Winter 2003

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Recommended Citation
Available at: http://scholarworks.gvsu.edu/sbr/vol9/iss1/7
House Prices in East Grand Rapids, 1987 - 2002
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The recent dramatic drop in stock prices has led investors to look for safer havens for their hard-earned savings. One of these alternatives is real estate. More than two-thirds of Michigan households live in the house they own; home ownership has long been regarded as an important component of an investment portfolio. Of interest, then, is how homes perform as an investment. We investigate a component of this issue by looking closely at the trends in home prices in one Grand Rapids-area community, East Grand Rapids.

Over the period 1987 to mid 2002, the sale prices of single-family dwellings in the City of East Grand Rapids rose at an average rate of just over 7% per year. This implies that home prices in EGR more than doubled (increased by 105%) over 14 1/2 years. This number does not much reflect the influence of new construction: only 2.6% of the housing stock, 96 houses, were built during the time period. The purpose of this study is to explore across both time and space the variation in the growth of house prices around this 7% average.

First, a little background. The City of East Grand Rapids (EGR), which borders the City of Grand Rapids on its east, had a population of 10,783 in year 2000, essentially unchanged from 1990. Interestingly, the Census Bureau reports that less than two-thirds (62%) of the EGR population over five years of age in 2000 lived in the same house in both 1995 and 2000. EGR assessment records indicate that there are a total of 3,740 single-family detached housing units in EGR. The area of the City is roughly rectangular, bordered by Robinson/Cascade Roads on the north, and roughly East Beltline on the east, Breton Village on the south, and the Eastown area on the west. Reeds Lake is a dominant feature in the northern portion of the City. Gaslight Village and Spectrum's Blodgett Campus are the main commercial developments.

Table 1 lists some statistics that provide a feel for the characteristics of the stock of single-family houses in EGR. The median house in EGR was built in 1950 on a 10,200 square foot lot with 75 feet of street frontage and has 1,920 square feet of floor space, 2 baths, and a two-stall garage. Other than the age and the relatively small street frontage, the characteristics of this house differ little from those found in many suburban residential areas. The standard deviation and the min and max columns show that houses in EGR vary considerably around this median. The bulk of the houses in EGR, about 85%, were built between 1920 and 1970, two-thirds of these since 1945. A substantial difference between mean and median indicates that the distribution isn’t symmetric, as is the case with both house and lot size. There are as many houses and lots smaller as there are larger than the respective medians, but a relatively small number of large houses and lots pulls both the mean and the standard deviation upward. There are 453 houses (12%) with more than 3000 square feet of floor space in EGR, and a roughly equal number of lots larger than 20,000 square feet.

Table 1: Characteristics of Houses in East Grand Rapids

<table>
<thead>
<tr>
<th>Year House Built</th>
<th>Mean</th>
<th>Median</th>
<th>Std Dev</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>1946</td>
<td>2093</td>
<td>1920</td>
<td>910.8</td>
<td>672</td>
<td>15,646</td>
</tr>
<tr>
<td>13,125</td>
<td>10,200</td>
<td>12,132.7</td>
<td>1496</td>
<td>171,626</td>
<td></td>
</tr>
<tr>
<td>79</td>
<td>75</td>
<td>31.8</td>
<td>16</td>
<td>347</td>
<td></td>
</tr>
<tr>
<td>2.2</td>
<td>2</td>
<td>0.9</td>
<td>1</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>460</td>
<td>441</td>
<td>216.5</td>
<td>0</td>
<td>4413</td>
<td></td>
</tr>
</tbody>
</table>

Figure 1 shows our estimate of the trend in house prices in EGR between the beginning of 1987 and the middle of 2002. We obtained the estimate by using statistical regression analysis. The data consist of information provided by the EGR assessor on 3,534 usable house sales, an average of 244 sales per year. Regression analysis allows us to control for variation over time in the characteristics of the houses that sold. In a particular year, for example, an unusually large number of newer and larger homes may have sold, and average sales prices would, therefore, appear to have jumped considerably over the average in the previous year. Computing simple averages in sale prices for a series of discrete time periods (such as years) would produce a pattern that generally follows that shown in Figure 1, but it would appear much more lumpy. While the curve shown in Figure 1 is smoother than is realistic, it captures the general trend in the price of a standard house.

Not surprisingly, the trend follows that of the general economy. House prices rose relatively quickly in the late 1980s, but growth in prices slowed during the recession of the early 1990s. The economic boom of the latter half of the 1990s was reflected in a faster rate of growth in house prices, peaking at an annual rate of about 9%. The growth in prices was clearly beginning to slow with the onset of the current economic slow-down.
Some of the price growth reflects improvements made to houses over the study period. How much is due to improvements is a topic for a future study.

The idea is to group houses together that have similar characteristics, for assessment purposes divided EGR into distinct neighborhoods. Recognizing this, staff in the EGR assessor's office have for each year establish a growth-rate differential for each neighborhood. This helps staff guard against over-stating or understating the growth rate in prices for tax-assessment purposes.

We took these assessor-identified neighborhoods as given and analyzed each neighborhood (represented on the horizontal axis in the graph) separately to obtain neighborhood price indices. The estimated average annual rates of growth are shown in Figure 2. Growth rates vary substantially across neighborhoods, from a high of over 9% to a low of just over 5%.

Interestingly, the neighborhoods with the highest rates of price growth consist of those with both the least and the most expensive houses. Neighborhoods 1 and 2 are neighborhoods near the Eastown and Gaslight Village commercial areas, and contain some of the oldest houses on the smallest lots that have seen substantial renovation over the past 15 years. Some of the growth in house value in these neighborhoods reflects the value of these recent investments. Neighborhoods 3 and 4 likewise consist of older homes, but many of these homes are of high construction quality and architectural interest. Some of the higher-than-average price growth may reflect renovation, but most probably reflects growing interest in character homes. Finally, neighborhoods 10 and 20 contain unusually large, well-constructed houses; neighborhood 10 consists of houses on lots that border Fisk and Reeds Lakes. Again, rising incomes during the booming 90s drove demand for the limited supply of high-amenity properties.

All this suggests that the rate of growth in the market value of the median house—built around 1950 with two baths and 1900 square feet of floor space on a 10,000 square foot lot—is lower than the 7% average for EGR as a whole. An average growth rate of about 6% is probably closer to the mark for this kind of house. This still represents a real return on average of about 2% per annum. This average gain reflects the growing demand for the kinds of amenities EGR offers: high quality schools and public services, a convenient location, and solidly-built houses on tree-lined streets in walking neighborhoods. And the variation around the average hasn't been very big (at least by stock-market standards); perhaps -1% during the recession of the early 1990s to about 4–5 % in the later 1990s. Thus, in addition to the obvious consumer benefits the home provides on a daily basis, owning a home in EGR appears to make sense from an investment standpoint.

Of interest is how this growth in the sale prices of houses in EGR compares with the growth in prices generally. How much more stuff can people buy when they sell their house? The general growth in prices, i.e., inflation, slowed over the time period in question from about 5% annually in the late 1980s to about 3% annually by the late 1990s. The average annual rate of inflation over the period was just under 4%. Thus, the real (i.e., inflation-adjusted) annual return from housing in EGR averaged just over 3%. The dashed line in Figure 1 shows the real growth in the price of a standard house in EGR. Only during the recession of the early 1990s may real house prices have fallen just a bit.

Though the 3% average is considerably lower than 7%, it isn't bad for real estate on average over the entire country. The U.S. is rich in land, so higher real housing prices encourage builders and developers to increase supply. In urban areas with plenty of land available, the inflation-adjusted price of a house with a standard set of characteristics tends not to grow much over the long haul. The relatively strong growth in prices in EGR mostly reflects growing demand for the houses and neighborhood characteristics offered in EGR, combined with a limited ability to add to the existing EGR housing stock.

Interestingly, growth rates in house prices vary across the neighborhoods within EGR just as they vary across metropolitan areas and across the jurisdictions that make up a metro area. The reason is that the characteristics of the houses vary across the neighborhoods within EGR; the variation in house characteristics within neighborhoods is generally less than that shown in Table 1 for EGR as a whole. EGR developed over the course of about fifty years, with development moving from the north and west toward the south and east. Different areas were developed by different builders and developers who targeted their product to somewhat different sets of consumers. At this point, the supply and characteristics of houses in each of these neighborhoods are more or less fixed. Thus, the growth in prices in each neighborhood varies mainly with changes in the demand for the types of houses that predominate in that neighborhood.

Recognizing this, staff in the EGR assessor’s office have for assessment purposes divided EGR into distinct neighborhoods. The idea is to group houses together that have similar characteristics, and that, therefore, tend to respond similarly to changes in market conditions. Staff monitor trends in prices in each neighborhood, and each year establish a growth-rate differential for each neighborhood. This helps staff guard against over-stating or understating the growth rate in prices for tax-assessment purposes.

Figure 1

Figure 1: Estimated EGR House-Price Index: 1987–2002

Average Annual Growth in House Prices in EGR Neighborhoods

Figure 2

Figure 2—Estimated EGR House-Price Index: 1987–2002

Average Annual Growth in House Prices in EGR Neighborhoods

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1 Some of the price growth reflects improvements made to houses over the study period. How much is due to improvements is a topic for a future study.