Does Changing Ownership Change Crime?
An analysis of apartment ownership and crime in Cincinnati

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Key question:

Does crime increase when ownership of an apartment building changes?
Why crime might be related to ownership change

1. Poor management
2. Crime events
3. Unprofitable place
4. Reaction: Sell
5. Purchased by naive owner
Hypotheses

H1: Ownership change is rare compared to ownership stability.

H2: A relative handful of apartments produce a disproportionate amount of crime.

H3: Ownership change will be associated with increases in crime; these increases will be greater at places with a history of crime problems.
Data sources

• Hamilton County Auditor

• Cincinnati Police Department

• Cincinnati Area GIS
Variables

• Dependent variable:
  – Count of calls for service in 2009

• Independent variable of interest: Ownership change
  – Number of owner changes from 2002-2009
Controls

• Prior calls for service
  – Three-year average
• Economic resources
  – Assessed property value
  – Foreclosure (dummy)
  – Delinquent taxes
• Size
  – Land use code (4-19; 20-39; 40+)
  – Total acreage
• Neighborhood-level calls for service (2009)
• Neighborhood-level ratio of single family dwellings to apartments
**Apartment characteristics: Most are small**

<table>
<thead>
<tr>
<th>Number of Units</th>
<th>Freq.</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-19 units</td>
<td>5,020</td>
<td>74.91</td>
</tr>
<tr>
<td>20-39 units</td>
<td>384</td>
<td>5.73</td>
</tr>
<tr>
<td>40+ units</td>
<td>292</td>
<td>4.36</td>
</tr>
<tr>
<td>Retail, apartments over</td>
<td>1,005</td>
<td>15.0</td>
</tr>
<tr>
<td>Total</td>
<td>6,701</td>
<td>100</td>
</tr>
</tbody>
</table>
Apartment Characteristics: Serial ownership change is rare

<table>
<thead>
<tr>
<th>Number of ownership changes</th>
<th>Freq.</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>3,339</td>
<td>49.83</td>
</tr>
<tr>
<td>1</td>
<td>2,172</td>
<td>32.41</td>
</tr>
<tr>
<td>2</td>
<td>669</td>
<td>9.98</td>
</tr>
<tr>
<td>3</td>
<td>144</td>
<td>2.15</td>
</tr>
<tr>
<td>4</td>
<td>15</td>
<td>0.22</td>
</tr>
<tr>
<td>(missing)</td>
<td>362</td>
<td>5.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>6,701</td>
<td>100</td>
</tr>
</tbody>
</table>
Apartment characteristics: Year of last sale

![Graph showing the distribution of apartment sales by year. The x-axis represents the year of the last sale, and the y-axis represents the percent of apartments sold. The graph shows a significant peak in sales around 2010, with a gradual decrease towards earlier years.]
Crime is not randomly distributed

The top 10% of apartments account for 63% of 2009 crime

43% of all apartments had no crime
Ownership change, size, and past crime effects on crime counts

Past crime is **highly** predictive of current crime.

Apartments with 20-39 units (circles) and past crime have more expected crime than apartments with 4-19 units (squares).

Apartments with ownership change (filled, red symbols) have 10% higher predicted counts of crime.
Together, these findings show this is plausible.
Implications

• Crime prevention should be targeted at larger (>20 units) apartments with high past crime.

• When the apartments that are sold are high-crime apartments, ownership change is likely to make the crime problem worse.
Final thoughts

• The majority of apartments have zero or one crime – even using a very broad definition of crime

• Problem-solvers should work with the majority of apartment owners
  – Positive police contacts
  – Public recognition of landlords with good management practices

• Landlords may be in the best position to educate their peers