Fresno-Clovis Area Distressed Residential Properties: Where & Who?

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Fresno-Clovis Area

• City of Fresno
  – The largest city in the Central Valley.
  – The 5\textsuperscript{th} largest city in California.
  – The 34\textsuperscript{th} largest city in the US.
  – Population 502,303 (2010 census) in 104.4 sq. mi.

• City Of Clovis
  – Population 97,218 (2010 census)
  – Area 22.03 sq. mi.
Fresno-Clovis Area

- The area is the economic hub of San Joaquin Valley (southern eight counties of the Central Valley).
- The unincorporated area and rural cities surrounding the area remain predominantly tied to large-scale agricultural production.
Fresno-Clovis Area

• Unemployment rates
  – Feb. 2006: 9.0% (CA 5%)
  – Feb. 2010: 17.4% (CA 12.4%)
  – Feb. 2014: 12.7% (CA 8.1%)

• Top distressed property market
  – Rank 14th in 2007 (CNNMoney.com)
  – Rank 10th in 2011 (MSN Real Estate)

• 29.5% Homes with negative equity (18.8% US Avg) (Mar 31, 2014. zillow.com)
Numbers of Sales by Year and Type

2003 - 2012

<table>
<thead>
<tr>
<th>Year</th>
<th>Foreclosure</th>
<th>Short Sales</th>
<th>Traditional</th>
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</thead>
<tbody>
<tr>
<td>2003</td>
<td>5</td>
<td>68</td>
<td>6,398</td>
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<tr>
<td>2004</td>
<td>10</td>
<td>15</td>
<td>6,811</td>
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<tr>
<td>2005</td>
<td>10</td>
<td>9</td>
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<td>2006</td>
<td>15</td>
<td>20</td>
<td>4,890</td>
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<tr>
<td>2007</td>
<td>36</td>
<td>389</td>
<td>3,163</td>
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<tr>
<td>2008</td>
<td>317</td>
<td>2,876</td>
<td>2,507</td>
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<tr>
<td>2009</td>
<td>893</td>
<td>4,173</td>
<td>2,451</td>
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<tr>
<td>2010</td>
<td>1,157</td>
<td>2,701</td>
<td>2,817</td>
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<tr>
<td>2011</td>
<td>1,407</td>
<td>2,708</td>
<td>1,936</td>
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<tr>
<td>2012</td>
<td>1,767</td>
<td>1,767</td>
<td>3,460</td>
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</table>
Study Objectives

• Are the distressed sales in the study area spatially clustered?
• If yes,
  – is the clustering becoming more or less intense over time?
  – where are the clusters?
• What are the social-economic characteristics of the clusters?
Study Area
Numbers of Sales in the Study Area by Year and Type
2003 - 2012

Total sales inside the study area: 61,287
All Sales 2003 - 2012

Total 61,2875 sales
Distressed Sales 2003 - 2012

Total 19,981 sales
Measuring Geographic Distributions

• Mean Center
  – Identifies the geographic center (or the center of concentration) for the real estate sales.
  – Tracks changes in the distribution over time.
  – The weighted mean center extends mean center to be weighted by sale price.
Centers – All Sales
2003-2012
Centers – Traditional Sales
2003-2012
Centers – Distressed Sales

2003-2012

% Distressed Sales

Geographic Centers of Single Family Residential Properties Sold in Fresno/Clovis Area From 2003-2012

Legend
- Fresno/Clovis Centroid
- Mean Centers – DS
- Mean Centers Weighted By Selling Price – DS
Cluster Analyses

• Identifying geographic patterns
  – It helps us to understand how distressed sales are distributed.
  – It answers questions such as,
    – "Are the distressed sales in the study area spatially clustered?" and
    – "Is the clustering becoming more or less intense over time?".
Nearest Neighbor Ratio: 1.159375
z-score: 0.914689
p-value: 0.360355

Significance Level (p-value)
- 0.01 (Red)
- 0.05 (Orange)
- 0.10 (Dark Red)
- 0.15 (Light Red)
- 0.20 (Yellow)
- 0.25 (Light Yellow)

Critical Value (z-score)
- < -2.58 (Red)
- -2.58 to -1.96 (Orange)
- -1.96 to -1.65 (Dark Red)
- -1.65 to -1.35 (Light Red)
- -1.35 to -1.05 (Yellow)
- -1.05 to -0.75 (Light Yellow)
- > 2.58 (Red)

Significant
(Random)

Clustering:
- Clustered
- Random
- Dispersed
Cluster Analysis

Cluster Analysis

*Distressed sales include short sales and foreclosure.
Where are the Clusters?

Fishnet Map - Number of Distressed Sales within a Quarter Mile

Number of Distressed Sales

- 0
- 1 - 5
- 6 - 10
- 11 - 15
- 16 - 23
Where are the Clusters?
Where are the Clusters?
Where are the Clusters?

• The Hot Spot Analysis calculates the Getis-Ord Gi* statistic for each location in the dataset.
• The resultant z-scores and p-values tell us where the properties with either high or low counts cluster spatially.
• To be a statistically significant hot spot, a property will have a high count itself and be surrounded by other properties with high count as well.
Hot Spot Analysis

• Interpretation
  – For statistically significant positive z-scores, the larger the z-score is, the more intense the clustering of high distressed property counts (hot spot).
  – For statistically significant negative z-scores, the smaller the z-score is, the more intense the clustering of low distressed property counts (cold spot).
So What?

Hot and cold areas of year 2009
So What?

Hot and cold areas of year 2010
Demographics and Social-Economic Profile

• Population
  – Race
  – Non-Latino vs. Latino
  – Age

• Social-economic
  – Median household income
  – Education
  – Employment
  – Mortgage payment
  – Driving time to work
Demographics of Hot and Cold Areas - 2009

Race and Latino

<table>
<thead>
<tr>
<th>Study Area</th>
<th>Hotspot 1</th>
<th>Hotspot 2</th>
<th>Hotspot 4</th>
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</thead>
<tbody>
<tr>
<td>Pct. Wht</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Pct. AA</td>
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<td></td>
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<td>Pct. Al</td>
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<td></td>
<td></td>
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<tr>
<td>Pct. Hisp</td>
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<td></td>
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</tr>
</tbody>
</table>

Coldspot 1 | Coldspot 2 | Coldspot 4

Race and Latino Study Area

Hotspot 1

Coldspot 1

Hotspot 2

Coldspot 2

Hotspot 4

Coldspot 4
Other social-economic statistics of the Hot and cold areas - 2009

**Age**

- All
- Male
- Female

**Median Household Income**

- All Male Female
- Study Area
- Hotspot 1
- Hotspot 2
- Hotspot 3
- Hotspot 4
- Coldspot 1
- Coldspot 2
- Coldspot 3
- Coldspot 4

- Pct. No High School Diploma
- Pct. Unemployment
- Pct HH with Mortage > 50% of HH Income
- Pct. Worker 16 years and old driving more than 45 minutes to work
Summary

• Compare hotspots (high count) and cold spots (low count) areas
  – Hotspots tend to have lower % of white population and higher % of African American, Asian, and Latino populations.
  – The median age in the hotspots are about 8-year younger than the median age in the cold spots.
  – MHI is significantly lower in the hotspots compare to the cold spots.
  – % population 25 or older without a high school diploma and unemployment rate are much higher in the hotspots compare to the cold spots.
  – In general, the percent households in the hotspots spend more than 50% of their income on their mortgage are higher than the cold spots area.
  – % population driving more that 45 minute to work seems higher than % population in cold spots.
Questions???????