IDEOLOGY, RELIGION, AND CHEAP HOUSING: ISRAELI SETTLEMENT OF THE WEST BANK

Ben-Shahar, Gabriel, and Golan
Discussed by Eunjee Kwon

2020 Rena Sivitanidou Annual Research Symposium
Summary

- How religious belief and national-ideological worldview affect response to economic factors among Israeli West Bank settlers: Non-ideological/ Ideological / Ultra-Orthodox settlement
- Economic opportunity (lower housing cost) is an important factor in location choice of household
- Households with religious belief in the West Bank are more sensitive to housing costs
Contribution

- Israel settlement of the West Bank is a crucial global issue!
- Impact of belief (e.g., religion) on the responsiveness to economic incentives, is important, yet understudied
- Limited studies investigate how different belief affects location choice (e.g., housing prices, transportation infrastructure..)
\[\ln\left(\frac{\text{Prob}_{ijt}}{\text{Prob}_{iit}}\right) = \theta + \alpha_1 C_{ijt} + \alpha_2 \ln\left(\frac{Z_{jt}}{Z_{it}}\right) + \alpha_3 \text{PR}_{jit} + \alpha_4 \ln T_{it}\]

\[+ \alpha_5 D_{sett,it} + \alpha_6 D_{Ideosett,jt} + \alpha_7 D_{Ultrasett,jt}\]

\[+ \alpha_8 \text{VoteNational}_{it} + \alpha_9 \text{VoteUltra}_{it}\]

\[+ \alpha_{10} \text{PR}_{ijt} \ast D_{\gamma,jt} + \alpha_{11} \text{PR}_{ijt} \ast \text{Vote}_{\chi,it}\]

\[+ \alpha_{12} D_{\gamma,jt} \ast \text{Vote}_{\chi,it} + \alpha_{13} \text{PR}_{ijt} \ast D_{\gamma,jt} \ast \text{Vote}_{\chi,it} + \epsilon_{ijt}\]

- Potential endogeneity
  - Omitted Variable Bias (e.g., positive construction shocks in \(j\), which increase the overall influx of people to destination \(j\), and decrease the housing prices in \(j\))
  - Reverse Causality (e.g., as more people moving from \(i\) to \(j\), changes \(\text{PR}_{ijt}\))

- Lagged variables: not enough to control for the time persistent unobservables
Potential Issues in Lagged Variable

Figure 1: "Lagged Explanatory Variables and the Estimation of Causal Effect" (Bellemare et al., 2017)
\[
\ln\left(\frac{Prob_{ijt}}{Prob_{iit}}\right) = \theta + \alpha_1 C_{ijt} + \alpha_2 \ln\left(\frac{Z_{jt}}{Z_{it}}\right) + \alpha_3 PR_{ijt} + \alpha_4 \ln T_{it}
\]

\[
+ \alpha_5 D_{sett,jt} + \alpha_6 D_{Ideosett,jt} + \alpha_7 D_{Ultrasett,jt}
\]

\[
+ \alpha_8 \text{VoteNational}_{it} + \alpha_9 \text{VoteUltra}_{it}
\]

\[
+ \alpha_{10} PR_{ijt} * D_{Y,jt} + \alpha_{11} PR_{ijt} * \text{Vote}_{X,it}
\]

\[
+ \alpha_{12} D_{Y,jt} * \text{Vote}_{X,it} + \alpha_{13} PR_{ijt} * D_{Y,jt} * \text{Vote}_{X,it} + \epsilon_{ijt}
\]

**Suggestions** Introduce fixed effects

- \(\upsilon_{jt}\): destination-time specific fixed effects
- \(\eta_{it}\): origin-time specific fixed effects
- \(\lambda_{ij}\): origin-destination pair fixed effects (e.g, distance b/w \(i\) and \(j\))

**Pros** Controls for any potential omitted variable bias at origin(destination)-level or origin-destination pair-level

**Cons** Cannot estimate the colored variables
The results that national-religious and ultra-orthodox groups are more sensitive to prices are counter-intuitive.

- Is it because the religious groups have worse socioeconomic status?
- I would include $PR_{ijt} \times Income_{it}$ and check whether the differential impacts across different groups still exist.
Comments (4): Settlement Location

- Selection in location choice of different types of settlement
  - "As shown in Figure 2A, many of the large non-ideological settlements were located close to the Green Line, whereas a large number of ideological settlements were established in the highlands of the West Bank in proximity to densely populated Palestinian areas."

- Potential identification threat:
  - e.g., Ideological settlements were located in cheaper part of the West Bank for some reason, and if the ideological groups move to the West Bank for religious reasons?

- Destination-level fixed effects could control for this issue; religious importance, distance to Jerusalem, stock of (each group of) people living in $j$ (to control for the homophily)
Comment (5): Discrepancies between aggregate and micro-level

Table 6: Results Obtained from the Estin Affordability Measure (Afford)

<table>
<thead>
<tr>
<th></th>
<th>Without Interaction Terms</th>
<th>With Simple Interaction Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>PriceRatio × Dum_Ideological</td>
<td></td>
<td>4.39***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.92)</td>
</tr>
<tr>
<td>PriceRatio × Dum_Ultra-Orthodox</td>
<td></td>
<td>4.69***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.44)</td>
</tr>
<tr>
<td>PriceRatio × Vote_National</td>
<td></td>
<td>0.27</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(4.48)</td>
</tr>
<tr>
<td>PriceRatio × Vote_Ultra-Orthodox</td>
<td></td>
<td>-37.04***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.52)</td>
</tr>
</tbody>
</table>

Table 6: Results Obtained from the Estin Affordability Measure (Afford)

<table>
<thead>
<tr>
<th></th>
<th>(1) All settlement</th>
</tr>
</thead>
<tbody>
<tr>
<td>h(t) equals 1 for moving to:</td>
<td></td>
</tr>
<tr>
<td>Price</td>
<td>.92***</td>
</tr>
<tr>
<td></td>
<td>(.08)</td>
</tr>
<tr>
<td>Vote_National</td>
<td>2.80***</td>
</tr>
<tr>
<td></td>
<td>(.17)</td>
</tr>
<tr>
<td>Vote_Ultra-Orthodox</td>
<td>.85***</td>
</tr>
<tr>
<td></td>
<td>(.13)</td>
</tr>
<tr>
<td>Price ×</td>
<td>.75***</td>
</tr>
<tr>
<td>Votes_National</td>
<td>(.28)</td>
</tr>
<tr>
<td>Price × Vote_Ultra-Orthodox</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.12)</td>
</tr>
</tbody>
</table>

X: Relative price in j
Y: Prob(moving I to settlement)

Figure 2: Aggregate (Left) vs. Micro (Right)
Comment (5): Discrepancies between aggregate and micro-level

Figure 3: Aggregate (Left) vs. Micro (Right)
Question: Transaction Data

% PriceRatio\_{jit}: the log of the ratio between average quality-adjusted house prices in destination j and origin i at time t

- How are the settlement area transaction data collected? How is the housing market working in the West Bank?
- Not governed by Israeli government?
Thank you very much.

Dinner Time!