Golfing for Information: Social Interactions and Economics Consequences

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Highlights
Using golf games played to capture the social interactions among the company directors, we find that the golf pattern change significantly after the market shocks, and the companies benefit from social interactions by making better investments.

1. The golf patterns of the top managers of real estate companies change after the demand for new information increases.
2. No evidence of collusion. The likelihood of a pair of golfers to both win decreases.
3. The more informed developers bid a lower price in the land auctions, while the chance of winning remain unchanged.
4. The informed land acquisition generate significant negative spillover to the nearby housing price.

Motivation
1. Social capital is important.
2. Social network is employed as a proxy for social capital.
3. Social network is static and endogenous.
4. Communication ≠ Connection.
5. 40% of the golfers are company top managers.

Land Market in SG
- Land parcels are sold through tenders.
- First Price Sealed Bids Auctions
- Highest bids are winning bids.
- On average 7-8 bidders in each tender
- Government announces land supply schedule every half a year, at flexible dates.

First Stage

Figure 1: Golf Network
Figure 2: Announcement Effects (unconditional)
Figure 3: Announcement Effects (conditional)
Figure 4: Announcement Effects (conditional)

Data
1. Golf record of all players in Singapore (2010-2014, 30,000 golfers, 6% population)
2. Land bidding data (all bids are included)
3. Property transaction records
4. Demographics of company top managers

Second Stage: Collusion?
The Likelihood of a Pair of Golfers to Win

<table>
<thead>
<tr>
<th>Variables</th>
<th>Both_win_p</th>
<th>Both_win_{t+1}p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Golf_{t}gther,p</td>
<td>-0.016***</td>
<td>-0.026**</td>
</tr>
<tr>
<td></td>
<td>(0.006)</td>
<td>(0.011)</td>
</tr>
<tr>
<td>Obs</td>
<td>55,125</td>
<td>55,125</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.230</td>
<td>0.365</td>
</tr>
<tr>
<td>Mean of DV</td>
<td>0.0127</td>
<td>0.0222</td>
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<tr>
<td>Cycle FE</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Pair FE</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>SE Cluster</td>
<td>Two-way Cluster at Bidder Level</td>
<td></td>
</tr>
</tbody>
</table>

Third Stage: Bidding
Outcomes: Winning or not, Bid price, Winners’ Curse

Fourth Stage: Spillover
Local Housing Price Decreases in the Short-run

Contribution
1. The paper is among the first to provide direct evidence showing that social interactions facilitate information exchanges.
2. This paper provides empirical evidence showing that the informal interactions positively influence company investment.

Frequently Asked Questions
1. Why not always golf? Why does not everyone golf?
2. Selection Issues in the Third Stage
3. Golf is not the only way of social interaction
4. About Second Stage: Not winning does not necessarily mean no collusion. Side payments?

Welfare Implication
The government loss USD 100 million per year, and the losses are gained by the developers.

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