Appraiser Adverse Location Survey Results

12/1/2020

Appraisers were asked to estimate the impact on value of five adverse locations. The mean value of all responses is divided by the value of the house value assumed for each question. For example, the mean value of all responses to the impact on a $400,000 house backing to a water tower was $20,525. $20,525 is 5.1% of $400,000.

The impact to value of:

backing to water tower	5.1%
backing to power lines	3.4%
adjacent buried pipeline	2.0%
backing to freeway	6.1%
fronting busy road	4.6%
backing to rail tracks	6.0%

Below is a 5 minute video that does an excellent job of explaining the concept called The Wisdom of the Crowd. In 1906, Sir Francis Galton proved that the mean of many non-expert opinions is more reliable than one expert opinion. The inference being drawn is that many appraisers who understand adverse location and the adjustment process, but do not have geographic expertise (non-experts) are more reliable at estimating adjustment rates than one local appraiser who has geographic competence.

https://www.youtube.com/watch?v=iOucwX7Z1HU

We had 81 responses which is a credible sample size(n).

"In practice, the Central Limit Theorem allows us to make inferences about population means relying on the normal distribution when a) the population is normal or b) when n ≥ 30. As a practical matter, the sampling distribution of the mean will be approximately normal when n ≥ 15 and the population is symmetrically distributed. However, appraisers usually know very little about the shape of population distributions of price, property attributes, financing arrangements, and the like. Therefore, the n ≥ 30 criterion generally applies to real property valuation work."[1]

Other descriptive statistics are shown on page 2.

[1] An Introduction to Statistics for Appraisers p171 by Martin L. Wolverton, PhD, MAI, published by The Appraisal Institute

A $400,000 house backs to a water tower.	
Mean	20525.25
Standard Error	3705.916
Median	15000
Mode	20000
Standard Deviation	33353.24
Sample Variance	1.11E+09
Kurtosis	13.96426
Skewness	2.095225
Range	300000
Minimum	-100000
Maximum	200000
Sum	1662545
Count	81
Confidence Level(95.0%)	7375.008

A $300,000 house backs to a freeway.	
Mean	18408.27
Standard Error	1964.774
Median	15000
Mode	30000
Standard Deviation	17682.97
Sample Variance	3.13E+08
Kurtosis	8.24379
Skewness	0.275559
Range	150000
Minimum	-50000
Maximum	100000
Sum	1491070
Count	81
Confidence Level(95.0%)	3910.025

A $400,000 house is adjacent to a buried pipeline.	
Mean	7884.859
Standard Error	1423.092
Median	5000
Mode	0
Standard Deviation	12568.41
Sample Variance	1.58E+08
Kurtosis	6.587553
Skewness	2.417475
Range	70000
Minimum	-10000
Maximum	60000
Sum	615019
Count	78
Confidence Level(95.0%)	2833.738

A $300,000 house has frontage on a busy, 40mph road.	
Mean	13756.78
Standard Error	1077.427
Median	14000
Mode	15000
Standard Deviation	9392.787
Sample Variance	88224456
Kurtosis	1.993501
Skewness	1.087683
Range	50000
Minimum	0
Maximum	50000
Sum	1045515
Count	76
Confidence Level(95.0%)	2146.344

A $400,000 house backs to power lines.	
Mean	13725.56
Standard Error	1973.328
Median	12000
Mode	20000
Standard Deviation	17649.98
Sample Variance	3.12E+08
Kurtosis	9.827294
Skewness	0.510591
Range	150000
Minimum	-50000
Maximum	100000
Sum	1098045
Count	80
Confidence Level(95.0%)	3927.81

A $200,000 house backs to rail tracks.	
Mean	11975.65
Standard Error	1596.644
Median	10000
Mode	10000
Standard Deviation	14369.79
Sample Variance	2.06E+08
Kurtosis	18.74326
Skewness	2.535619
Range	140000
Minimum	-40000
Maximum	100000
Sum	970028
Count	81
Confidence Level(95.0%)	3177.423