

alter per-child demand. We use the median per capita gross household income, the average of housing price in log, the proportion of children to the population, the proportion of persons born outside the country, and the proportion of individuals speaking non-English language at home (see Appendix B for details). We also use geographical variables to control for demand conditions. The child density is constructed as the ratio of the number of children to the area of the market to control for travelling cost for parents. Geographical size of adjacent markets relative to the market is used to capture the isolation of the postcode area, because geographically large postcode areas tend to be rural or remote areas with low economic activity. After controlling for the relative size of child population in adjacent markets, this relative geographic size variable may capture the extent to which the competition the entering firms involve is isolated and confined in the market. Hence, we predict this variable has a positive coefficient.

Variables that are assumed to affect the cost side are also included in both variable profit and fixed cost functions. The median commercial property value of transactions in the past two years is used as a proxy for how costly it is to rent a commercial building in each area. Since many areas do not have such transactions, we construct a dummy variable for postcode areas with no commercial property transaction in the

past two years. These commercial property variables include three types of commercial property (offices, shops, and industries).

To control for other unobservable demand and cost conditions, we include dummy variables for urban areas, years, and states in both variable profit and fixed cost functions. The urban dummy variable is constructed for areas that are defined as Major Cities and Inner Regional in the Remoteness Classification indicators, which categorize each area into five groups depending on the proximity to shopping and service facilities. The reference group is Outer Regional, Remote, and Very Remote areas. We do not attempt to draw structural inferences about the estimated signs of these controls, because these may reflect both demand and cost side conditions.

The definitions of these variables and their descriptive statistics are summarized in Tables 6 and 7, respectively.

5 Estimation Results

5.1 Profit Function Estimates

Table 8 reports the estimation result.

The estimated parameters, α 's, represent the marginal effects of additional entrants in the profit function. Figure 4 shows the accumulated effect.

5.2 Entry Thresholds

We calculate entry thresholds by ... [TALK ABOUT THE MEAN VALUE USED]

Table 9 reports the calculated entry thresholds and per firm entry thresholds. Figures 5 and 6 show the entry threshold ratio, s_6/s_N , by the number of operating firms.

EXPLANATION. Bresnahan and Reiss (1991) report the same figure for the five industries they analyse, which is shown in Figure 7.

5.3 Non-Linear Rebate Effect

So far, we assume that the rebate has an effect on the per child variable profit,

, that is constant with respect to the market structure. However, the standard Cournot competition model predicts the effect of price subsidy on profits is larger when a firm has greater market power. To confirm this point, ...

The result is reported in Table 10. Figure 8 shows the accumulated effect. Compared to Figure 4, ...

6 Conclusions

[TBW] This study extends our knowledge about

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Appendix A: The Market Size of Large Postcode Areas

The market size we use in this study is based on the number of children aged 0 to 4.

The total number of children in adjacent areas is in most cases constructed as the sum of children in all adjacent areas. However, if the postcode area or one of its adjacent areas is geographically too large to regard the entire area one large market, it may be more reasonable to count only some part of the entire child population. In particular, we set a cut-off market size, 2,000 square kilometres. If the market is larger than this size, we do not count the population from adjacent markets. If the market is not as large as 2,000 square kilometres, we take the difference of 2,000 and the market size, divide the difference by the number of adjacent postcode areas, and assign this per postcode residual to each postcode area. If an adjacent postcode area is smaller than this assigned per postcode residual, we count all the children in that post code area. If an adjacent postcode area is larger, we count the number of children in this adjacent market only up to the share of the assigned residual to the market size of this adjacent market. The implicit assumption behind this is that children are distributed uniformly over the entire market.

Table 1: Selecting Sample for Entry Analysis

| | Number of observation | Share |
|--|-----------------------|--------|
| National Population from 2001 to 2006 | 14,916 | 100.0% |
| Area < 10 square kilometres | 4,008 | 26.9% |
| Area > 3,000 square kilometres | 1,488 | 10.0% |
| # child < 20 any year | 1,692 | 11.3% |
| # child >= 2,000 | 677 | 4.5% |
| # child <= 2 * total # child in adjacent markets | 11,951 | 80.1% |
| Total area including adjacent markets < 50 sqkm | 1,758 | 11.8% |
| Missing data and anomalous markets | 6 | 0.0% |
| All dropped observations | 13,707 | 91.9% |
| Sample used in the entry analysis | 1,209 | 8.1% |

Table 2: Sample Distribution by Population and Number of Childcare Centres (Count)

| Number of children aged 0 – 4 per postcode | Number of Childcare Centres | | | | | | | | | | | Total |
|---|-----------------------------|--------------|--------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10+ | |
| National Population | | | | | | | | | | | | |
| Less than 10 | 524 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 531 |
| 10 – 30 | 1,806 | 35 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1,846 |
| 30 – 50 | 1,122 | 72 | 5 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1,201 |
| 50 – 100 | 1,630 | 168 | 11 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1,810 |
| 100 – 200 | 1,331 | 511 | 37 | 18 | 1 | 0 | 0 | 0 | 0 | 6 | 0 | 1,904 |
| 200 – 300 | 473 | 479 | 91 | 22 | 13 | 3 | 0 | 0 | 0 | 1 | 0 | 1,082 |
| 300 – 400 | 235 | 468 | 127 | 55 | 24 | 7 | 7 | 1 | 3 | 7 | 3 | 937 |
| 400 – 500 | 120 | 271 | 198 | 78 | 37 | 9 | 16 | 10 | 2 | 2 | 0 | 743 |
| 500 – 700 | 137 | 333 | 300 | 260 | 118 | 44 | 23 | 5 | 1 | 2 | 3 | 1,226 |
| 700 – 1,000 | 66 | 175 | 348 | 315 | 168 | 77 | 66 | 27 | 11 | 4 | 0 | 1,257 |
| 1,000 – 1,500 | 12 | 89 | 139 | 160 | 189 | 183 | 120 | 82 | 50 | 13 | 49 | 1,086 |
| 1,500 – 2,000 | 0 | 11 | 15 | 67 | 80 | 90 | 74 | 64 | 59 | 47 | 109 | 616 |
| 2,000 or more | 0 | 1 | 2 | 21 | 27 | 50 | 65 | 52 | 63 | 67 | 329 | 677 |
| Total | 7,456 | 2,620 | 1,275 | 996 | 663 | 463 | 371 | 241 | 189 | 149 | 493 | 14,916 |
| Sample for Analysis | | | | | | | | | | | | |
| Less than 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 – 30 | 40 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 45 |
| 30 – 50 | 102 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 |
| 50 – 100 | 195 | 68 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 263 |
| 100 – 200 | 148 | 81 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 229 |
| 200 – 300 | 34 | 73 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 108 |
| 300 – 400 | 23 | 39 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 67 |
| 400 – 500 | 15 | 46 | 21 | 7 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 92 |
| 500 – 700 | 4 | 29 | 31 | 6 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 76 |
| 700 – 1,000 | 6 | 15 | 58 | 35 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 124 |
| 1,000 – 1500 | 4 | 5 | 13 | 11 | 13 | 0 | 0 | 3 | 0 | 0 | 0 | 49 |
| 1,500 – 2,000 | 0 | 0 | 0 | 0 | 13 | 13 | 10 | 2 | 0 | 0 | 0 | 38 |
| 2,000 or more | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 571 | 377 | 129 | 59 | 39 | 19 | 10 | 5 | 0 | 0 | 0 | 1,209 |

Table 3: Sample Distribution by Population and Number of Childcare Centres (Share)

| # of children aged 0 – 4 per postcode | Number of Childcare Centres | | | | | | | | | | | Total |
|---------------------------------------|-----------------------------|--------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10+ | |
| National Population | | | | | | | | | | | | |
| Less than 10 | 98.7% | 1.3% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100% |
| 10 – 30 | 97.8% | 1.9% | 0.1% | 0.0% | 0.2% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100% |
| 30 – 50 | 93.4% | 6.0% | 0.4% | 0.0% | 0.2% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100% |
| 50 – 100 | 90.1% | 9.3% | 0.6% | 0.0% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100% |
| 100 – 200 | 69.9% | 26.8% | 1.9% | 1.0% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.3% | 0.0% | 100% |
| 200 – 300 | 43.7% | 44.3% | 8.4% | 2.0% | 1.2% | 0.3% | 0.0% | 0.0% | 0.0% | 0.1% | 0.0% | 100% |
| 300 – 400 | 25.1% | 50.0% | 13.6% | 5.9% | 2.6% | 0.8% | 0.8% | 0.1% | 0.3% | 0.8% | 0.3% | 100% |
| 400 – 500 | 16.2% | 36.5% | 26.7% | 10.5% | 5.0% | 1.2% | 2.2% | 1.4% | 0.3% | 0.3% | 0.0% | 100% |
| 500 – 700 | 11.2% | 27.2% | 24.5% | 21.2% | 9.6% | 3.6% | 1.9% | 0.4% | 0.1% | 0.2% | 0.2% | 100% |
| 700 – 1,000 | 5.3% | 13.9% | 27.7% | 25.1% | 13.4% | 6.1% | 5.3% | 2.2% | 0.9% | 0.3% | 0.0% | 100% |
| 1,000 – 1,500 | 1.1% | 8.2% | 12.8% | 14.7% | 17.4% | 16.9% | 11.1% | 7.6% | 4.6% | 1.2% | 4.5% | 100% |
| 1,500 – 2,000 | 0.0% | 1.8% | 2.4% | 10.9% | 13.0% | 14.6% | 12.0% | 10.4% | 9.6% | 7.6% | 17.7% | 100% |
| 2,000 or more | 0.0% | 0.2% | 0.3% | 3.1% | 4.0% | 7.4% | 9.6% | 7.7% | 9.3% | 9.9% | 48.6% | 100% |
| Total | 50.0% | 17.6% | 8.6% | 6.7% | 4.4% | 3.1% | 2.5% | 1.6% | 1.3% | 1.0% | 3.3% | 100% |
| Sample for Analysis | | | | | | | | | | | | |
| Less than 10 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | - |
| 10 – 30 | 88.9% | 11.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100% |
| 30 – 50 | 86.4% | 13.6% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100% |
| 50 – 100 | 74.1% | 25.9% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100% |
| 100 – 200 | 64.6% | 35.4% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100% |
| 200 – 300 | 31.5% | 67.6% | 0.9% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100% |
| 300 – 400 | 34.3% | 58.2% | 7.5% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100% |
| 400 – 500 | 16.3% | 50.0% | 22.8% | 7.6% | 3.3% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100% |
| 500 – 700 | 5.3% | 38.2% | 40.8% | 7.9% | 0.0% | 7.9% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100% |
| 700 – 1,000 | 4.8% | 12.1% | 46.8% | 28.2% | 8.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100% |
| 1,000 – 1500 | 8.2% | 10.2% | 26.5% | 22.5% | 26.5% | 0.0% | 0.0% | 6.1% | 0.0% | 0.0% | 0.0% | 100% |
| 1,500 – 2,000 | 0.0% | 0.0% | 0.0% | 0.0% | 34.2% | 34.2% | 26.3% | 5.3% | 0.0% | 0.0% | 0.0% | 100% |
| 2,000 or more | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | - |
| Total | 47.2% | 31.2% | 10.7% | 4.9% | 3.2% | 1.6% | 0.8% | 0.4% | 0.0% | 0.0% | 0.0% | 100% |

Table 4: Distribution of Sample Markets by Size and State

| Area SqKm | ACT | NSW | NT | QLD | SA | TAS | VIC | WA | Total |
|----------------------------|------------|--------------|------------|--------------|--------------|------------|--------------|--------------|---------------|
| National Population | | | | | | | | | |
| Less than 1 | 0 | 84 | 0 | 18 | 12 | 6 | 42 | 18 | 180 |
| 1 – 5 | 12 | 654 | 12 | 228 | 288 | 60 | 468 | 174 | 1,896 |
| 5 – 10 | 48 | 534 | 0 | 216 | 324 | 78 | 516 | 216 | 1,932 |
| 10 – 30 | 66 | 420 | 24 | 402 | 252 | 60 | 594 | 222 | 2,040 |
| 30 – 50 | 0 | 96 | 24 | 168 | 48 | 30 | 186 | 84 | 636 |
| 50 – 100 | 12 | 162 | 6 | 150 | 84 | 78 | 282 | 90 | 864 |
| 100 – 200 | 0 | 198 | 12 | 138 | 132 | 78 | 432 | 102 | 1,092 |
| 200 – 300 | 0 | 144 | 12 | 132 | 120 | 36 | 294 | 66 | 804 |
| 300 – 400 | 6 | 102 | 6 | 72 | 60 | 6 | 210 | 48 | 504 |
| 400 – 500 | 0 | 42 | 6 | 42 | 66 | 24 | 114 | 30 | 324 |
| 500 – 700 | 0 | 156 | 0 | 120 | 96 | 48 | 204 | 84 | 708 |
| 700 – 1,000 | 0 | 144 | 0 | 120 | 84 | 18 | 204 | 108 | 678 |
| 1,000 – 1,500 | 6 | 162 | 0 | 72 | 96 | 48 | 114 | 174 | 672 |
| 1,500 – 2,000 | 0 | 108 | 12 | 114 | 90 | 18 | 102 | 120 | 564 |
| 2,000 – 3,000 | 0 | 204 | 0 | 72 | 72 | 6 | 72 | 108 | 534 |
| 3,000 – 5,000 | 0 | 186 | 0 | 132 | 48 | 36 | 54 | 102 | 564 |
| 5,000 – 10,000 | 0 | 114 | 6 | 120 | 6 | 12 | 6 | 60 | 324 |
| 10,000 or larger | 0 | 78 | 30 | 228 | 60 | 0 | 6 | 198 | 600 |
| Total | 150 | 3,588 | 150 | 2,544 | 1,938 | 642 | 3,900 | 2,004 | 14,916 |
| Sample for Analysis | | | | | | | | | |
| Less than 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 – 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 – 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 – 30 | 0 | 0 | 6 | 18 | 6 | 0 | 24 | 18 | 72 |
| 30 – 50 | 0 | 0 | 6 | 6 | 0 | 6 | 6 | 6 | 30 |
| 50 – 100 | 0 | 6 | 0 | 6 | 12 | 6 | 15 | 6 | 51 |
| 100 – 200 | 0 | 0 | 0 | 12 | 6 | 0 | 0 | 6 | 24 |
| 200 – 300 | 0 | 0 | 0 | 6 | 6 | 0 | 0 | 6 | 18 |
| 300 – 400 | 0 | 6 | 4 | 0 | 0 | 0 | 0 | 0 | 10 |
| 400 – 500 | 0 | 0 | 6 | 0 | 6 | 0 | 15 | 0 | 27 |
| 500 – 700 | 0 | 6 | 0 | 8 | 5 | 0 | 0 | 6 | 25 |
| 700 – 1,000 | 0 | 0 | 0 | 6 | 24 | 0 | 13 | 2 | 45 |
| 1,000 – 1,500 | 0 | 18 | 0 | 12 | 20 | 18 | 19 | 29 | 116 |
| 1,500 – 2,000 | 0 | 78 | 0 | 42 | 36 | 12 | 48 | 85 | 301 |
| 2,000 – 3,000 | 0 | 186 | 0 | 70 | 60 | 6 | 60 | 108 | 490 |
| 3,000 – 5,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5,000 – 10,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10,000 or larger | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 300 | 22 | 186 | 181 | 48 | 200 | 272 | 1,209 |

Table 5: Distribution of Sample Markets by the Number of Childcare Centres and

Year

| # Childcare | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | Total |
|----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| Sample for Analysis | | | | | | | |
| 0 | 108 | 102 | 98 | 93 | 85 | 85 | 571 |
| 1 | 53 | 60 | 61 | 63 | 71 | 69 | 377 |
| 2 | 25 | 25 | 23 | 21 | 16 | 19 | 129 |
| 3 | 8 | 7 | 9 | 11 | 12 | 12 | 59 |
| 4 | 3 | 3 | 4 | 7 | 11 | 11 | 39 |
| 5 | 3 | 3 | 3 | 3 | 3 | 4 | 19 |
| 6 | 0 | 1 | 2 | 3 | 3 | 1 | 10 |
| 7 | 0 | 0 | 0 | 1 | 1 | 3 | 5 |
| 8 or more | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 200 | 201 | 200 | 202 | 202 | 204 | 1,209 |
| 0 | 54.00% | 50.75% | 49.00% | 46.04% | 42.08% | 41.67% | 47.23% |
| 1 | 26.50% | 29.85% | 30.50% | 31.19% | 35.15% | 33.82% | 31.18% |
| 2 | 12.50% | 12.44% | 11.50% | 10.40% | 7.92% | 9.31% | 10.67% |
| 3 | 4.00% | 3.48% | 4.50% | 5.45% | 5.94% | 5.88% | 4.88% |
| 4 | 1.50% | 1.49% | 2.00% | 3.47% | 5.45% | 5.39% | 3.23% |
| 5 | 1.50% | 1.49% | 1.50% | 1.49% | 1.49% | 1.96% | 1.57% |
| 6 | 0.00% | 0.50% | 1.00% | 1.49% | 1.49% | 0.49% | 0.83% |
| 7 | 0.00% | 0.00% | 0.00% | 0.50% | 0.50% | 1.47% | 0.41% |
| 8 or more | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 100% |

Table 6: Definitions of Variables

| Dependent variable | |
|--|---|
| <i>nLDC6</i> | Number of Long Day Care Centres: 0, 1, 2, 3, 4, 5, and "6 or more". |
| Explanatory variables: Market characteristics | |
| <i>nChild</i> | Number of children aged 0 to 4 (in 1,000's) |
| <i>ChildIncrease</i> | Newborn child growth rate over 4 years ^a |
| <i>PerCapitalIncome</i> | Median weekly gross household income divided by median household size (in 1,000's, 2005 dollar) |
| <i>LnHousePrice</i> | Average ln(housing price in 2005 dollar) |
| <i>LnHPrice_missing</i> ^b | =1 if <i>LnHousePrice</i> is missing |
| <i>rChild</i> | Ratio of children aged 0 to 4 to the number of couples aged 20 to 49. |
| <i>rImmigrant</i> | Ratio of immigrants to total population (per thousand) |
| <i>rNoEnglish</i> | Ratio of non-English speakers to total population (per thousand) |
| <i>LnPropertyPrice</i> | Median commercial property price in the past 2 years [log of 2005 dollar] |
| <i>LnPPrice_missing</i> ^b | =1 if <i>LnPropertyPrice</i> is missing (less than 10 transactions in the past 2 years) |
| <i>LnDensity</i> | Log of (<i>nChild</i> divided by <i>Area</i>) |
| <i>City</i> | =1 if Remoteness Area Index is <i>Major Cities</i> or <i>Inner Regional</i> (Reference group: <i>Outer Regional, Remote, Very Remote</i>) ^c |
| Explanatory variables: characteristics of adjacent markets | |
| <i>AdjChild</i> ^d | Relative market size of adjacent markets. 0 if there is no adjacent market. |
| <i>AdjArea</i> | Relative area size of adjacent markets. 0 if there is no adjacent market. |
| <i>AdjArea^2</i> | <i>AdjArea</i> squared |
| Explanatory variables: year and state dummy variables | |
| <i>2002, 2003, ..., 2006</i> | Year dummy variables. The reference group is 2001. |
| <i>Year</i> | Time trend variable taking 0, 1, 2, 3, 4, and 5 for 2001, 2002, ..., and 2006. |
| <i>YearRebate</i> | Year dummy variable for 2005 and 2006, years after introduction of the rebate |
| <i>Victoria</i> | State dummy variable for Victoria. (Reference group: New South Wales) |
| <i>Queensland</i> | State dummy variable for Queensland. (Reference group: New South Wales) |
| <i>Tasmania</i> | State dummy variable for Tasmania. (Reference group: New South Wales) |
| <i>SA</i> | State dummy variable for South Australia. (Reference group: New South Wales) |
| <i>WA&NT</i> | State dummy variable for Western Australia and Northern Territory. (Reference group: New South Wales) |

Note: ^a: For year t , *ChildIncrease* is calculated by $(i_{t+1} + i_t + i_{t-1} + i_{t-2}) / (i_{t-3} + i_{t-4} + i_{t-5} + i_{t-6})$, where i_k is the number of newborns in the postcode in year k . The size of each cohort actually living in the postcode would be preferred to the number of newborns to reflect trends of child migration flow, but such information is not available before our study period. The number of births were obtained from the ABS, and converted from the original 2006-SLA-level data to the 2006-postcode-area-level data. ^b: *LnHousePrice* and *LnPropertyPrice* take 0 if missing. ^c: Constructed from Remoteness Area Index of the

highest share in a postcode area. ^d: See Appendix A for how this variable is constructed.

Table 7: Summary Statistics

| <i>Variables</i> | Mean | S.D. | Min | Max |
|---|--------|----------|--------|-----------|
| Dependent variable | | | | |
| <i>nLDC6</i> | 0.954 | 1.275 | 0 | 6 |
| Explanatory variables: Market characteristics | | | | |
| <i>nChild</i> | 0.353 | 0.410 | 0.021 | 1.996 |
| <i>ChildIncrease</i> | 0.944 | 0.175 | 0.485 | 4.833 |
| <i>PerCapitalIncome</i> | 0.453 | 0.100 | 0.205 | 1.483 |
| <i>LnHousePrice^a</i> | 11.751 | 0.443 | 9.972 | 13.314 |
| <i>LnHPrice_missing</i> | 0.080 | 0.272 | 0 | 1 |
| <i>rChild</i> | 0.481 | 0.096 | 0.204 | 1.321 |
| <i>rImmigrant</i> | 0.093 | 0.051 | 0 | 0.455 |
| <i>rNoEnglish</i> | 0.039 | 0.079 | 0 | 0.776 |
| <i>LnPropertyPrice^a</i> | 11.219 | 0.953 | 6.602 | 12.624 |
| <i>LnPPrice_missing</i> | 0.326 | 0.469 | 0 | 1 |
| <i>LnDensity</i> | -1.635 | 1.976 | -4.908 | 4.211 |
| <i>City</i> | 0.240 | 0.427 | 0 | 1 |
| Explanatory variables: Characteristics of adjacent markets | | | | |
| <i>AdjChild</i> | 0.125 | 0.157 | 0 | 0.500 |
| <i>AdjArea</i> | 251.47 | 1,714.15 | 0 | 22,128.59 |
| <i>N</i> | 1,209 | | | |

Note: ^a: summary statistics excludes missing values.

Table 8: Entry Estimation Result 1: Year Dummies

| | Market size: S() | | Variable profit: V() | | Fixed costs: F() | |
|-------------------------|-------------------|-----------|-----------------------|-----------|-------------------|-----------|
| | Coefficient | Std error | Coefficient | Std error | Coefficient | Std error |
| <i>nChild</i> | 1.000 | | | | | |
| <i>ChildIncrease</i> | 0.198 *** | 0.047 | | | | |
| <i>AdjChild</i> | 0.170 *** | 0.060 | | | | |
| <i>PerCapitalIncome</i> | | | -1.778 ** | 0.799 | | |
| <i>LnHousePrice</i> | | | 0.413 * | 0.229 | | |
| <i>LnHPrice_missing</i> | | | 4.804 * | 2.667 | | |
| <i>rChild</i> | | | -1.674 | 1.231 | | |
| <i>rImmigrant</i> | | | 6.744 *** | 2.011 | | |
| <i>rNoEnglish</i> | | | -6.989 *** | 1.889 | | |
| <i>LnPropertyPrice</i> | | | 1.027 *** | 0.233 | 0.240 * | 0.124 |
| <i>LnPPrice_missing</i> | | | 14.288 *** | 2.611 | 4.343 *** | 1.373 |
| <i>LnDensity</i> | | | 0.079 | 0.055 | | |
| <i>AdjArea</i> | | | 1.63e-03 *** | 0.39e-03 | | |
| <i>AdjArea^2</i> | | | -1.24e-07 ** | 0.61e-07 | | |
| <i>City</i> | | | -0.737 *** | 0.245 | -0.184 | 0.204 |
| <i>2002</i> | | | 0.019 | 0.309 | -0.096 | 0.237 |
| <i>2003</i> | | | 0.011 | 0.313 | -0.139 | 0.235 |
| <i>2004</i> | | | 0.212 | 0.319 | -0.163 | 0.232 |
| <i>2005</i> | | | 0.541 * | 0.335 | -0.141 | 0.236 |
| <i>2006</i> | | | 0.689 ** | 0.341 | -0.053 | 0.242 |
| <i>Victoria</i> | | | -0.808 ** | 0.398 | -0.010 | 0.303 |
| <i>Queensland</i> | | | 0.619 | 0.380 | 0.400 | 0.263 |
| <i>Tasmania</i> | | | -1.212 * | 0.689 | -0.611 | 0.375 |
| <i>South Australia</i> | | | -1.284 *** | 0.430 | -0.339 | 0.291 |
| <i>WA&NT</i> | | | -2.223 *** | 0.779 | -1.076 *** | 0.401 |
| α_1 | | | -11.233 *** | 3.500 | | |
| α_2 | | | 1.484 *** | 0.308 | | |
| α_3 | | | -0.974 ** | 0.434 | | |
| α_4 | | | -0.469 | 0.433 | | |
| α_5 | | | -1.811 *** | 0.347 | | |
| α_6 | | | -0.407 | 0.404 | | |
| Y_1 | | | | | -1.058 | 1.395 |
| Y_2 | | | | | 2.974 *** | 0.246 |
| Y_3 | | | | | 0.488 | 0.400 |
| Y_4 | | | | | 0.400 | 0.447 |
| Y_5 | | | | | -0.982 *** | 0.347 |

| | | | | |
|--------------------|---------|--|-------|-------|
| Y_6 | | | 0.562 | 0.685 |
| <i>Log-L</i> | -896.87 | | | |
| <i>N</i> | 1,209 | | | |
| <i>Chi-sq stat</i> | 29.15 | | | |
| <i>P-value</i> | 0.0000 | | | |

Note: *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Table 9: Entry Threshold S_N (Minimum Number of Children Necessary to Maintain N

Firms) and Per Firm Entry Threshold s_N ($=S_N/N$)

| Number of Entrants | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|--|-------|-------|-------|-------|-------|-------|
| Cities (Major Cities, Inner Regional) | | | | | | |
| S_1 | 239 | 207 | 195 | 164 | 137 | 146 |
| S_2 | 729 | 705 | 697 | 655 | 605 | 599 |
| S_3 | 1,104 | 1,072 | 1,063 | 992 | 905 | 888 |
| S_4 | 1,416 | 1,377 | 1,368 | 1,270 | 1,147 | 1,119 |
| S_5 | 2,766 | 2,663 | 2,648 | 2,290 | 1,889 | 1,785 |
| S_6 | 4,457 | 4,286 | 4,276 | 3,543 | 2,780 | 2,576 |
| s_1 | 239 | 207 | 195 | 164 | 137 | 146 |
| s_2 | 364 | 352 | 348 | 327 | 302 | 299 |
| s_3 | 368 | 357 | 354 | 331 | 302 | 296 |
| s_4 | 354 | 344 | 342 | 318 | 287 | 280 |
| s_5 | 553 | 533 | 530 | 458 | 378 | 357 |
| s_6 | 743 | 714 | 713 | 590 | 463 | 429 |
| Rural Areas (Outer Regional, Remote, Very Remote) | | | | | | |
| S_1 | 246 | 217 | 205 | 177 | 152 | 161 |
| S_2 | 701 | 679 | 672 | 634 | 589 | 584 |
| S_3 | 1,037 | 1,008 | 999 | 937 | 861 | 847 |
| S_4 | 1,308 | 1,274 | 1,265 | 1,181 | 1,077 | 1,054 |
| S_5 | 2,279 | 2,202 | 2,188 | 1,938 | 1,648 | 1,573 |
| S_6 | 3,402 | 3,288 | 3,275 | 2,827 | 2,325 | 2,188 |
| s_1 | 246 | 217 | 205 | 177 | 152 | 161 |
| s_2 | 351 | 340 | 336 | 317 | 294 | 292 |
| s_3 | 346 | 336 | 333 | 312 | 287 | 282 |
| s_4 | 327 | 318 | 316 | 295 | 269 | 263 |
| s_5 | 456 | 440 | 438 | 388 | 330 | 315 |
| s_6 | 567 | 548 | 546 | 471 | 388 | 365 |

Table 10: Entry Estimation Result 2: Rebate Effect (TO BE UPDATED)

| | Market size: S () | | Variable profit: V () | | Fixed costs: F () | |
|-------------------------|--------------------|-----------|------------------------|-----------|--------------------|-----------|
| | Coefficient | Std error | Coefficient | Std error | Coefficient | Std error |
| <i>nChild</i> | 1.000 | | | | | |
| <i>ChildIncrease</i> | 0.279 *** | 0.050 | | | | |
| <i>AdjChild</i> | 0.138 ** | 0.070 | | | | |
| <i>PerCapitalIncome</i> | | | 0.101 | 0.615 | | |
| <i>LnHousePrice</i> | | | 0.042 * | 0.022 | | |
| <i>rChild</i> | | | 0.197 | 1.473 | | |
| <i>rImmigrant</i> | | | 6.366 *** | 1.697 | | |
| <i>rNoEnglish</i> | | | -6.516 *** | 1.442 | | |
| <i>LnPropertyPrice</i> | | | -0.217 *** | 0.073 | -0.165 *** | 0.050 |
| <i>LnPPrice_missing</i> | | | -0.036 | 0.479 | 0.414 | 0.316 |
| <i>LnDensity</i> | | | 0.209 *** | 0.044 | | |
| <i>AdjArea</i> | | | 6.63e-04 *** | 1.64e-04 | | |
| <i>AdjArea^2</i> | | | -3.73e-08 *** | 1.08e-08 | | |
| <i>City</i> | | | -0.390 | 0.244 | 0.062 | 0.221 |
| <i>Year</i> | | | 0.173 * | 0.092 | -0.015 | 0.075 |
| <i>YearRebate</i> | | | | | 0.114 | 0.310 |
| <i>Victoria</i> | | | -0.594 | 0.420 | 0.652 * | 0.337 |
| <i>Queensland</i> | | | 0.623 * | 0.364 | 0.564 ** | 0.276 |
| <i>Tasmania</i> | | | -2.056 *** | 0.637 | -0.847 ** | 0.417 |
| <i>South Australia</i> | | | -1.298 *** | 0.428 | 0.026 | 0.319 |
| <i>WA&NT</i> | | | -0.680 | 0.556 | -0.224 | 0.353 |
| α_1 | | | 3.647 *** | 0.668 | | |
| $\alpha_1 * YearRebate$ | | | 0.340 | 0.523 | | |
| α_2 | | | 1.443 *** | 0.305 | | |
| $\alpha_2 * YearRebate$ | | | -0.438 | 0.284 | | |
| α_3 | | | -1.070 ** | 0.434 | | |
| $\alpha_3 * YearRebate$ | | | 0.480 ** | 0.208 | | |
| α_4 | | | -0.240 | 0.423 | | |
| $\alpha_4 * YearRebate$ | | | 0.106 | 0.177 | | |
| α_5 | | | -1.628 *** | 0.347 | | |
| $\alpha_5 * YearRebate$ | | | -0.295 | 0.206 | | |
| α_6 | | | -0.812 * | 0.420 | | |
| $\alpha_6 * YearRebate$ | | | 0.304 | 0.292 | | |
| γ_1 | | | | | 1.840 *** | 0.288 |
| γ_2 | | | | | 2.824 *** | 0.252 |
| γ_3 | | | | | 0.441 | 0.432 |