

Ground Control

Most Influential Land Price Factors

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Land markets function because of an available supply of credit, meaning limits on credit pose challenges for potential buyers. From March 2022 to July 2023, the Federal Reserve raised the short-term fed fund rate 11 times to combat inflation. In response, banks increased their credit standards and constrained loan offers, and a phenomenon called credit tightening occurred. The question is, if the credit market begins to contract, will it lead to a decline in rural land values? Possibly.

To answer this question, the Texas Real Estate Research Center (TRERC) developed a model that measures the impact of credit availability on Texas rural land prices while controlling for other potential market influences. TRERC has noticed that research on agricultural land values using summary data often obscures factors that may help explain differences, such as the land's distance to urban centers. In addition, relying on summary data prevents the use of innovative models that are common in fields like residential land or housing value studies. Therefore, rather than relying on broad credit indicators such as interest rates, the study

Key Takeaways

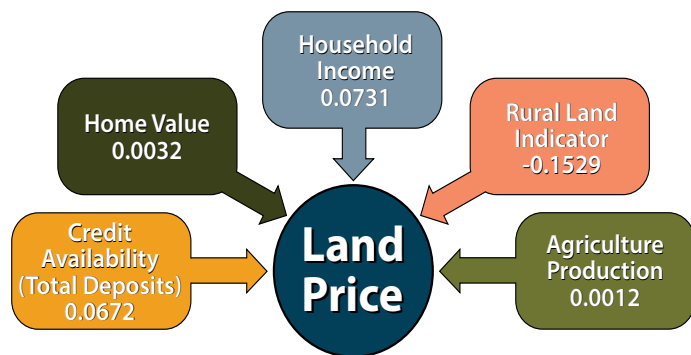
- Credit availability affects Texas rural land prices positively.
- Household income and agricultural production significantly influence rural land prices.
- Home price increases have a relatively small impact on land prices, although the effect may be greater in urban fringe markets.

employed data collected at the county level to capture location variations and improve prediction of market trends. TRERC's model used data for 147 of the state's 254 counties collected at five-year intervals (2007, 2012, and 2017). The model evaluated median rural land price using the following variables:

- credit availability measured by the number of different bank companies in a county and total deposits in banks in the county measured in millions of dollars per square mile;

- median value of single-family home;
- government payments received per acre, excluding conservation payments;
- median household income;
- a rural–urban continuum indicator;
- per-acre market value of agricultural products sold; and
- value of machinery reported in the Census of Agriculture.

TRERC’s study found Texas rural land prices are heavily influenced by traditional farm returns as well as a number of nonfarm variables (see figure). These variables help explain land prices over time and differences from county to county. The coefficient indicates the estimated effect of the associated variable.



See the technical report *Credit Availability's Effect on Texas Rural Land Markets* for regression details.



Total Deposits (in Millions of Dollars)

The deposit variable coefficient of 0.0672 indicates that, for total deposits measured as millions of dollars per square mile, each additional \$1 million in deposits implies a \$67.20 per acre increase in land price—a substantial impact on land values.

The reason for this could be that when banks have more funds, they grant more loans to land buyers. This increase in credit supply may push land prices up.

Single-Family Home Values (in Thousands of Dollars)

The estimated impact of the home value variable indicates that a \$1,000 increase in home price generates only a \$3.20

per acre increase in the price of rural land. This minor effect indicates that while expansion of the single-family home market has statistically significant effect on rural land prices, that effect is not *practically* significant. Home price increases signal potential increases in demand for developed land, so this effect would likely be larger in urban fringe markets.

Household Income

A \$1,000 increase in median household income results in a \$73.10 per-acre increase in land value. This suggests that increased prosperity, which improves purchasing power, greatly impacts rural land prices.

Agricultural Production Value Per Acre

Agricultural products (i.e., crops and livestock) sold also has a substantial impact on land prices, with a \$1.00 increase in agricultural product value boosting land prices by \$1.20 per acre.

Rural-Urban Indicator

The rural–urban continuum code variable, which is nearly statistically significant, indicates that distance matters to Texas land values.

A larger code signifies a more rural county, while a smaller code signifies a more urban area. TRERC’s model shows a negative effect of -0.1529 for each unit increase in distance from population centers, indicating that the farther away the land is from metropolitan cities, the lower the demand for commercial land.

Most Impactful Factors

Several nonagricultural factors impact Texas rural land values, with median household income having the strongest influence.

Credit availability, however, is also a big driver, confirming results of recent land value studies conducted outside of Texas. Lenders can assess and mitigate loan risks and better manage their investment portfolios if they are aware of these positive impacts on land values. 📌

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