

AirBNB: Effect on Singapore

SPIRE – NUS

PI: Ivan Png

Summary statistics

Property	No of rooms
Licensed hotels (2016)	63,850
AirBNB: weekdays	7,184
AirBNB: weekends	7,688

Variable	Obs	Mean	Std. Dev.	Min	Max
entire	6,202	0.48	0.50	0.00	1.00
weekend	6,202	0.06	0.24	0.00	1.00
minstay	6,083	2.75	3.72	1.00	90.00
reviews	6,188	9.19	18.76	0.00	204.00

48% rent
entire home

Study 1: Effect on hotels

- Combined with Singapore Tourist Board data on hotel occupancy and rates in four tiers
 - Luxury
 - Upscale
 - Mid-tier
 - Economy
- 2010-2016

Variables	DV: Occupancy (%)	AirBNB effect	DV: Room rate (S\$/day)	AirBNB effect	DV: Avg rev. (S\$/day)	AirBNB effect
Luxury	81.88*** (1.017)	80.34*** (1.102)	429.15*** (5.516)	411.37*** (4.559)	355.51*** (7.558)	336.12*** (7.172)
Upscale	83.66*** (0.838)	83.49*** (0.832)	262.96*** (4.151)	268.35*** (3.226)	219.26*** (5.777)	224.48*** (5.033)
Midtier	83.12*** (0.863)	82.92*** (0.879)	173.86*** (4.106)	178.61*** (3.202)	141.15*** (5.719)	144.92*** (4.938)
Economy	79.30*** (0.913)	80.46*** (0.948)	95.93*** (4.041)	94.36*** (3.314)	70.10*** (5.679)	69.37*** (5.054)
Luxury x AirBNB		0.000 (0.001)		0.000 (0.004)		-0.001 (0.005)
Upscale x AirBNB		-0.0006 (0.001)		-0.011*** (0.004)		-0.012** (0.005)
Midtier x AirBNB		-0.0005 (0.001)		-0.010*** (0.004)		-0.012** (0.005)
Economy x AirBNB		-0.0012 (0.001)		-0.007** (0.004)		-0.009** (0.005)
Year f.e.	Yes	Yes	Yes	Yes	Yes	Yes
Month f.e.	Yes	Yes	Yes	Yes	Yes	Yes
Observations	312	312	312	312	312	312
R2	1.00	1.00	1.00	1.00	0.99	1.00

Study 2: Effect on housing market

- Combined with Urban Redevelopment Authority data on residential property transactions
 - Resales
- 2010-16

Housing: Data

VARIABLES	N	mean	std dev	min	max
Number of hosts	12,786	0.267	0.755	0	9
Price (\$ million)	12,786	1.616	7.226	0.370	638
Area (sqm)	12,786	130.3	532.2	29	55,838
Units sold	12,786	1.080	3.565	1	358
Apartment	12,786	0.342	0.474	0	1
Condominium	12,786	0.619	0.486	0	1
Exec condo	12,786	0.039	0.194	0	1
Freehold	12,786	0.431	0.495	0	1
Lease 99 years	12,786	0.495	0.500	0	1
Lease 999 years	12,786	0.057	0.232	0	1