

# HOUSING AFFORDABILITY

## Outlook Improving Along the Border

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In recent years the U.S. home-ownership rate has reached historic levels. The 66.8 percent recorded in 1999 is the highest since the statistic was first collected in 1965. Texas experienced a similar trend in 1999, posting the highest home-ownership rate since 1984. The most recent statistics available for Texas–Mexico border communities show home-ownership rates comparable to those of Texas as a whole. In 1990, Texas' 60.9 percent rate was only slightly above El Paso's 58.7 percent and several points below Brownsville's 64.4 percent.

However, studies suggest that a substantial percentage of border residents spend an excessive proportion of income on housing (30 percent of income is widely considered acceptable). According to a 1998 report from the Texas Comptroller of Public Accounts, housing is considered affordable to only one in three residents along the Texas–Mexico border. A study by Jorge Chapa of the University of Texas reported that from 1980 to 1990 the percentage of households paying excessive housing costs rose sharply in several border counties. Cameron County saw

an increase of 42 percent and El Paso County 23 percent. The study projected the number of households paying excessive housing costs would continue increasing through 2000 and beyond.

This article discusses trends in housing affordability along the Texas–Mexico border during the 1990s, compares affordability levels among four border communities and suggests possible reasons for any variation.

### Affordability Analysis

To determine the level of housing affordability along the border, we compare the monthly mortgage payment on the median-priced home with the monthly payment affordable to a household earning the area median income. We perform this comparison for the Brownsville, El Paso, Harlingen and McAllen metropolitan statistical areas (MSAs) for the years 1992–99. In accordance with industrywide standards, we assume 30 percent of monthly gross income to be an affordable housing payment. We calculate monthly gross income from annual median incomes established by the Department of Housing and Urban Development.

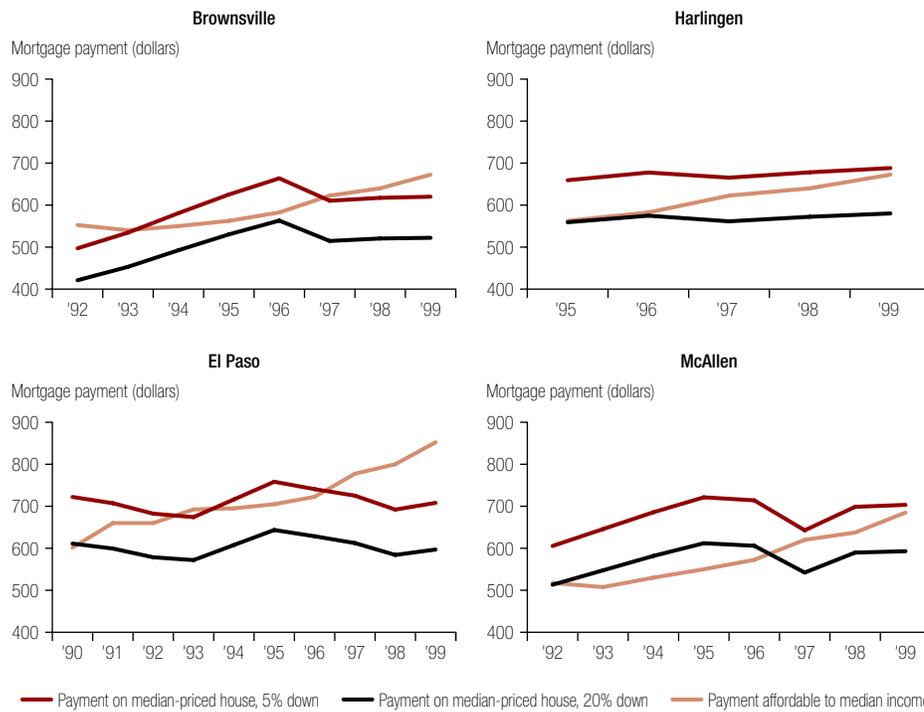
Using the annual median sales price for a single-family residence, we calculate the mortgage payment for a median-priced residence. We assume a 30-year term, the average annual mortgage interest rate, the average annual homeowner's insurance premium rate and the average statewide property tax rate. For comparative purposes, we make two calculations for each MSA for each year. One assumes a 20 percent down payment and the other 5 percent. When the latter is assumed, we add a calculation for private mortgage insurance to the formula.<sup>2</sup>

### Housing Affordability

In recent years, purchasing a house along the border has generally become more affordable (*Chart 1*). In the early 1990s, buying the median-priced house was impossible in three of the four markets examined unless a purchaser made a significant down payment, roughly 20 percent or more. By the end of the 1990s, households earning the median income could afford the mortgage payment on the median-priced house when making only a 5 percent down payment in two markets and were just a few dollars short in the other two.

Chart 1

**Housing Affordability in Border Cities**



SOURCES: See Note 2.

Table 1 shows affordability of a median-priced home in 1992 and 1999 assuming a 5 percent down payment. In 1992, the mortgage payment on the median-priced house in El Paso was \$682—\$22 above what was affordable to a median-income household. By 1999, the situation was very different: A median-income household could afford \$853 for a mortgage—\$145 more than the monthly payment on the median-priced house.

In contrast, the mortgage on the median-priced house in McAllen and Harlingen was not affordable to households earning the median income in 1999. In both communities, the monthly amount a household could afford to spend on housing was about \$15 below the payment on the median-priced home. However, like El Paso, both communities experienced an increase in affordability.

In Brownsville, a household earning the median income in 1999 could afford more for a mortgage than was necessary for the median-priced house. However, as Table 1 shows, the median-priced house was already affordable to median-income households in 1992 and was actually less affordable in 1999.

With the exception of Brownsville, increases in housing affordability in the MSAs examined exceeded the increase in affordability for the entire state. Clearly the border region has made positive gains in this arena.

**Determinants of Affordability**

Many factors contribute to housing affordability. Declining interest rates and the 1997 increase in the Texas homestead property tax exemption both boosted housing affordability throughout the state. However, the varying rates of affordability among the border MSAs suggest other factors are also in play. This section explores possible reasons for the changes in housing affordability along the Texas–Mexico border and looks at circumstances that may be responsible for the differing affordability rates in the four border MSAs.

**Income**

Much of the improvement in housing affordability along the border has occurred because the increase in income levels has outpaced the rise in home prices. As shown in Table 2, the three MSAs that recorded greater housing affordability had income growth

Table 1

**Affordability of Median-Priced Home, 1992 and 1999**

	1992			1999			Percentage point change in affordability 1992–99
	Mortgage payment	Affordable housing payment	Affordable payment as percentage of mortgage payment	Mortgage payment	Affordable housing payment	Affordable payment as percentage of mortgage payment	
Brownsville	\$497	\$553	111	\$620	\$ 673	109	–2
El Paso	682	660	97	708	853	120	23
Harlingen*	659	563	85	688	673	98	13
McAllen	605	518	86	703	685	97	11
Texas	751	910	121	927	1,145	124	3

\* Harlingen data begin in 1995.

NOTE: Calculations assume 5 percent down payment.

SOURCES: Department of Housing and Urban Development; author's calculations. See Note 2 for mortgage payment calculation.

Table 2

**Median Home Sales Price and Median Income, 1992 and 1999**

	Median sales price			Median income		
	1992	1999	Percent change	1992	1999	Percent change
Brownsville	\$50,100	\$ 68,600	37	\$22,100	\$26,900	22
El Paso	68,400	77,900	14	26,400	34,100	29
Harlingen*	66,800	75,800	13	22,500	26,900	20
McAllen	60,800	77,800	28	20,700	27,400	32
Texas	75,200	101,000	34	36,400	45,800	26

\* Harlingen data are for 1995 and 1999.

SOURCES: Texas Real Estate Center; Bureau of Economic Analysis.

larger than housing price increases. In Brownsville, the only community that did not see an increase in affordability, income growth was slower than sales price growth.

From 1992 to 1999, the median household income in El Paso grew 29 percent, more than double the 14 percent increase in the median house price. McAllen also posted a large gain in median family income—32 percent from 1992 to 1999. But unlike in El Paso, the median house price also rose dramatically, increasing 28 percent. In Brownsville, the 37 percent increase in median house price significantly outpaced the 22 percent increase in income. Harlingen experienced a 20 percent rise in income and a 13 percent rise in house prices for 1995–99.

**Population Growth**

The rapid income growth explains much of the increased housing affordability. However, the equally rapid

rise in housing prices has dampened affordability in some communities. For example, from 1992 to 1999 income levels climbed dramatically in both El Paso and McAllen; however, because of McAllen's large increase in median home prices, its increase in housing affordability significantly trailed El Paso's.

The faster increase in median house prices in McAllen and Brownsville may be partly caused by their population boom. A 1998 Census Bureau report ranks McAllen and Brownsville the fourth and 14th fastest growing MSAs in the country. Rapid population growth is likely to increase demand for houses and, hence, put upward pressure on prices.

**New Home Construction**

The volume of new construction also may affect affordability. In El Paso, for example, greater housing affordability is due to not only income growth but also the relatively minimal housing cost increases resulting from greater housing production. The number of single-family building permits is increasing in all four MSAs (*Table 3*), but the permit value has gone up only slightly during the period analyzed. This may indicate a proportional increase in the construction of less expensive homes.

**Research Model**

To quantify the effects of income, population growth and new home construction on new home prices, we perform a regression analysis using data for each of the four MSAs.<sup>3</sup> To

receive a building permit, a builder must record the estimated cost of improvements with the issuer. This makes it possible to obtain the average annual permit value, which is the dependent variable. Permit values are regressed on the annual number of single-family building permits, annual per capita income, population estimates and a trend line.<sup>4</sup> We would expect increases in both population and income to result in higher average permit values, while increases in the number of permits would correlate with decreases in permit values. We would expect controlling for income and population to result in a downward trend in permit values.

To quantify the effect of construction volume on house prices, we perform a second regression analysis on annual average single-family home sales price.<sup>5</sup> We expect the number of permits to correlate negatively with home sales price but to a lesser degree. This is because the economies of building on a larger scale should lower the price of new home construction, which, in turn, would lower existing home prices through expanded competition.

**Results**

The first regression analysis tests the relationship between the volume of new construction and the cost of new homes. An increase in the number of single-family building permits is associated with a decrease in permit values (*Table 4*). For each additional building permit issued, the permit value declines by 0.35 percent. As expected, an increase in personal income leads to an increase in permit value. However, when accounting for personal income and population, the declining trend line

Table 4

**Permit Value Regression**

	Coefficient	Standard error	t statistic
Number of permits	-.352	.068	-5.14
Population	-.15	.145	-1.031
Personal income	1.056	.303	3.485
Trend	-.165	.035	-4.655

Table 3

**Single-Family Building Permits, 1992–99**

	Metropolitan statistical area		
	Brownsville	El Paso	McAllen
1992	1,308	2,270	3,230
1993	1,486	2,296	5,565
1994	1,694	2,323	3,955
1995	1,642	2,259	3,761
1996	1,729	2,347	4,287
1997	1,602	2,316	4,155
1998	1,926	3,039	5,219
1999	2,017	3,472	5,069
Change 1992–99	54%	53%	57%

NOTE: Brownsville and Harlingen are in the same reporting area.

SOURCE: Texas Real Estate Center.

Table 5

**Home Sales Price Regression**

	Coefficient	Standard error	t statistic
Number of permits	-.009	.026	-.358
Population	.273	.055	4.907
Personal income	-.238	.115	-2.062
Trend	-.118	.013	-8.72

indicates an overall decrease in permit values.

The second regression analysis tests the relationship between new home construction and housing prices while controlling for population and income. A greater supply of housing, reflected as an increase in building permits, should result in lower prices. However, rising income and population should raise the demand for homes and push prices higher.

Table 5 shows that population correlates positively with house price, as predicted. This supports the earlier finding that housing prices are rising faster in communities with dramatic population growth, such as Brownsville and McAllen, than in border cities with slower population growth. Nick Mitchell-Bennett of Brownsville Community Development Corp., the city's largest homebuilder, confirms this conclusion: "The issue is no longer finding buyers; the problem is building to keep up with demand."

Unexpectedly, the coefficient for personal income is negative. For an additional dollar of personal income, the average house price decreases by 0.24 percent. However, by removing El Paso from the model, the coefficient for personal income becomes positive. El Paso dominates the results because of its relatively large size. In addition, the city has had one of the largest increases in income but the lowest increase in housing price.

The coefficient for permits is not statistically significant in this model. However, removing the trend line from the model results in a statistically significant coefficient. For every single-family building permit issued, the average sales price falls by 0.1 percent, less than a third of the decrease associated

with permit volume and permit value. This indicates that the rapid rise in housing construction is having a greater impact on the prices of new homes than on existing ones.

This finding may be a result of greater supply of starter homes. According to Bob Bowlen, chief executive officer of Tropicana Homes in El Paso, developers are building to an emerging niche. "We shifted to the starter market three to four years ago," he says. Pam Rodriguez, vice president of community lending at Texas State Bank in McAllen, adds, "Developers have realized there is a great need for this type of housing."

Our econometric findings are consistent with the housing affordability picture presented in Chart 1. The negative trend in both regressions supports the prediction that housing is becoming more affordable. The increased capacity of developers has led to a less expensive housing stock. "The building industry in El Paso has been capable of meeting increased demand and delivering more affordable homes," says Tropicana Homes' Bowlen.

**Conclusion**

With the exception of Brownsville, housing in the border communities studied became more affordable during the 1990s. Of the three communities in which housing affordability improved, all outpaced the increase in affordability for the state as a whole. Additionally, house prices along the border grew more slowly than in Texas as a whole. The rapid rise in single-family construction contributed to the relatively slow increase in border housing prices as developers began focusing on the starter-home market. Rapid increases in income also explain much of the gain in housing affordability. With income growth outpacing housing price increases, border residents have relatively more income available for housing.

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**Notes**

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<sup>1</sup> Data for Harlingen are only available beginning in 1995. Data for El Paso begin in 1990, but comparisons begin with 1992 data. Laredo is not included in the analysis because the median single-family home sales price is not available.

<sup>2</sup> Annual median sales price from Texas Real Estate Center; average annual mortgage interest rate from Federal Housing Finance Board Monthly Interest Rate Survey; average annual homeowner's insurance premium rate from Texas Department of Insurance; statewide average property tax rate from Texas Comptroller of Public Accounts; private mortgage insurance from *FHA Premium Reconciliation Group Procedures Manual: FHA Risk-Based Monthly Premium*. Property tax rate is a statewide average for state and local governments and school districts in 1998; historical data are unavailable.

<sup>3</sup> For data used in regression, Brownsville and Harlingen are in the same reporting area.

<sup>4</sup> Average annual permit value and annual number of single-family building permits from Texas Real Estate Center; annual per capita income from Bureau of Economic Analysis; population estimates from Census Bureau.

<sup>5</sup> Average single-family home sales price from Texas Real Estate Center.