**Impact on Quantity and Price**

**Events (Regulatory Intervention)**

Variable with 4 categories

Period 1 : Pre Purge

Period 2 : Post Purge - Pre Expose

Period 3 : Post Expose - Pre Law Enforcement

Period 4 : Post Law Enforcement

Purge date is not exclusively known so I try vary date of purge and create 4 events accordingly

Event1 : purge date is assumed to be October 1, 2015

Event2 : purge date is assumed to be November 1, 2015

Event3 : purge date is assumed to be November 15, 2015

Event4 : purge date is assumed to be November 30, 2015

**Host Type (Treatment and control groups)**

The target group is also not explicitly known. So I create different specifications of host type depending on home many listings and entire homes did they own and rented out.

**HostType1**

Always Single Listing Host

Others

**HostType2**

Max One Listing Host

Max more than 2 listings Host

Max two listings Host

**Hosttype3**

Min 2 or more listings Host

Min 4 or more listings Host

Others

**HostType1E**

Always Private/Shared Room Host

Max 1 Entire Home Host

Others

**HostType2E**

Always Private/Shared Room Host

Max 1 Entire Home Host

Max 2 Entire Home Host

Max more than 2 Entire Home Host

**Hosttype3E**

Min 2 Entire Home Host

Min 4 Entire Home Host

Others

**Quantity by events and host type**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | (1) | (2) | (3) | (4) | (5) |
| VARIABLES | lquan | lquan | lquan | lquan | lquan |
|  |  |  |  |  |  |
| 2.event1 |  | 0.0511\*\*\* | 0.0388\*\*\* | 0.0396\*\*\* | 0.0340\*\*\* |
|  |  | (0.00211) | (0.00320) | (0.00319) | (0.00316) |
| 3.event1 |  | 0.0543\*\*\* | 0.0808\*\*\* | 0.0831\*\*\* | 0.0945\*\*\* |
|  |  | (0.00149) | (0.00226) | (0.00225) | (0.00223) |
| 4.event1 |  | 0.0510\*\*\* | 0.0674\*\*\* | 0.0718\*\*\* | 0.0729\*\*\* |
|  |  | (0.00183) | (0.00269) | (0.00268) | (0.00265) |
| 2.HostType1 |  |  | -0.0718\*\*\* | -0.0455\*\*\* | -0.0502\*\*\* |
|  |  |  | (0.00230) | (0.00231) | (0.00230) |
| 1b.event1#1b.HostType1 |  |  | 0 | 0 | 0 |
|  |  |  | (0) | (0) | (0) |
| 1b.event1#2o.HostType1 |  |  | 0 | 0 | 0 |
|  |  |  | (0) | (0) | (0) |
| 2o.event1#1b.HostType1 |  |  | 0 | 0 | 0 |
|  |  |  | (0) | (0) | (0) |
| 2.event1#2.HostType1 |  |  | 0.0183\*\*\* | 0.0186\*\*\* | 0.0200\*\*\* |
|  |  |  | (0.00425) | (0.00423) | (0.00419) |
| 3o.event1#1b.HostType1 |  |  | 0 | 0 | 0 |
|  |  |  | (0) | (0) | (0) |
| 3.event1#2.HostType1 |  |  | -0.0571\*\*\* | -0.0533\*\*\* | -0.0462\*\*\* |
|  |  |  | (0.00301) | (0.00300) | (0.00297) |
| 4o.event1#1b.HostType1 |  |  | 0 | 0 | 0 |
|  |  |  | (0) | (0) | (0) |
| 4.event1#2.HostType1 |  |  | -0.0459\*\*\* | -0.0452\*\*\* | -0.0389\*\*\* |
|  |  |  | (0.00368) | (0.00366) | (0.00363) |
| Constant | 1.319\*\*\* | 1.281\*\*\* | 1.324\*\*\* | 1.367\*\*\* | 1.259\*\*\* |
|  | (0.000615) | (0.00114) | (0.00177) | (0.00244) | (0.0303) |
| Control age | No | No | No | Yes | Yes |
| Bed, bath, Listing Type | No | No | No | Yes | Yes |
| Neighborhood | No | No | No | No | Yes |
|  |  |  |  |  |  |
| Observations | 1,629,063 | 1,629,063 | 1,629,063 | 1,629,063 | 1,629,063 |
| R-squared | 0.000 | 0.001 | 0.005 | 0.015 | 0.035 |
| Standard errors in parentheses |  |  |  |  |  |
| \*\*\* p<0.01, \*\* p<0.05, \* p<0.1 |  |  |  |  |  |

**Price by events and host type**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | (1) | (2) | | (3) | | (4) | | (5) | |
| VARIABLES | lprice | lprice | | lprice | | lprice | | lprice | |
|  |  |  | |  | |  | |  | |
| 2.event1 |  | -0.00960\*\*\* | | -0.0103\*\*\* | | -0.00495\*\*\* | | -0.00561\*\*\* | |
|  |  | (0.00180) | | (0.00271) | | (0.00185) | | (0.00152) | |
| 3.event1 |  | -0.0227\*\*\* | | 0.0137\*\*\* | | -0.0245\*\*\* | | -0.0133\*\*\* | |
|  |  | (0.00127) | | (0.00192) | | (0.00130) | | (0.00107) | |
| 4.event1 |  | -0.128\*\*\* | | -0.0844\*\*\* | | -0.0993\*\*\* | | -0.0794\*\*\* | |
|  |  | (0.00156) | | (0.00228) | | (0.00155) | | (0.00127) | |
| 2.HostType1 |  |  | | -0.137\*\*\* | | -0.0321\*\*\* | | -0.0175\*\*\* | |
|  |  |  | | (0.00195) | | (0.00134) | | (0.00110) | |
| 1b.event1#1b.HostType1 |  |  | | 0 | | 0 | | 0 | |
|  |  |  | | (0) | | (0) | | (0) | |
| 1b.event1#2o.HostType1 |  |  | | 0 | | 0 | | 0 | |
|  |  |  | | (0) | | (0) | | (0) | |
| 2o.event1#1b.HostType1 |  |  | | 0 | | 0 | | 0 | |
|  |  |  | | (0) | | (0) | | (0) | |
| 2.event1#2.HostType1 |  |  | | -0.00537 | | -0.0125\*\*\* | | -0.0113\*\*\* | |
|  |  |  | | (0.00360) | | (0.00245) | | (0.00201) | |
| 3o.event1#1b.HostType1 |  |  | | 0 | | 0 | | 0 | |
|  |  |  | | (0) | | (0) | | (0) | |
| 3.event1#2.HostType1 |  |  | | -0.0825\*\*\* | | -0.0103\*\*\* | | 0.00369\*\*\* | |
|  |  |  | | (0.00255) | | (0.00173) | | (0.00143) | |
| 4o.event1#1b.HostType1 |  |  | | 0 | | 0 | | 0 | |
|  |  |  | | (0) | | (0) | | (0) | |
| 4.event1#2.HostType1 |  |  | | -0.112\*\*\* | | -0.0456\*\*\* | | -0.0238\*\*\* | |
|  |  |  | | (0.00311) | | (0.00212) | | (0.00174) | |
| Constant | 4.789\*\*\* | 4.822\*\*\* | | 4.903\*\*\* | | 4.707\*\*\* | | 3.978\*\*\* | |
|  | (0.000526) | (0.000970) | | (0.00150) | | (0.00141) | | (0.0145) | |
| Control age | No | No | No | | Yes | | Yes | |
| Bed, bath, Listing Type | No | No | No | | Yes | | Yes | |
| Neighborhood | No | No | No | | No | | Yes | |
|  |  |  | |  | |  | |  | |
| Observations | 1,629,063 | 1,629,063 | | 1,629,063 | | 1,629,063 | | 1,629,063 | |
| R-squared | 0.000 | 0.005 | | 0.026 | | 0.550 | | 0.696 | |
| Standard errors in parentheses |  |  | |  | |  | |  | |
| \*\*\* p<0.01, \*\* p<0.05, \* p<0.1 |  |  | |  | |  | |  | |

**Price on Quantity**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | (1) | | (2) | | (3) | | (4) | | (5) | |
| VARIABLES | | lprice | | lprice | | lprice | | lprice | | lprice | |
|  | |  | |  | |  | |  | |  | |
| lquan | | 0.0448\*\*\* | | 0.0456\*\*\* | | 0.0374\*\*\* | | 0.00535\*\*\* | | 0.0112\*\*\* | |
|  | | (0.000669) | | (0.000668) | | (0.000663) | | (0.000453) | | (0.000376) | |
| 2.event1 | |  | | -0.0119\*\*\* | | -0.0117\*\*\* | | -0.00516\*\*\* | | -0.00599\*\*\* | |
|  | |  | | (0.00180) | | (0.00271) | | (0.00185) | | (0.00152) | |
| 3.event1 | |  | | -0.0252\*\*\* | | 0.0107\*\*\* | | -0.0250\*\*\* | | -0.0144\*\*\* | |
|  | |  | | (0.00127) | | (0.00191) | | (0.00130) | | (0.00107) | |
| 4.event1 | |  | | -0.130\*\*\* | | -0.0870\*\*\* | | -0.0997\*\*\* | | -0.0802\*\*\* | |
|  | |  | | (0.00156) | | (0.00227) | | (0.00155) | | (0.00127) | |
| 2.HostType1 | |  | |  | | -0.135\*\*\* | | -0.0318\*\*\* | | -0.0169\*\*\* | |
|  | |  | |  | | (0.00195) | | (0.00134) | | (0.00110) | |
| 1b.event1#1b.HostType1 | |  | |  | | 0 | | 0 | | 0 | |
|  | |  | |  | | (0) | | (0) | | (0) | |
| 1b.event1#2o.HostType1 | |  | |  | | 0 | | 0 | | 0 | |
|  | |  | |  | | (0) | | (0) | | (0) | |
| 2o.event1#1b.HostType1 | |  | |  | | 0 | | 0 | | 0 | |
|  | |  | |  | | (0) | | (0) | | (0) | |
| 2.event1#2.HostType1 | |  | |  | | -0.00605\* | | -0.0126\*\*\* | | -0.0115\*\*\* | |
|  | |  | |  | | (0.00359) | | (0.00245) | | (0.00201) | |
| 3o.event1#1b.HostType1 | |  | |  | | 0 | | 0 | | 0 | |
|  | |  | |  | | (0) | | (0) | | (0) | |
| 3.event1#2.HostType1 | |  | |  | | -0.0803\*\*\* | | -0.0100\*\*\* | | 0.00421\*\*\* | |
|  | |  | |  | | (0.00254) | | (0.00173) | | (0.00143) | |
| 4o.event1#1b.HostType1 | |  | |  | | 0 | | 0 | | 0 | |
|  | |  | |  | | (0) | | (0) | | (0) | |
| 4.event1#2.HostType1 | |  | |  | | -0.111\*\*\* | | -0.0454\*\*\* | | -0.0233\*\*\* | |
|  | |  | |  | | (0.00311) | | (0.00212) | | (0.00174) | |
| 1b.event1#co.lquan | |  | |  | |  | |  | |  | |
|  | |  | |  | |  | |  | |  | |
| 2.event1#c.lquan | |  | |  | |  | |  | |  | |
|  | |  | |  | |  | |  | |  | |
| 3.event1#c.lquan | |  | |  | |  | |  | |  | |
|  | |  | |  | |  | |  | |  | |
| 4.event1#c.lquan | |  | |  | |  | |  | |  | |
|  | |  | |  | |  | |  | |  | |
| 1b.HostType1#co.lquan | |  | |  | |  | |  | |  | |
|  | |  | |  | |  | |  | |  | |
| 2.HostType1#c.lquan | |  | |  | |  | |  | |  | |
|  | |  | |  | |  | |  | |  | |
| 1b.event1#1b.HostType1#co.lquan | |  | |  | |  | |  | |  | |
|  | |  | |  | |  | |  | |  | |
| 1b.event1#2o.HostType1#co.lquan | |  | |  | |  | |  | |  | |
|  | |  | |  | |  | |  | |  | |
| 2o.event1#1b.HostType1#co.lquan | |  | |  | |  | |  | |  | |
|  | |  | |  | |  | |  | |  | |
| 2.event1#2.HostType1#c.lquan | |  | |  | |  | |  | |  | |
|  | |  | |  | |  | |  | |  | |
| 3o.event1#1b.HostType1#co.lquan | |  | |  | |  | |  | |  | |
|  | |  | |  | |  | |  | |  | |
| 3.event1#2.HostType1#c.lquan | |  | |  | |  | |  | |  | |
|  | |  | |  | |  | |  | |  | |
| 4o.event1#1b.HostType1#co.lquan | |  | |  | |  | |  | |  | |
|  | |  | |  | |  | |  | |  | |
| 4.event1#2.HostType1#c.lquan | |  | |  | |  | |  | |  | |
|  | |  | |  | |  | |  | |  | |
| Constant | | 4.730\*\*\* | | 4.764\*\*\* | | 4.854\*\*\* | | 4.700\*\*\* | | 3.964\*\*\* | |
|  | | (0.00103) | | (0.00129) | | (0.00173) | | (0.00154) | | (0.0145) | |
| Control age |  | | No | | No | | No | | Yes | | Yes | |
| Bed, bath, Listing Type |  | | No | | No | | No | | Yes | | Yes | |
| Neighborhood |  | | No | | No | | No | | No | | Yes | |
|  | |  | |  | |  | |  | |  | |
| Observations | | 1,629,063 | | 1,629,063 | | 1,629,063 | | 1,629,063 | | 1,629,063 | |
| R-squared | | 0.003 | | 0.007 | | 0.028 | | 0.550 | | 0.696 | |
| Standard errors in parentheses | |  | |  | |  | |  | |  | |
| \*\*\* p<0.01, \*\* p<0.05, \* p<0.1 | |  | |  | |  | |  | |  | |

**Price on Quantity**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | (6) | | (7) | | (8) | | (9) | | (10) | |
| VARIABLES | | lprice | | lprice | | lprice | | lprice | | lprice | |
|  | |  | |  | |  | |  | |  | |
| lquan | | 0.0448\*\*\* | | 0.0338\*\*\* | | 0.0197\*\*\* | | -0.00274\*\* | | 0.00725\*\*\* | |
|  | | (0.000669) | | (0.00126) | | (0.00196) | | (0.00133) | | (0.00110) | |
| 2.event1 | |  | | -0.0329\*\*\* | | -0.0118\*\* | | -0.0161\*\*\* | | -0.0201\*\*\* | |
|  | |  | | (0.00354) | | (0.00547) | | (0.00372) | | (0.00306) | |
| 3.event1 | |  | | -0.0459\*\*\* | | 0.0131\*\*\* | | -0.0317\*\*\* | | -0.0112\*\*\* | |
|  | |  | | (0.00249) | | (0.00388) | | (0.00264) | | (0.00217) | |
| 4.event1 | |  | | -0.154\*\*\* | | -0.0960\*\*\* | | -0.119\*\*\* | | -0.0888\*\*\* | |
|  | |  | | (0.00302) | | (0.00454) | | (0.00309) | | (0.00254) | |
| 2.HostType1 | |  | |  | | -0.157\*\*\* | | -0.0265\*\*\* | | -0.0159\*\*\* | |
|  | |  | |  | | (0.00382) | | (0.00260) | | (0.00214) | |
| 1b.event1#1b.HostType1 | |  | |  | | 0 | | 0 | | 0 | |
|  | |  | |  | | (0) | | (0) | | (0) | |
| 1b.event1#2o.HostType1 | |  | |  | | 0 | | 0 | | 0 | |
|  | |  | |  | | (0) | | (0) | | (0) | |
| 2o.event1#1b.HostType1 | |  | |  | | 0 | | 0 | | 0 | |
|  | |  | |  | | (0) | | (0) | | (0) | |
| 2.event1#2.HostType1 | |  | |  | | -0.0462\*\*\* | | -0.0527\*\*\* | | -0.0403\*\*\* | |
|  | |  | |  | | (0.00713) | | (0.00485) | | (0.00399) | |
| 3o.event1#1b.HostType1 | |  | |  | | 0 | | 0 | | 0 | |
|  | |  | |  | | (0) | | (0) | | (0) | |
| 3.event1#2.HostType1 | |  | |  | | -0.106\*\*\* | | -0.0180\*\*\* | | -0.000285 | |
|  | |  | |  | | (0.00502) | | (0.00342) | | (0.00281) | |
| 4o.event1#1b.HostType1 | |  | |  | | 0 | | 0 | | 0 | |
|  | |  | |  | | (0) | | (0) | | (0) | |
| 4.event1#2.HostType1 | |  | |  | | -0.124\*\*\* | | -0.0606\*\*\* | | -0.0310\*\*\* | |
|  | |  | |  | | (0.00604) | | (0.00411) | | (0.00338) | |
| 1b.event1#co.lquan | |  | | 0 | | 0 | | 0 | | 0 | |
|  | |  | | (0) | | (0) | | (0) | | (0) | |
| 2.event1#c.lquan | |  | | 0.0162\*\*\* | | 0.000562 | | 0.00828\*\*\* | | 0.0105\*\*\* | |
|  | |  | | (0.00232) | | (0.00352) | | (0.00240) | | (0.00197) | |
| 3.event1#c.lquan | |  | | 0.0160\*\*\* | | -0.000684 | | 0.00526\*\*\* | | -0.00200 | |
|  | |  | | (0.00164) | | (0.00249) | | (0.00170) | | (0.00139) | |
| 4.event1#c.lquan | |  | | 0.0178\*\*\* | | 0.00734\*\* | | 0.0143\*\*\* | | 0.00634\*\*\* | |
|  | |  | | (0.00197) | | (0.00289) | | (0.00197) | | (0.00162) | |
| 1b.HostType1#co.lquan | |  | |  | | 0 | | 0 | | 0 | |
|  | |  | |  | | (0) | | (0) | | (0) | |
| 2.HostType1#c.lquan | |  | |  | | 0.0170\*\*\* | | -0.00468\*\*\* | | -0.00100 | |
|  | |  | |  | | (0.00253) | | (0.00172) | | (0.00142) | |
| 1b.event1#1b.HostType1#co.lquan | |  | |  | | 0 | | 0 | | 0 | |
|  | |  | |  | | (0) | | (0) | | (0) | |
| 1b.event1#2o.HostType1#co.lquan | |  | |  | | 0 | | 0 | | 0 | |
|  | |  | |  | | (0) | | (0) | | (0) | |
| 2o.event1#1b.HostType1#co.lquan | |  | |  | | 0 | | 0 | | 0 | |
|  | |  | |  | | (0) | | (0) | | (0) | |
| 2.event1#2.HostType1#c.lquan | |  | |  | | 0.0302\*\*\* | | 0.0312\*\*\* | | 0.0225\*\*\* | |
|  | |  | |  | | (0.00464) | | (0.00316) | | (0.00260) | |
| 3o.event1#1b.HostType1#co.lquan | |  | |  | | 0 | | 0 | | 0 | |
|  | |  | |  | | (0) | | (0) | | (0) | |
| 3.event1#2.HostType1#c.lquan | |  | |  | | 0.0190\*\*\* | | 0.00651\*\*\* | | 0.00317\* | |
|  | |  | |  | | (0.00329) | | (0.00224) | | (0.00184) | |
| 4o.event1#1b.HostType1#co.lquan | |  | |  | | 0 | | 0 | | 0 | |
|  | |  | |  | | (0) | | (0) | | (0) | |
| 4.event1#2.HostType1#c.lquan | |  | |  | | 0.0100\*\* | | 0.0131\*\*\* | | 0.00650\*\*\* | |
|  | |  | |  | | (0.00393) | | (0.00267) | | (0.00220) | |
| Constant | | 4.730\*\*\* | | 4.779\*\*\* | | 4.877\*\*\* | | 4.710\*\*\* | | 3.969\*\*\* | |
|  | | (0.00103) | | (0.00188) | | (0.00299) | | (0.00226) | | (0.0146) | |
| Control age |  | | No | | No | | No | | Yes | | Yes | |
| Bed, bath, Listing Type |  | | No | | No | | No | | Yes | | Yes | |
| Neighborhood |  | | No | | No | | No | | No | | Yes | |
|  | |  | |  | |  | |  | |  | |
| Observations | | 1,629,063 | | 1,629,063 | | 1,629,063 | | 1,629,063 | | 1,629,063 | |
| R-squared | | 0.003 | | 0.008 | | 0.028 | | 0.550 | | 0.696 | |
| Standard errors in parentheses | |  | |  | |  | |  | |  | |
| \*\*\* p<0.01, \*\* p<0.05, \* p<0.1 | |  | |  | |  | |  | |  | |