

Appendix C. Robustness

Table C1. Robustness checks for the analyses of parking non-compliance rates by cities.

	Linear regression models					The existence of non-linear effects		
	Parking density	Parking coverage	Significant density variables count	Significant land use dummy variables count	N	R2	Parking density	Parking coverage
Cincinnati	-0.002* (0.001)	0.085 (0.322)	0	0	48	0.27	Yes	Yes
Cologne	-0.025** (0.01)	1.817 (1.352)	0	0	16	0.77	Yes	Yes
Long Beach	-0.022*** (0.005)	-0.721 (1.17)	1	0	74	0.43	Yes	Yes
Lubbock	-0.009 (0.013)	0.228 (1.828)	0	0	22	0.45	Yes	Yes
Madrid	-0.001*** (0.000)	-0.012 (0.033)	2	2	602	0.07	Yes	Yes
Munich	-0.024*** (0.004)	0.299 (0.591)	1	1	23	0.78	Yes	Yes
Stockholm	-0.000*** (0.000)	-0.020 (0.030)	1	0	311	0.05	Yes	Yes
Tel Aviv	-0.004*** (0.000)	-0.217* (0.113)	1	1	240	0.35	Yes	Yes
Washington DC	-0.034*** (0.004)	0.401 (0.508)	0	0	48	0.8	Yes	Yes

Note: asterisks represent the significance levels, with * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Density variables include population density, destination accessibility, intersection density, and distance to the city center. Land use dummy variables are defined in the method section.

Table C2. Robustness checks for the analyses of parking non-compliance rates by land use types.

	Linear regression models					The existence of non-linear effects	
	Parking density	Parking coverage	Significant density variables count	N	R2	Parking density	Parking coverage
Residential	-0.013*** (0.004)	0.221 (0.358)	1	73	0.51	Yes	Yes
Commercial	-0.000 (0.000)	-0.179 (0.117)	1	115	0.22	Yes	Yes
Public	-0.001 (0.002)	0.02 (0.327)	0	58	0.18	Yes	Yes
Office	-0.000** (0.000)	-0.037 (0.07)	1	187	0.52	Yes	Yes
Leisure	-0.003* (0.002)	0.008 (0.177)	1	53	0.26	Yes	Yes
Tourism	-0.009*** (0.002)	0.012 (0.238)	0	104	0.56	Yes	Yes
Mixed	-0.000*** (0.000)	-0.102*** (0.40)	2	696	0.23	Yes	Yes
Transit	-0.013*** (0.003)	0.828*** (0.304)	0	105	0.39	Yes	Yes

Note: asterisks represent the significance levels, with * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Density variables include population density, destination accessibility, intersection density, and distance to the city center.

Table C3. Robustness checks for the regression of parking demand by cities.

	Parking density	Parking coverage	Significant density variables count	Significant land use dummy variables count	N	LR Chi2
Charlotte	1.016 (0.011)	1.028*** (0.004)	4	3	922	871.41
Cincinnati			2	3	3601	1782.81
Cologne	0.995 (0.02)	0.984 (0.008)	4	3	929	311.71
Denver	1.019*** (0.003)	1.016*** (0.001)	4	4	2,812	3429.72
Long Beach	1.045*** (0.007)	1.010*** (0.003)	1	2	294	267.48
Lubbock			3	2	3897	1320.53
Lubeck			4	5	589	314.1
Madrid					59	8.68
Munich	1.002 (0.012)	0.998 (0.004)	3	5	2215	444.94
Tel Aviv	1.051 (0.056)	0.985 (0.019)	3	2	664	447.72
Washington DC	1.01 (0.008)	1.010*** 3(0.003)	3	5	1579	1152.93

Note: asterisks represent the significance levels, with * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Density variables include population density, destination accessibility, intersection density, and distance to the city center. Land use dummy variables are defined in the method section.

Table C4. Robustness checks for the analyses of parking demand by land use types.

	Parking density	Parking coverage	Significant density variables count	N	LR Chi2
Residential	1.017* (0.009)	1.015*** (0.003)	3	7722	1481.01
Commercial	1.031*** (0.006)	1.013*** (0.002)	3	658	626.92
Public	1.027*** (0.009)	1.013 (0.003)	3	713	349.11
Office	1.02 (0.014)	1.022 (0.005)	2	589	315.71
Leisure	1.023 (0.02)	1.016*** (0.006)	4	685	332.88
Tourism	1.017 (0.012)	1.038*** (0.005)	4	575	615.39
Mixed	1.012*** (0.006)	1.017 (0.002)	4	2321	1710.34
Transit	1.021 (0.015)	1.011*** (0.004)	3	1,545	1348.72

Note: asterisks represent the significance levels, with * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Density variables include population density, destination accessibility, intersection density, and distance to the city center.