The Effects of Social Participation on Health and Well-Being: Evidence using a Spatial Marginal Treatment Effects Model

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Social Capital

Social Participation

Community Trust

Asset Mapping

Physical Spaces

Institutions

Associations

Local Economy

Individuals
Introduction

• Social capital broadly improves health outcomes\(^1\), with health dis-benefits for certain population groups\(^2\)

• Social participation has lead to improved health outcomes\(^3\) and reduced mortality\(^4,5\)

• Access to community assets facilitates participation\(^6\) – in terms of walkability and proximity\(^7\)

• Endogeneity concerns due to reverse causality around social participation\(^8,9\) and selection bias\(^10\)
Aims

1. to estimate the health and well-being returns to social participation

2. to further examine if these effects/returns vary by propensity to participate.
### Social Participation – social and interest group membership

“I am going to read a list of types of organisations. For each, tell me whether you are a member of an organisation of that type”

<table>
<thead>
<tr>
<th>Option</th>
<th>Group</th>
<th>Option</th>
<th>Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Political party</td>
<td>9</td>
<td>Scouts/Guides organisation</td>
</tr>
<tr>
<td>2</td>
<td>Trade Unions</td>
<td>10</td>
<td>Professional organisation</td>
</tr>
<tr>
<td>3</td>
<td>Environmental group</td>
<td>11</td>
<td>Other community group</td>
</tr>
<tr>
<td>4</td>
<td>Parents'/School Association</td>
<td>12</td>
<td>Social/Working men club</td>
</tr>
<tr>
<td>5</td>
<td>Tenants/Residents Group</td>
<td>13</td>
<td>Sports Club</td>
</tr>
<tr>
<td>6</td>
<td>Religious/church organisation</td>
<td>14</td>
<td>WI/Townswomen's Guild</td>
</tr>
<tr>
<td>7</td>
<td>Voluntary services group</td>
<td>15</td>
<td>Women's Group/Fem organisation</td>
</tr>
<tr>
<td>8</td>
<td>Pensioners group/organisation</td>
<td>16</td>
<td>Other</td>
</tr>
</tbody>
</table>

UK Household Longitudinal Study – LSOA Special License

Data I
Data II - Outcomes

Health – “How is your health in general?”

Poor (1), Fair, Good, Very Good and Excellent (5)

Well-being - SF12 – Mental Health Component

Derived from 6 questions on a 6-point Likert scale

Measure ranges from [0,100] with a mean = 50 and standard deviation = 10
Community Assets

Community centre/hall
Sports centre/facility/club
Church/place of worship
Youth club/centre/facility
Asset of Community Value

Social Participation

Error Term

Health or Well-being

Availability – if within 1km of LSOA centroid

buildings or green areas which individuals or organisations within the community nominate to their local authority to have additional protection under the Localism Act
Assets are mapped within Greater Manchester
Methods – Marginal Treatment Effects

1\textsuperscript{st} Stage:

\[ \text{social participation}_i = \delta + \text{assets}_i \theta + \text{controls}_i \phi + \nu_i \]

2\textsuperscript{nd} Stage:

\[ \text{outcome}_i = \alpha + \beta \text{social participation}_i + \text{controls}_i \gamma + \epsilon_i \]

3\textsuperscript{rd} Stage:

estimate treatment effect across propensity scores from 1\textsuperscript{st} stage

Additionally, we estimate:

Average Treatment Effect (ATE), Average Treatment Effect on Treated (ATT),
Average Treatment on Untreated (ATU) and Local Average Treatment Effect (LATE)
### Results

<table>
<thead>
<tr>
<th></th>
<th>(1) Binary 1km Mean</th>
<th>(2) 1st Stage – Social Participation (Average Marginal Effect)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Church/place of worship</td>
<td>0.895</td>
<td>0.034 (-0.017 to 0.085)</td>
</tr>
<tr>
<td>Youth club/centre/facility</td>
<td>0.543</td>
<td>0.063*** (0.026 to 0.099)</td>
</tr>
<tr>
<td>Sports centre/facility/club</td>
<td>0.366</td>
<td>-0.037* (-0.070 to -0.003)</td>
</tr>
<tr>
<td>Community centre/hall</td>
<td>0.477</td>
<td>-0.016 (-0.048 to 0.016)</td>
</tr>
<tr>
<td>Asset of Community Value</td>
<td>0.467</td>
<td>0.044** (0.011 to 0.077)</td>
</tr>
</tbody>
</table>
Results - Health

| Health | ATE   | 0.795  
|        | (-0.127 to 1.717) |
| ATT    | 2.237** | (0.554 to 3.920) |
| ATU    | -1.016 | (-2.367 to 0.336) |
| LATE   | 0.384  | (-0.519 to 1.287) |
| Obs    | 3,737  |
Results – Well-being

SF12 -Mental
ATE 9.304
(-0.103 to 18.710)
ATT 20.137*
(2.332 to 37.943)
ATU -4.276
(-17.677 to 9.125)
LATE 9.552*
(0.503 to 18.602)
Obs 3,737

High Probability of Social Participation

Low Probability of Social Participation

MTE 95% CI ATE
Discussion

- Community asset infrastructure is a strong predictor of social participation, particularly youth clubs and assets of community value (ACV)

- There a significant returns to outcomes for those more likely to engage in social participation

- This may lead to widening on existing health inequalities

- Empowering individuals within communities of currently low social participation rates to engage with nominating ACV could have equitable benefits.
References: