JANUARY 2010 Land Markets PUBLICATION 1923

A Reprint from *Tierra Grande*

Small, Medium, Large

Tract Size Affects Land Prices

By Charles E. Gilliland
and Abhijeet Gunadekar

When it comes to rural land, small properties sell for more per acre than comparable large tracts. Because of this, studies of trends in land prices based on sales should include an analysis of size trends over time.

Specifically, median price per acre may increase from one year to the next, but if that rise is coupled with a sharp drop in the typical tract size, the indicated trend is probably an exaggeration. It may even mask a decline in prices when markets weaken. The 2009 Texas rural land market provides a case in point.

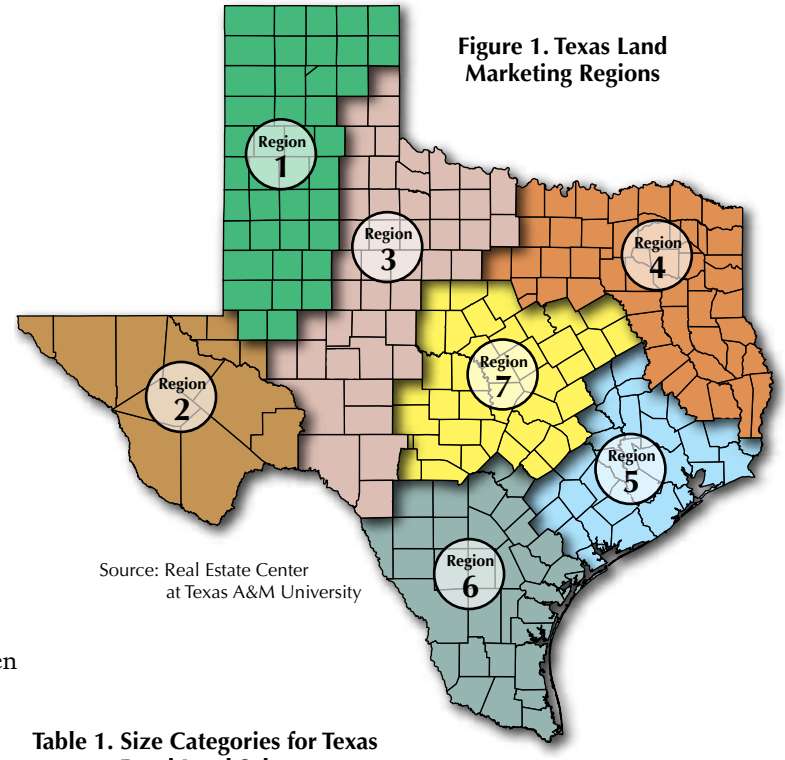


Figure 1. Texas Land Marketing Regions

Source: Real Estate Center at Texas A&M University

The typical acreage in Texas land market transactions varies in size in response to changing market conditions. Those variations wax and wane with ever-changing social and economic developments.

The statewide median tract size was 145 acres in 1992 when recession-shocked buyers avoided unnecessary spending and markets were saturated with lender-owned properties remaining from the 1986 economic collapse. Median tract size dipped as low as 80 acres in 2007, reflecting the growing numbers of buyers securing their own personal footholds in the countryside (see *Texas Land Market Developments, Third Quarter 2008;* recenter.tamu.edu/pdf/1885.pdf).

Growing prosperity encourages more and more urbanites to seek a bucolic refuge away from the turmoil of the city. The result is a flood of well-heeled buyers with available (but limited) wealth increasing the demand for small parcels. Large numbers of small properties change hands, and entrepreneurs began to split large properties into more marketable small tracts.

During tough economic times, recreational and investment buyers retreat, leaving the market to farmers and ranchers, who typically seek larger tracts. However, at the onset of downturns, fewer prosperous buyers can muster the resources needed to acquire large properties, while small tracts still find buyers. Consequently, the faltering market for large tracts leads to relatively few large-property sales, altering the mix of marketed properties.

That dearth of sizable tract sales tips aggregated market statistics toward the small end of the spectrum. As larger tracts fail to sell, potential buyers sense falling prices in the offing and reduce their offers. The resulting mix of sales has fewer large properties and typical tract size falls.

From 2002 through 2007, booming markets teeming with eager small-tract buyers drove tract size down. Then in 2008 the volume of sales declined. However, a decrease in large-

Table 1. Size Categories for Texas Rural Land Sales

	Size Class	1966–2008 Median Price	Size Adjustment (Percent)
Region 1	< 160	498.13	124.5
	161–180	386.25	96.6
	181–320	400.00	100.0
	321–550	350.00	87.5
	> 551	283.19	70.8
Region 2	< 500	2,299.50	2673.8
	500–2,000	127.50	148.3
	2,001–6,500	86.00	100.0
	6,501–12,100	75.00	87.2
	> 12,101	70.00	81.4
Region 3	< 95	500.00	134.9
	96–160	391.25	105.5
	161–240	370.74	100.0
	241–500	347.50	93.7
	> 501	248.25	67.0
Region 4	< 36	1,105.00	130.0
	36–55	953.65	112.2
	56–90	850.00	100.0
	91–160	750.00	88.2
	> 161	592.50	69.7
Region 5	< 40	1,775.00	151.8
	41–65	1,271.00	108.7
	66–100	1,169.25	100.0
	101–190	1,000.00	85.5
	> 191	750.00	64.1
Region 6	< 45	1,606.25	201.5
	46–90	997.50	125.1
	91–165	797.08	100.0
	166–365	674.00	84.6
	> 366	500.00	62.7
Region 7	< 50	1,231.25	161.5
	51–95	922.75	121.0
	96–155	762.50	100.0
	156–280	656.75	86.1
	> 281	576.00	75.5

Source: Real Estate Center at Texas A&M University

property buyers in 2009 resulted in a larger proportion of small properties in the reported statewide data on rural land markets.

To gauge the effect of such size variations on land prices in Texas, Center researchers analyzed Texas land sales using the seven regions delineated by the Texas Chapter of the American Society of Farm Managers and Rural Appraisers (Figure 1). Reported annual sales were divided into five equal groups (classes) based on tract size in each of the years from 1966 to 2008.

The category containing the smallest properties contained all sales of acreage smaller or equal to the 20th percentile. The next size class contained sales of acreage from the 20th percentile up to the 40th; the third class size ranged up to the 60th percentile, and the largest class exceeded the 80th percentile.

In a market where volume of sales of large tracts has plummeted, the median price per acre reflects a market shift to pricier small properties.

Using the acreages from each size class over the 42 years, "normal" size categories for land markets in each region were established. Then a median price within each size category was calculated to establish an estimated typical price for that category. That produced an array of typical size-related prices in each region for each year.

For example, Region 7, located in Central Texas, includes the Hill Country, highland lakes, blacklands and portion of the grand prairie. Region 7 is dominated by rangeland prized for its scenic characteristics with substantial expanses of cropland and pasture. Expanding urban populations in the region have prompted owners to subdivide large holdings, resulting in a sizable volume of relatively small sales.

Analysis of Region 7 sales indicates substantial variation in prices based on the size of transaction over the 42-year period (Table 1). The median price for the third class size (96–155 acres) in the middle of the distribution was $762.50 per acre over the 42-year interval. Median price for the smallest tracts (less than 50 acres) was $1,231.25 over the 42 years. That suggests that small properties in Region 7 historically sold for 161.5 percent of prices registered for land in the middle-size interval, a 61.5 percent premium.

At $576 per acre, the largest tracts (more than 281 acres) sold at 75.5 percent of the middle interval median price, a 24.5 percent discount from prices in the 96–155 acre class. The 156–280 acres class reflected a 13.9 percent discount while the 51–95 acres size class registered a 21.0 percent premium in per-acre price.

Analysis of the remaining regions indicates that large property discounts range from as much as 37.3 percent in Region 6 to as little as 18.6 percent in Region 2. Small tract premiums ranged from 101.5 percent in Region 6 to as little as 24.5 percent in Region 1. Region 2 small property sales showed a premium of nearly 27 times the third class size, indicating that the small sales in that area are not comparable to land sales in the other four size classes.

This analysis indicates that variations in size do impact market unit price trend indicators in Texas land markets. The amount of premium and discount varies across the different areas of Texas. The agricultural country of Region 1 showed an overall range of 53.7 percent between small property premium and large property discount, while other areas displayed a much larger variation.

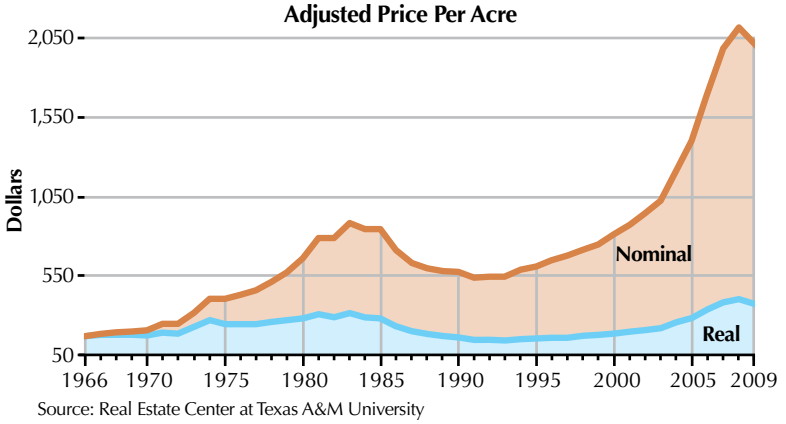
These results suggest a need to adjust market indicators based on observed prices when the size composition of the market changes abruptly. Obviously, in a market where volume of sales of large tracts has plummeted, the median price per acre reflects a market shift to pricier small properties. Such circumstances could lead to a substantial error when using these statistics to estimate overall market trends.

Researchers calculated adjusted regional trends from 1966 through 2009 and combined the regional indicators into a statewide price trend adjusted for both size and location. The size-adjusted price indicator suggests that rural land prices across Texas have begun to retreat from the frenzied increases posted from 2004 to 2007 (Table 2 and Figure 2).

In fact, the price for the first three quarters of 2009 settled in at 3 percent less than the 2008 weighted price. This decline coincides with the experience related by land market participants all across the state.

Before adjusting for size, the statewide land prices appeared to have increased slightly. The revised price series reflects the accelerating market prices posted between 2003 and 2007, peaking at $2,125 per acre in 2008. The 2009 price of $2,054

Figure 2. Texas Rural Land Size- and Location-Adjusted Price Per Acre



Source: Real Estate Center at Texas A&M University

Table 2. Nominal and Real Changes in the Size- and Location-Adjusted Weighted Average Price of Texas Rural Land, 1966–2009 Third Quarter

		Nominal			Real		
Year	Median Tract Size (acres)	Weighted Average Index Price Per Acre	Year-to-Year Percentage Change	Annual Compound Five-Year Growth Rate	Deflated Weighted Average Index Price Per Acre*	Year-to-Year Percentage Change	Annual Compound Five-Year Growth Rate
1966	120	$169	****	****	$169	****	****
1967	110	183	9	****	178	5	****
1968	101	193	5	****	180	1	****
1969	100	199	3	****	176	–2	****
1970	107	207	4	****	175	–1	****
1971	110	244	17	7.6	195	11	2.9
1972	120	243	0	5.7	186	–5	0.9
1973	153	317	31	10.4	231	24	5.1
1974	150	404	28	15.3	270	17	8.9
1975	126	405	0	14.3	247	–9	7.1
1976	128	431	6	12.1	248	0	4.9
1977	121	460	7	13.7	250	1	6.1
1978	126	514	12	10.2	260	4	2.4
1979	132	577	12	7.4	270	4	0.0
1980	138	662	15	10.3	284	5	2.8
1981	124	791	19	12.9	310	9	4.6
1982	105	785	–1	11.3	290	–6	3.0
1983	113	882	12	11.4	314	8	3.8
1984	125	843	–5	7.9	289	–8	1.4
1985	118	845	0	5.0	281	–3	–0.2
1986	113	707	–16	–2.2	230	–18	–5.8
1987	130	631	–11	–4.3	200	–13	–7.2
1988	139	600	–5	–7.4	184	–8	–10.1
1989	141	580	–3	–7.2	171	–7	–10.0
1990	135	573	–1	–7.5	163	–5	–10.3
1991	138	537	–6	–5.4	147	–10	–8.6
1992	145	549	2	–2.7	147	0	–6.0
1993	140	542	–1	–2.0	142	–3	–5.1
1994	136	591	9	0.4	152	7	–2.3
1995	122	612	4	1.3	154	1	–1.1
1996	111	654	7	4.0	161	5	1.8
1997	139	679	4	4.3	165	2	2.3
1998	139	718	6	5.8	173	5	4.0
1999	120	749	4	4.9	177	2	3.1
2000	117	816	9	5.9	189	7	4.2
2001	101	875	7	6.0	198	5	4.2
2002	107	949	8	6.9	211	7	5.0
2003	100	1,028	8	7.4	224	6	5.3
2004	102	1,221	19	10.3	259	16	7.9
2005	100	1,413	16	11.6	290	12	8.9
2006	98	1,713	21	14.4	340	17	11.4
2007	80	1,986	16	15.9	384	13	12.7
2008	90	2,125	7	15.6	402	5	12.4
2009	73	2,054	–3	11.0	383	–5	8.1

*In terms of 1966 dollars
Source: Real Estate Center at Texas A&M University

represents a 3 percent statewide decline, reflecting price weakness in many areas.

This size-adjusted array of prices more closely reflects the reality of today's market and suggests that land prices have begun to come back down to earth.

Dr. Gilliland (c-gilliland@tamu.edu) is a research economist and Gunadekar a research assistant with the Real Estate Center at Texas A&M University.

THE TAKEAWAY

Size matters when determining price trends in Texas land markets. In general, large tracts sell for less per acre than small tracts, but premiums and discounts vary from one area of the state to another. Size-adjusted prices indicate that land markets are weakening.

MAYS BUSINESS SCHOOL

Texas A&M University
2115 TAMU
College Station, TX 77843-2115

http://recenter.tamu.edu
979-845-2031

Tierra Grande (ISSN 1070-0234) is published quarterly by the Real Estate Center at Texas A&M University, College Station, Texas 77843-2115. Subscriptions are free to Texas real estate licensees. Other subscribers, $20 per year. Views expressed are those of the authors and do not imply endorsement by the Real Estate Center, Mays Business School or Texas A&M University. The Texas A&M University System serves people of all ages, regardless of socioeconomic level, race, color, sex, religion, disability or national origin. Photography/Illustrations: Real Estate Center files, p. 1.