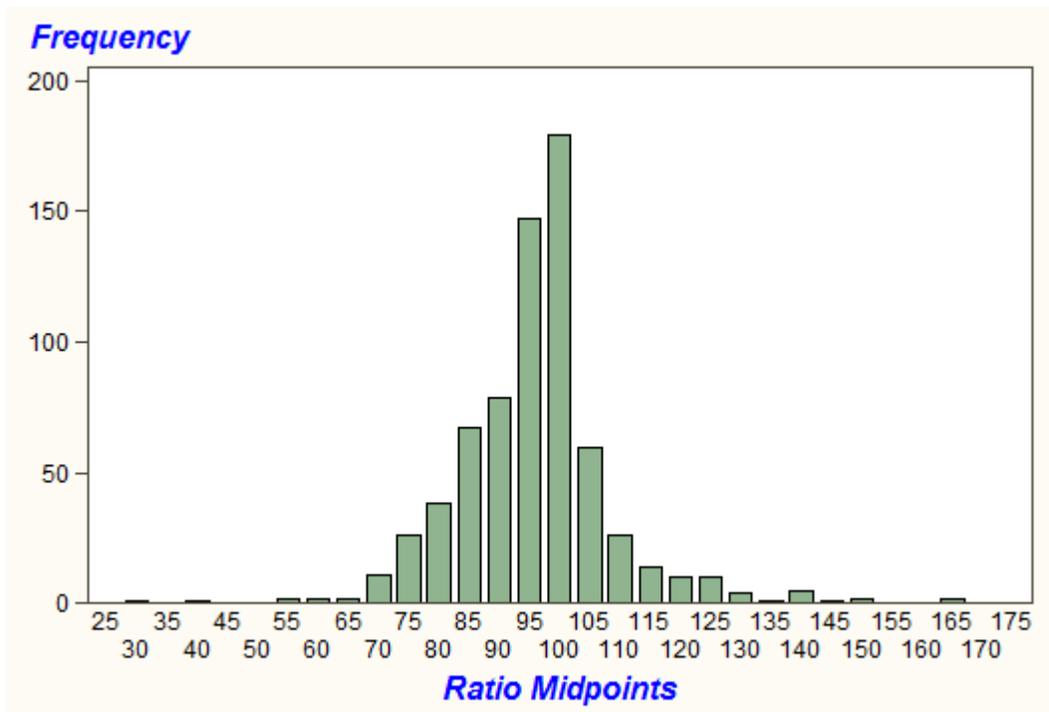
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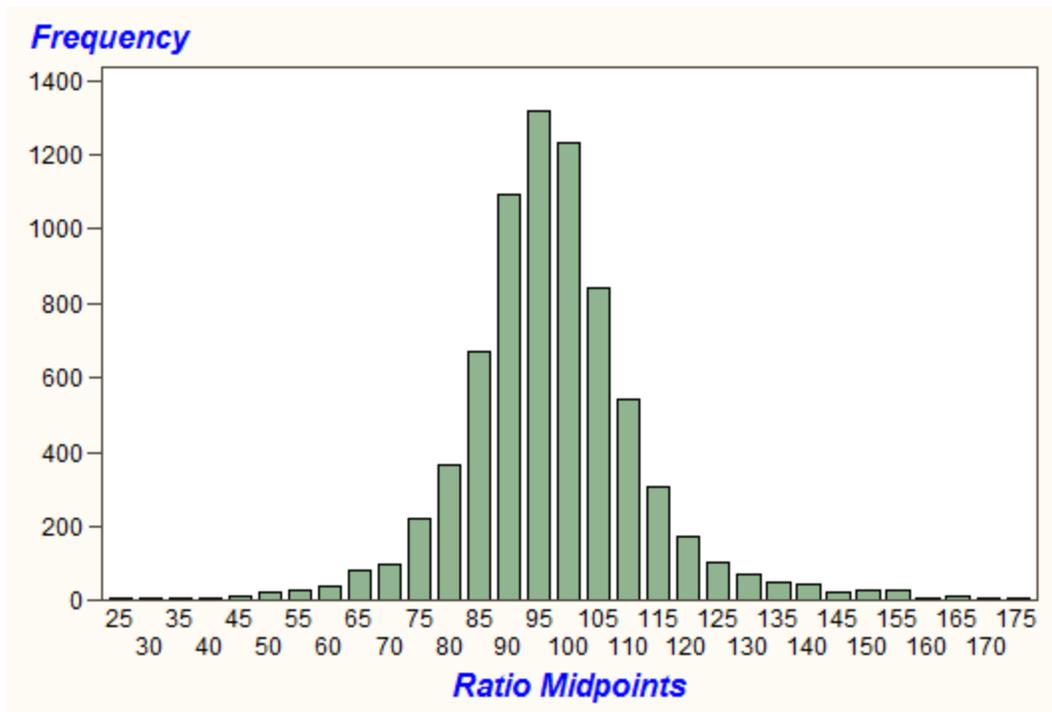
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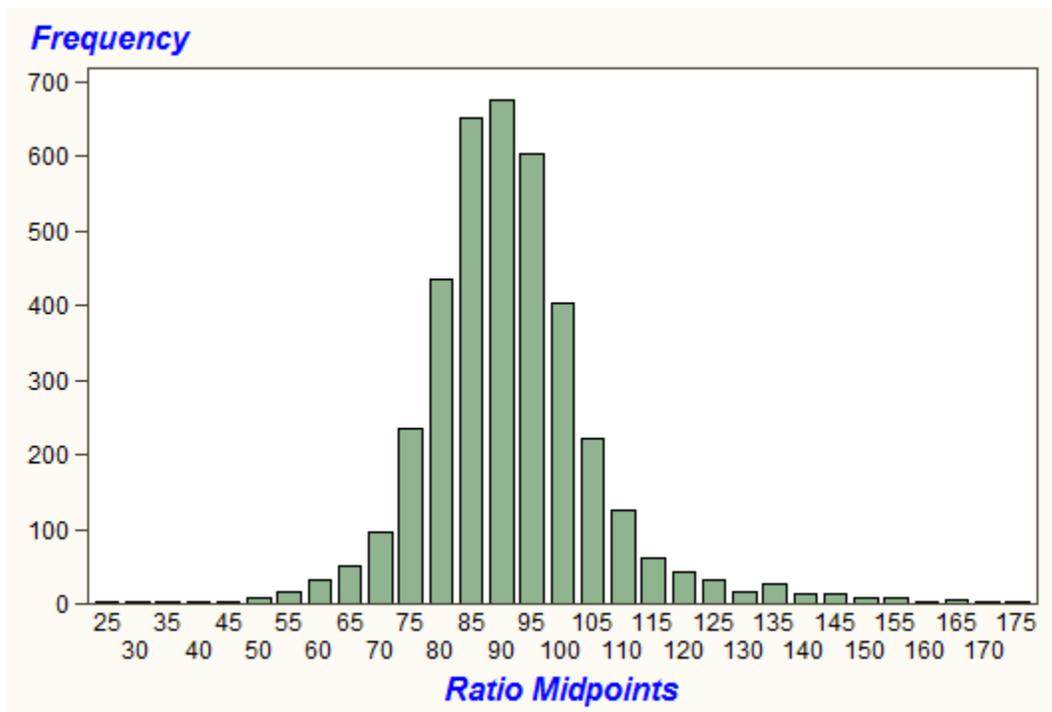
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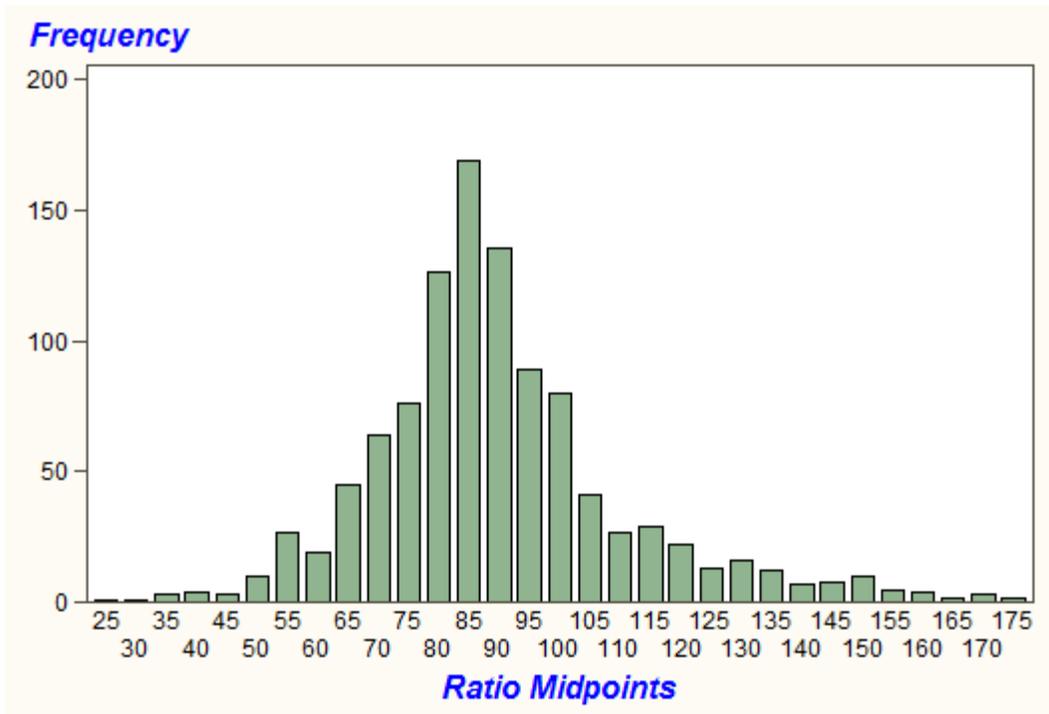
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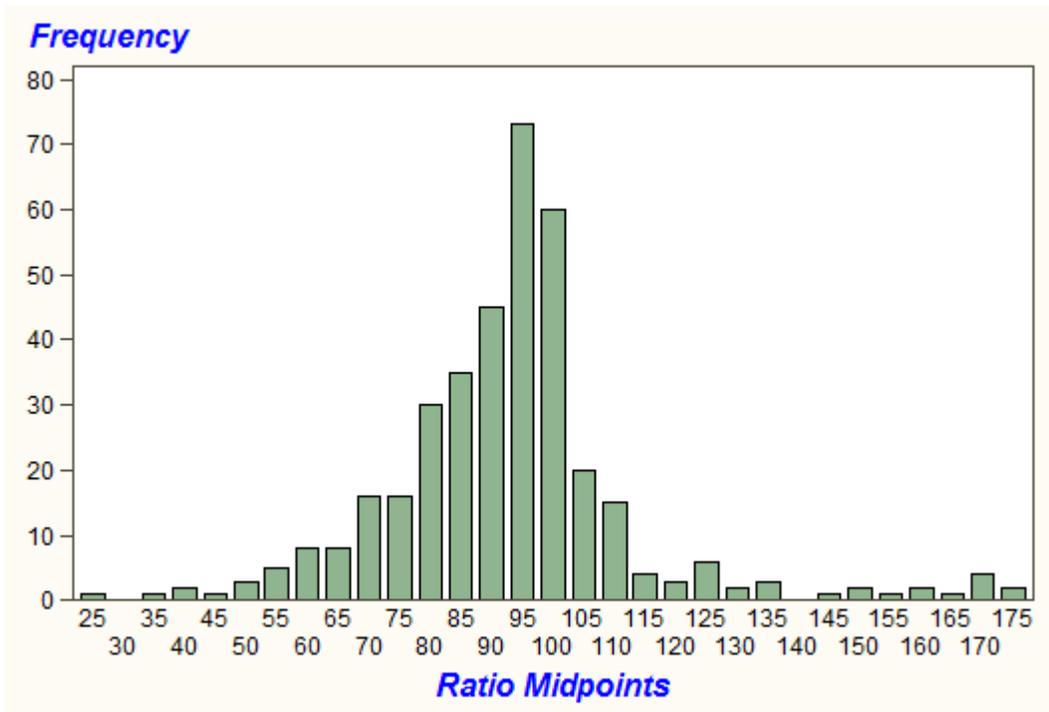
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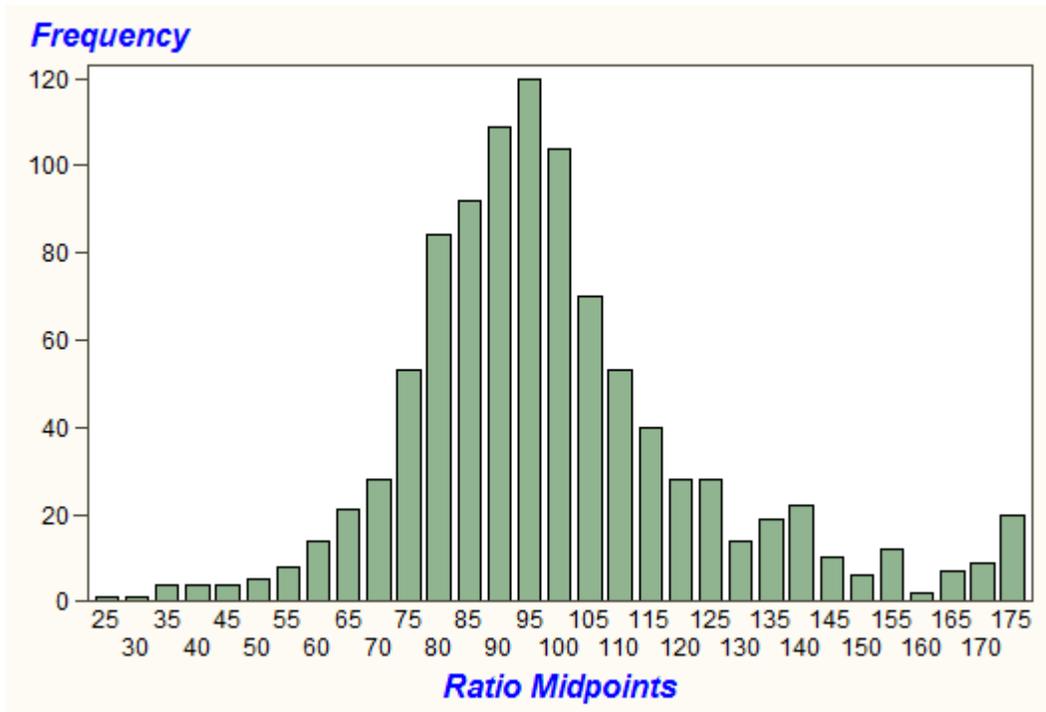
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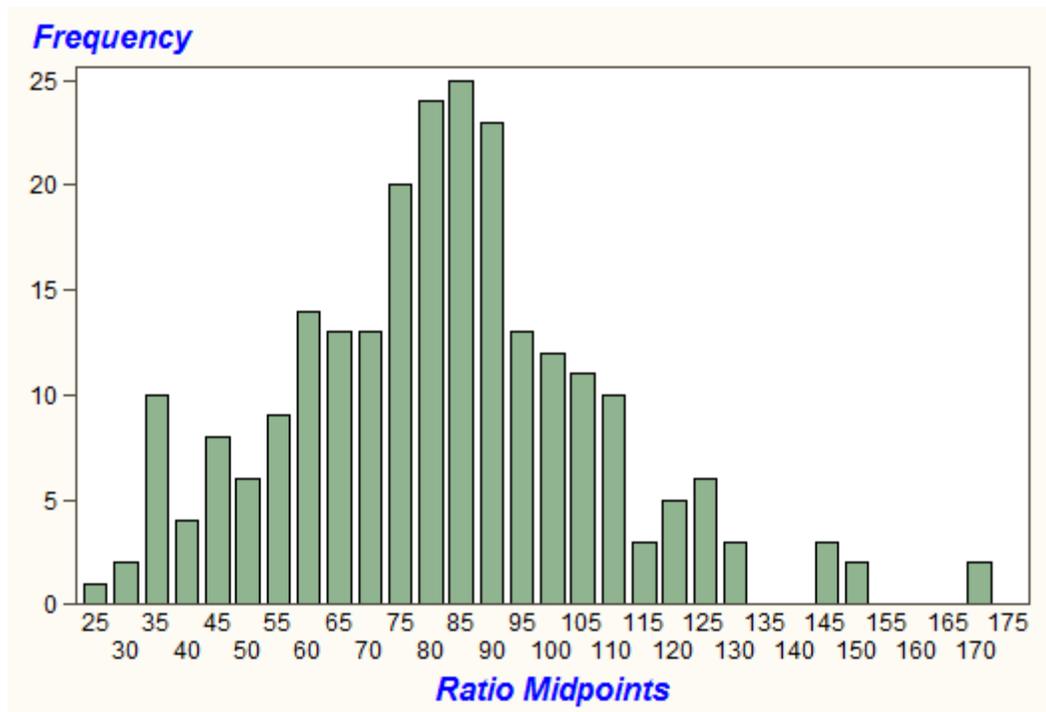
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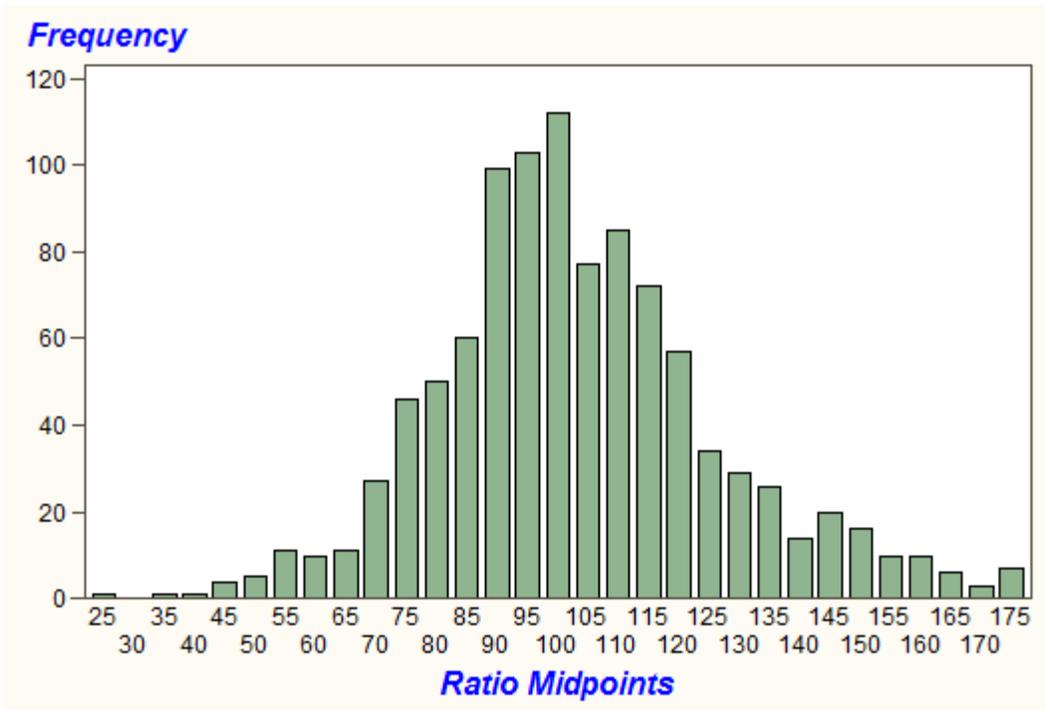
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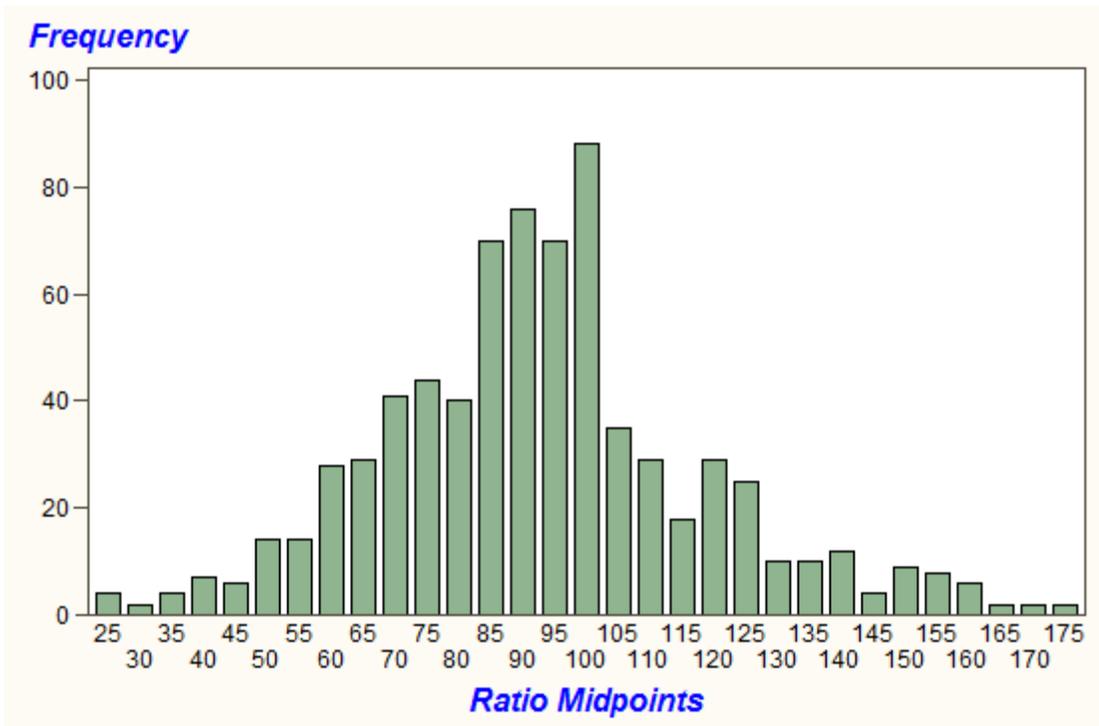
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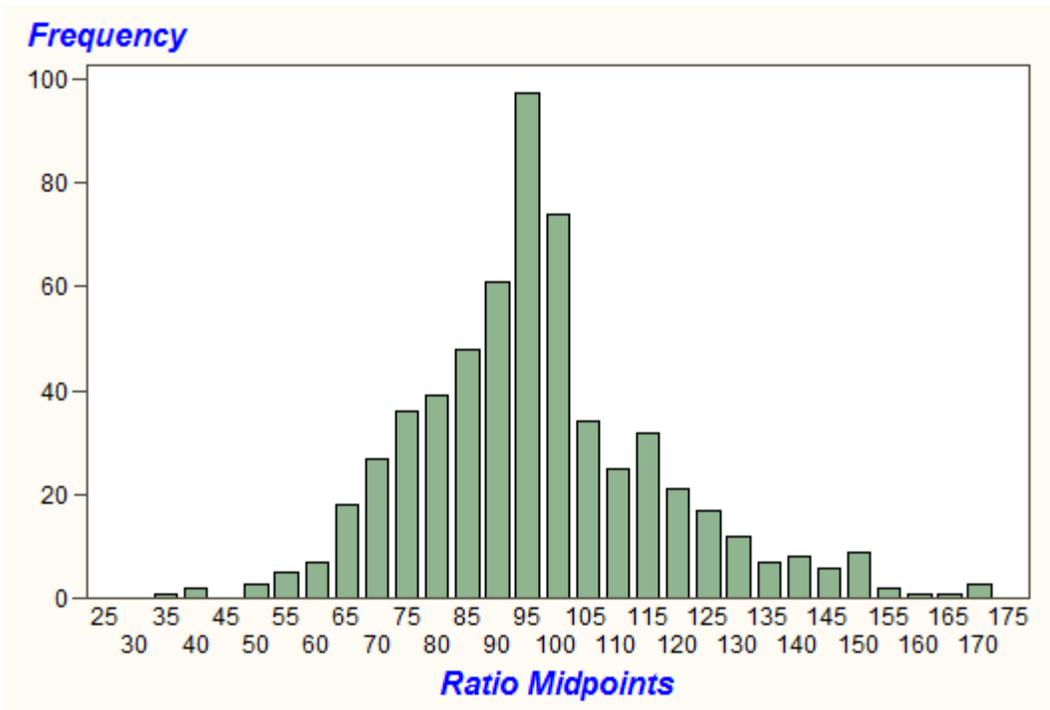
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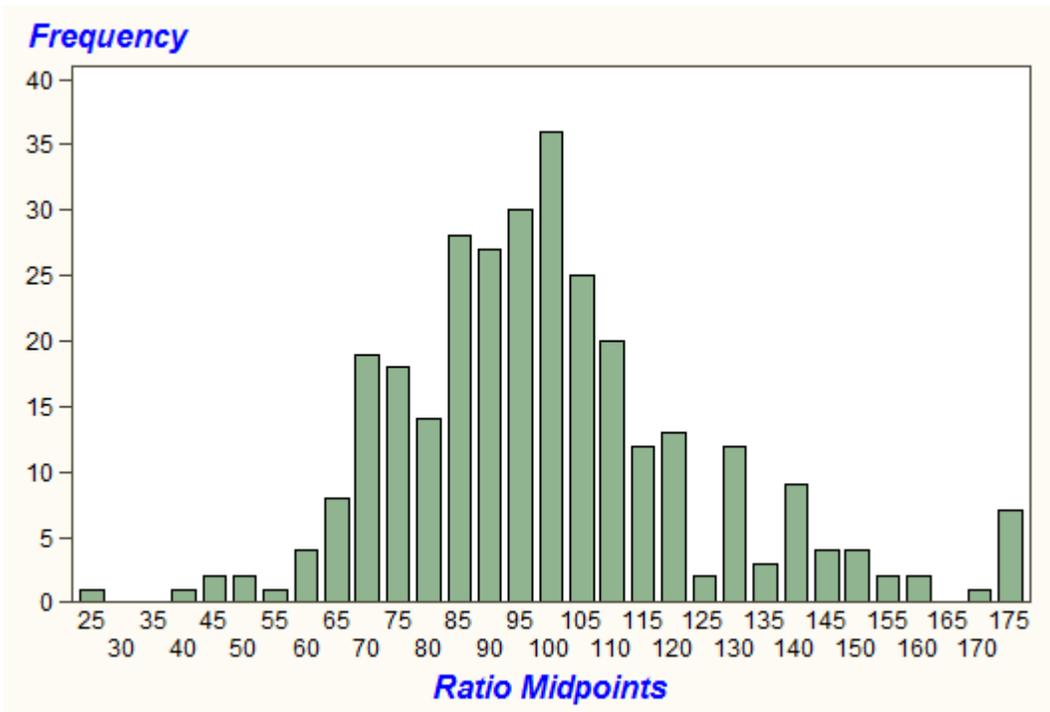
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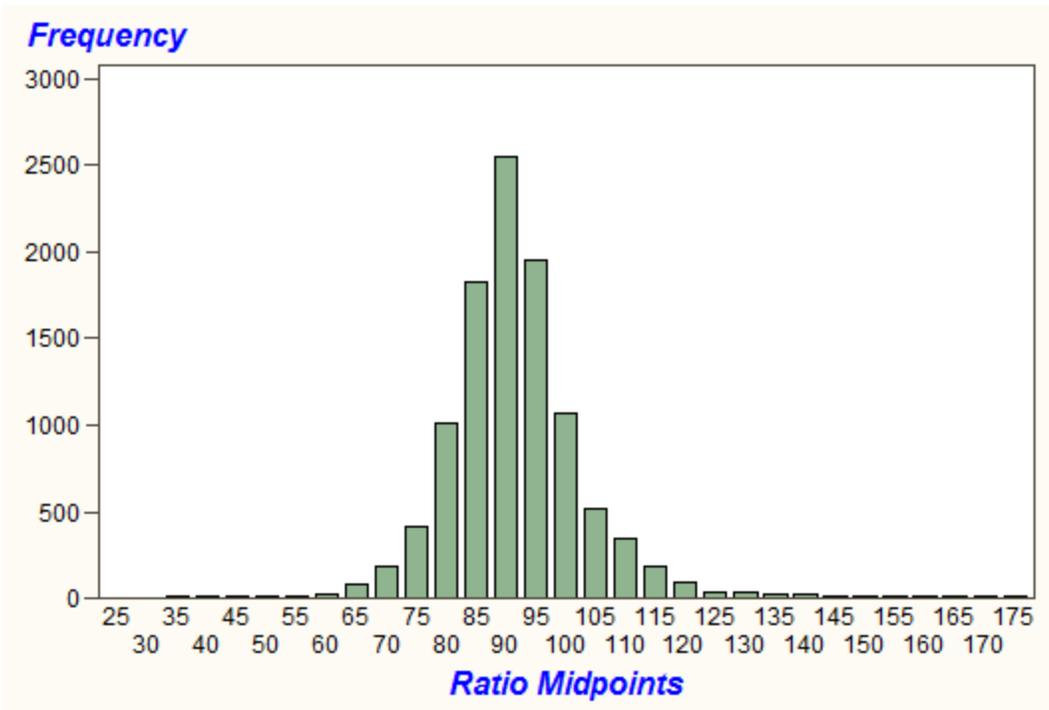
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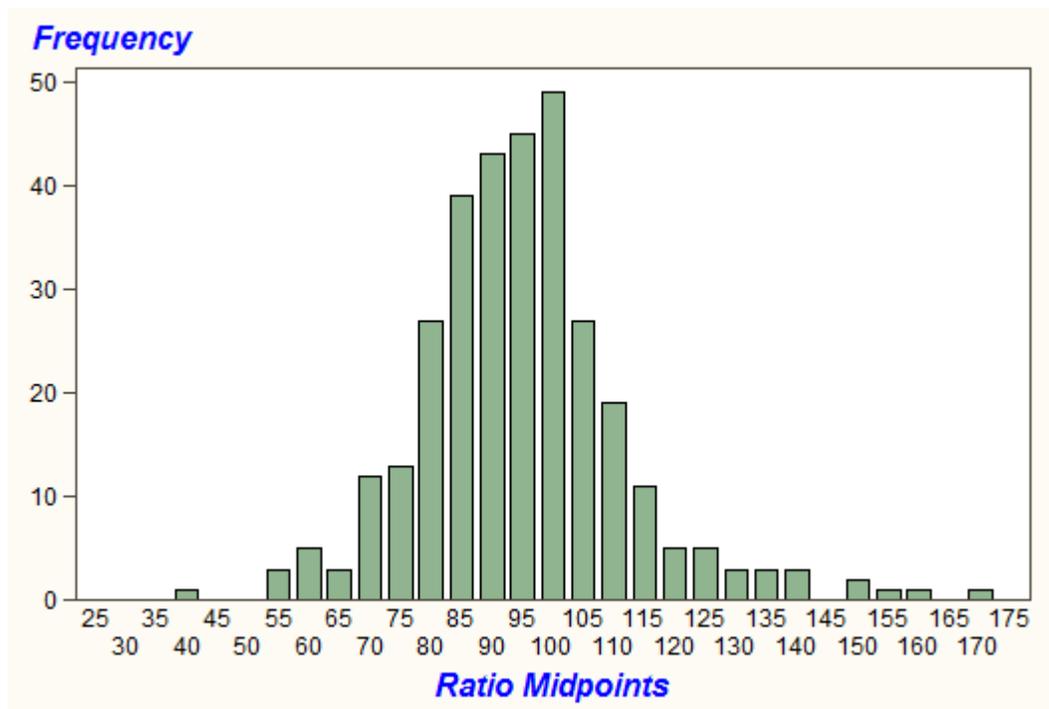
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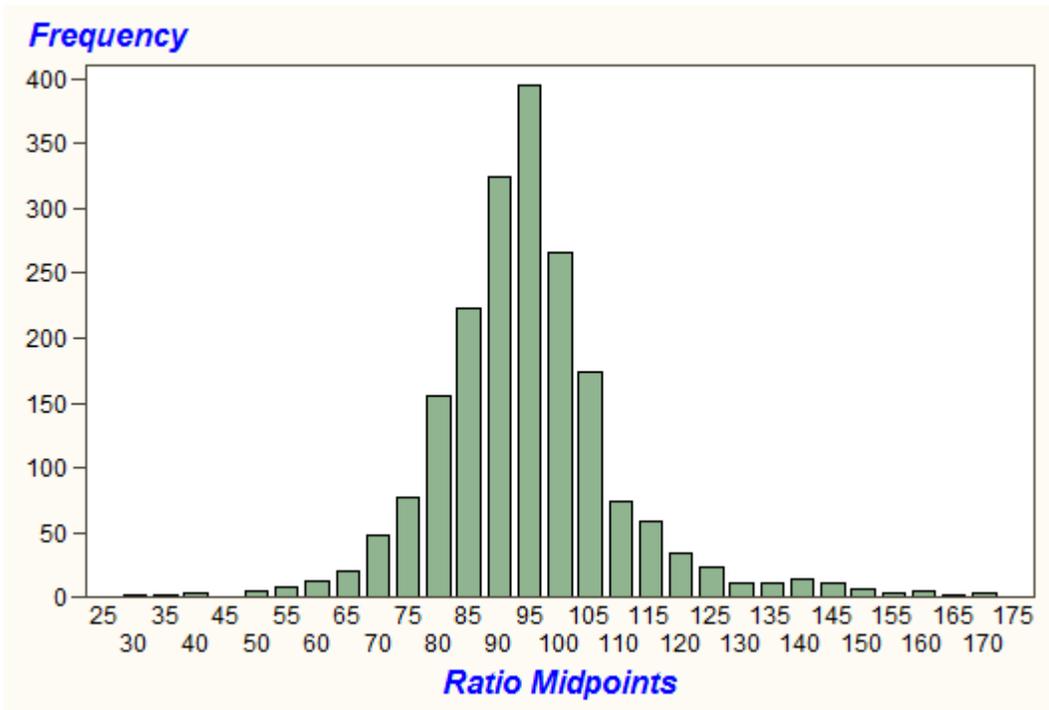
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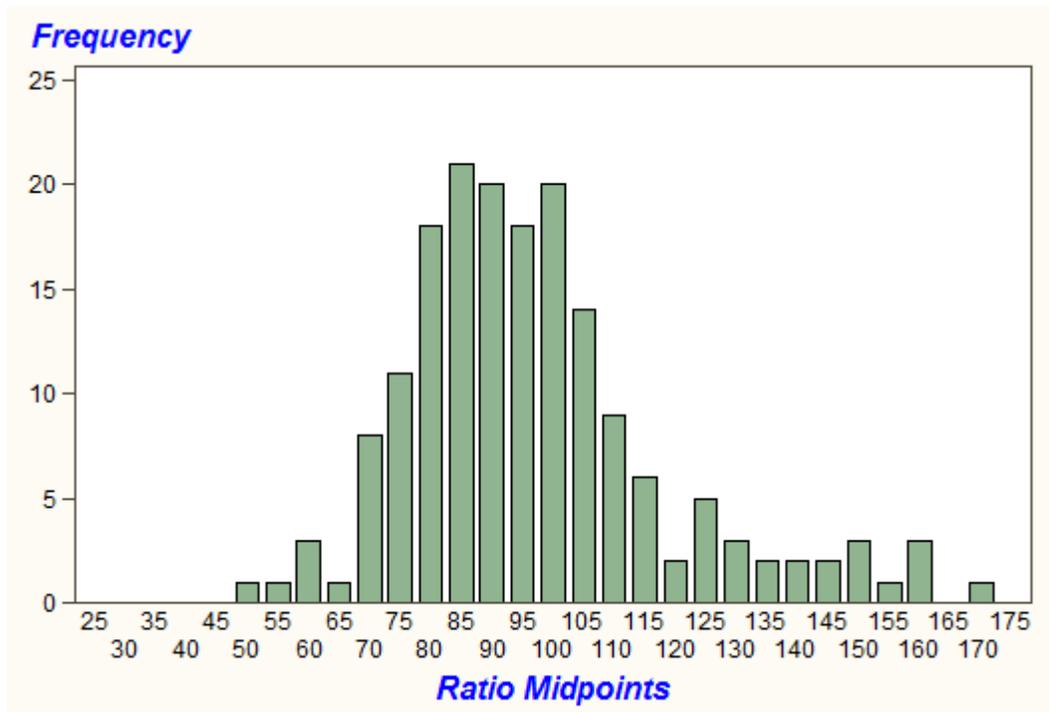
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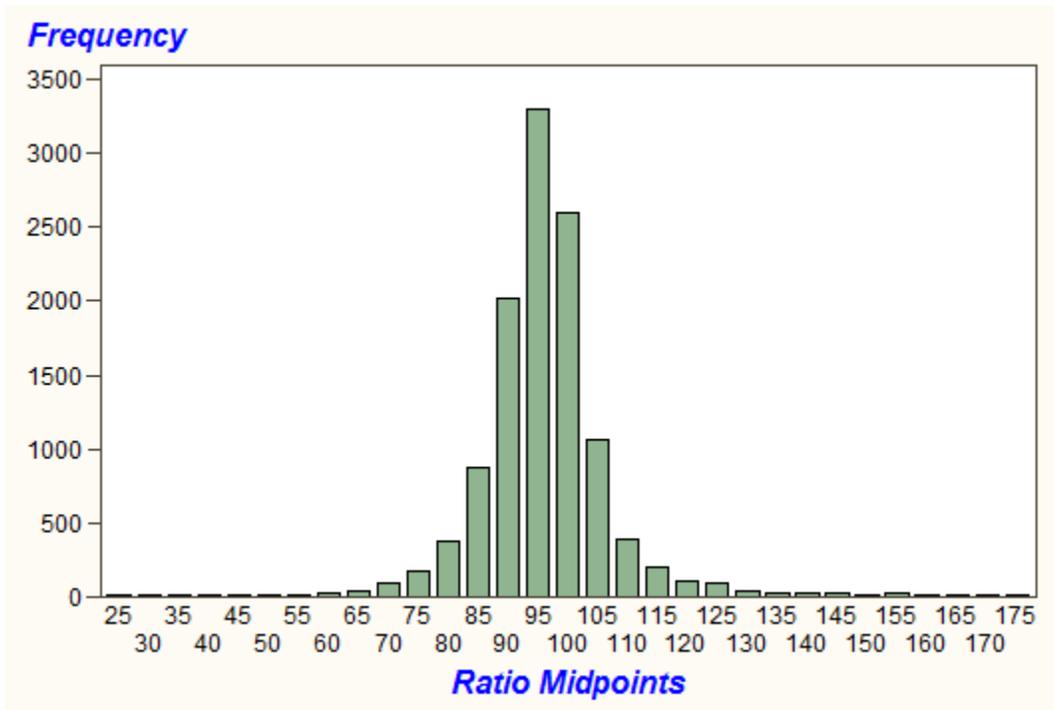
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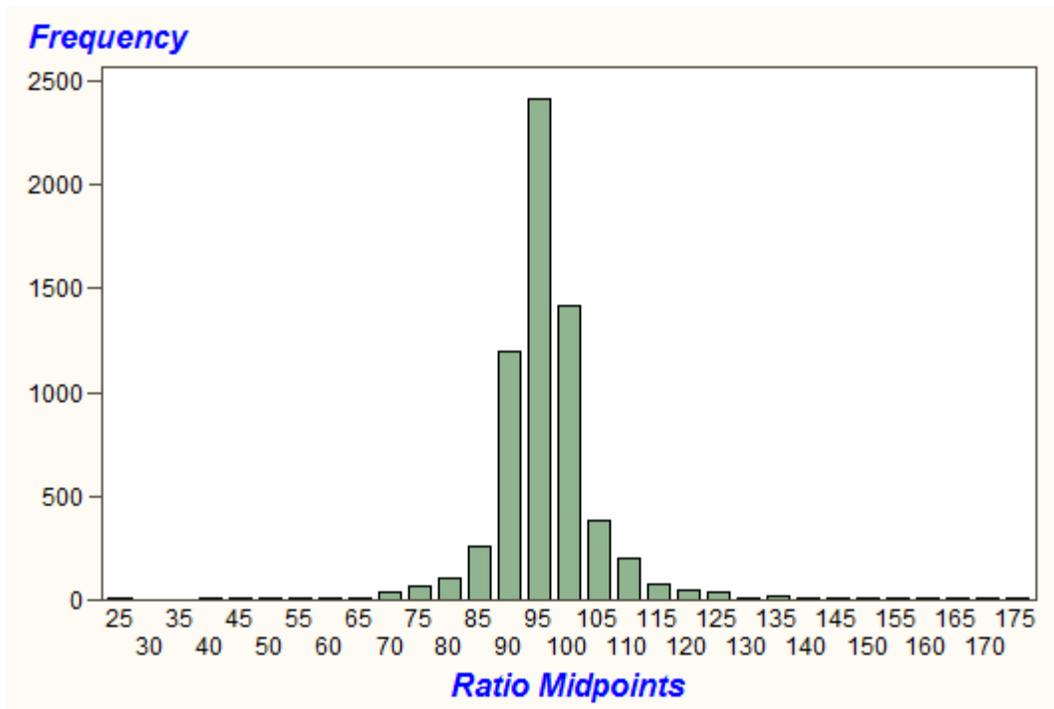
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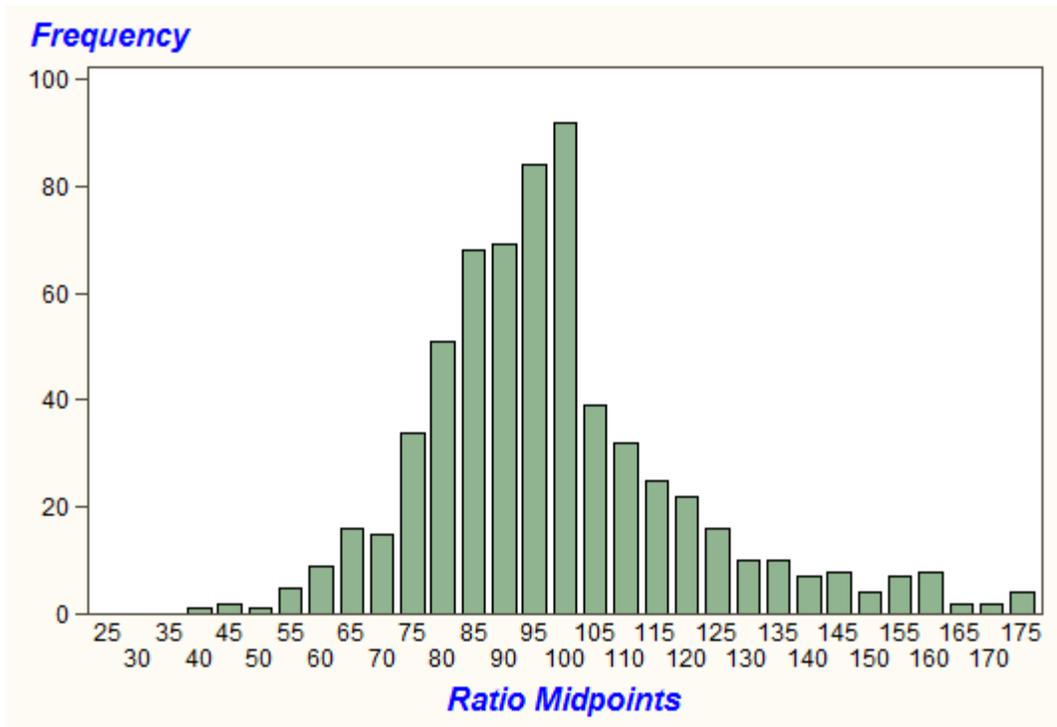
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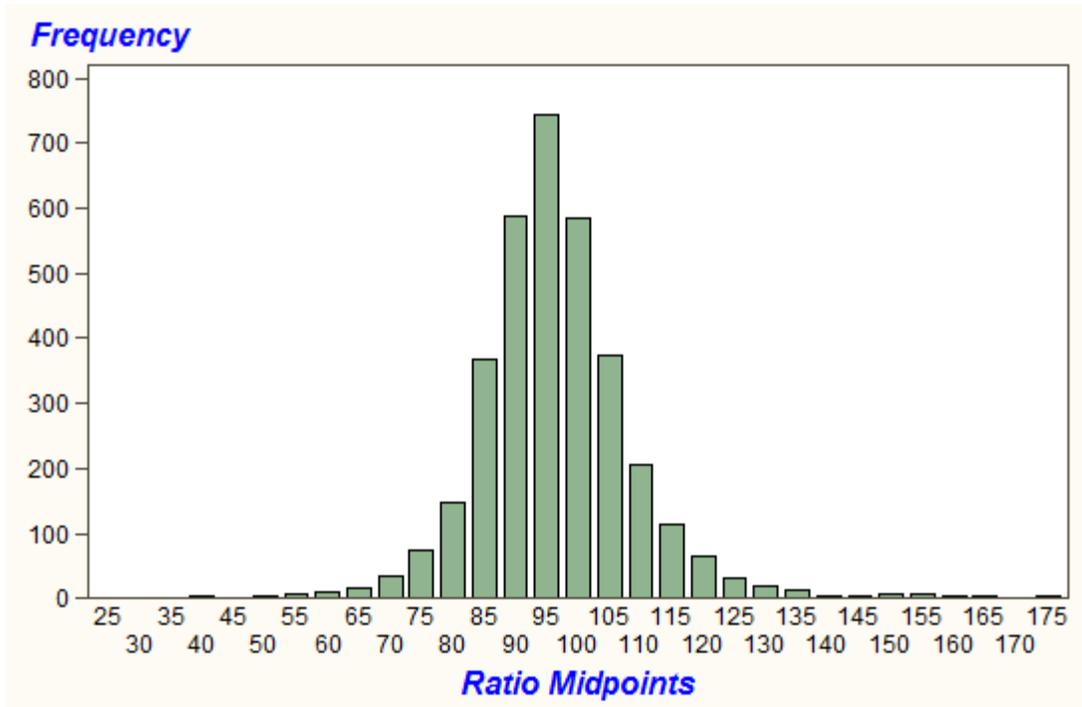
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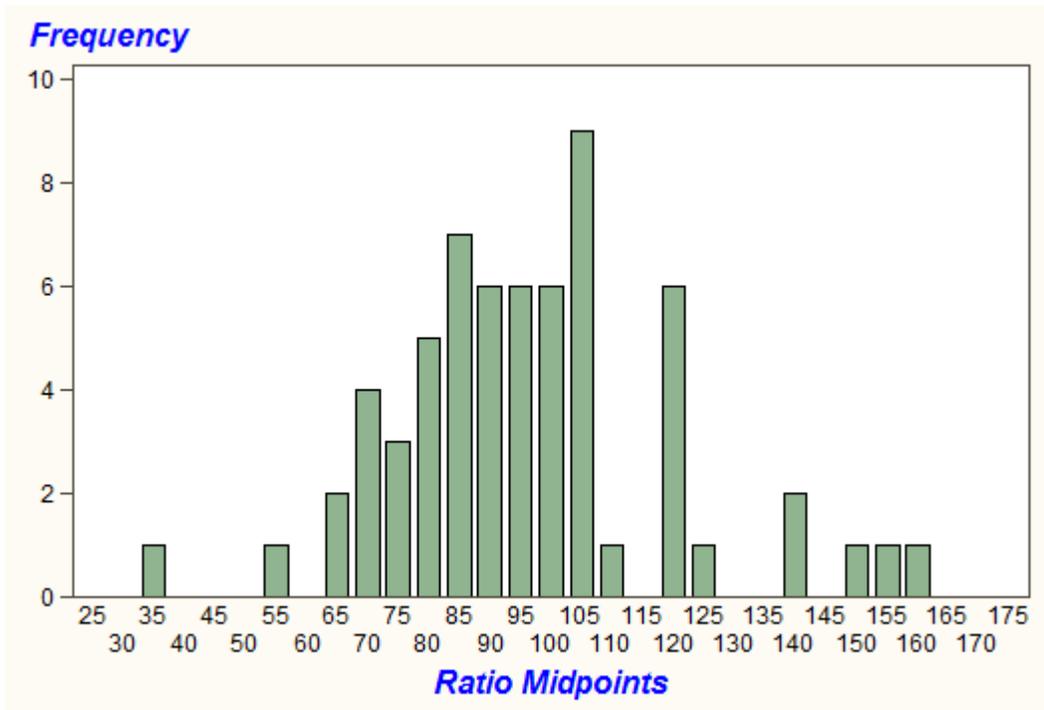
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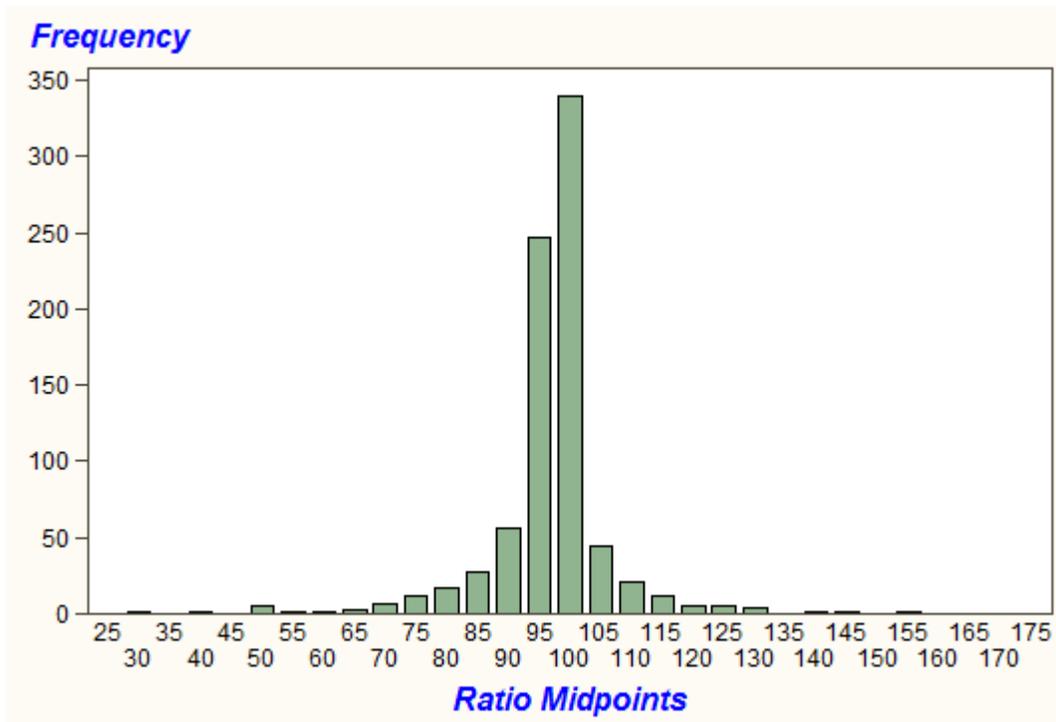
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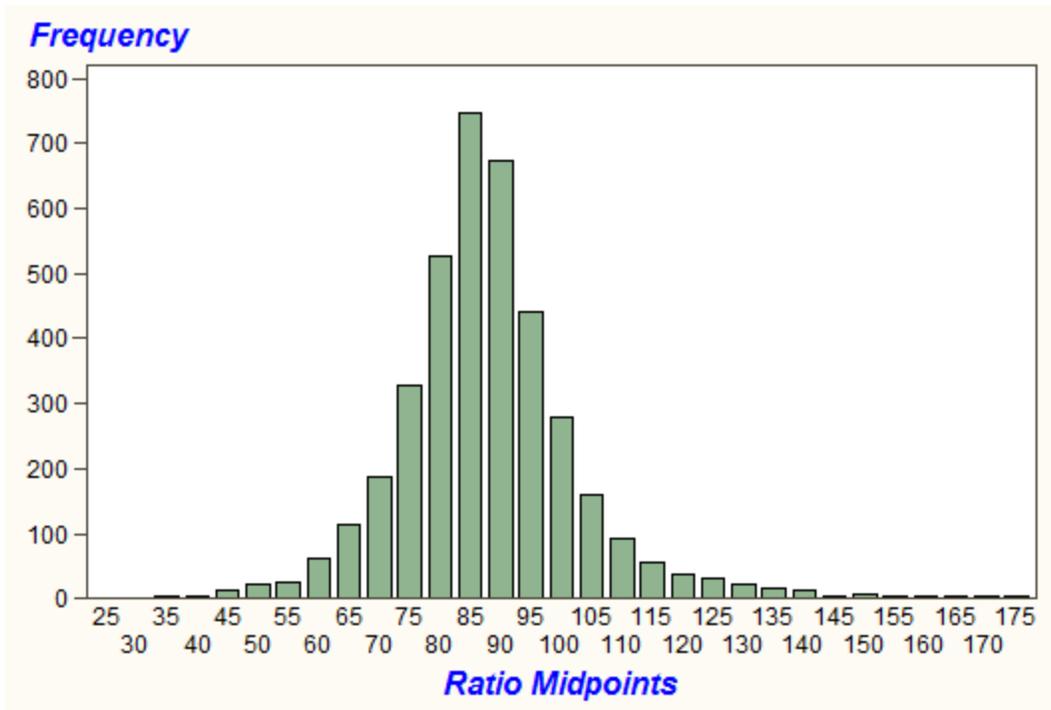
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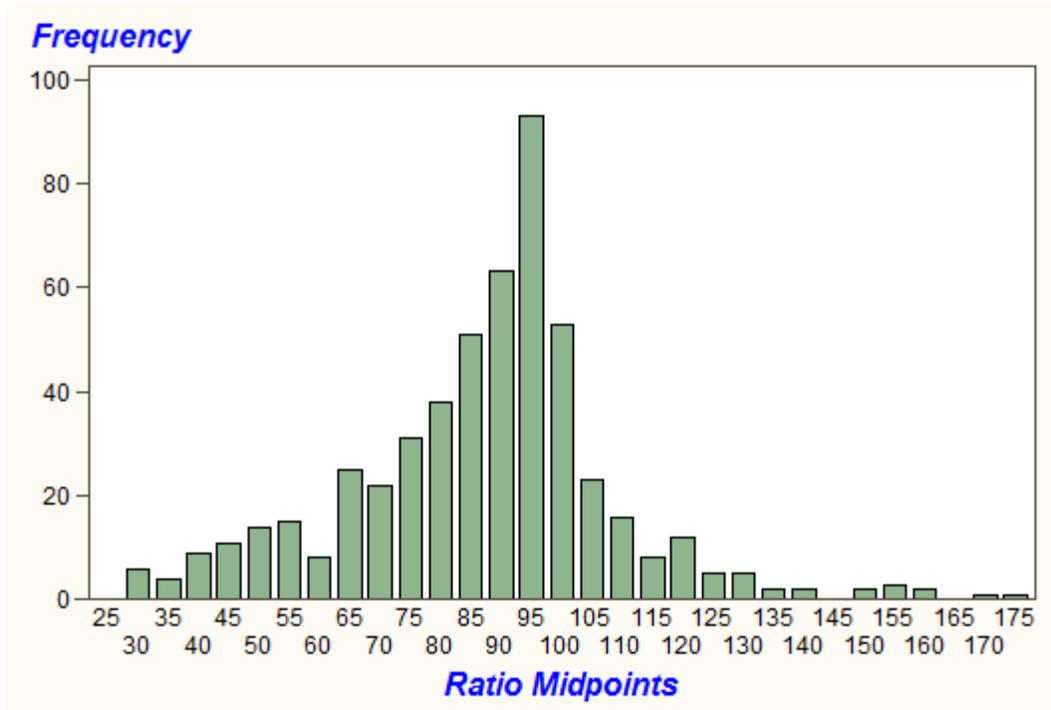
Walla Walla



Whatcom



Whitman



Yakima

