

Supplementary Information for

**Data Aggregation Impacts on Built Environment-Mode Share Models Around
Public Transit Stations**

Appendix A1: spatial distribution of stations

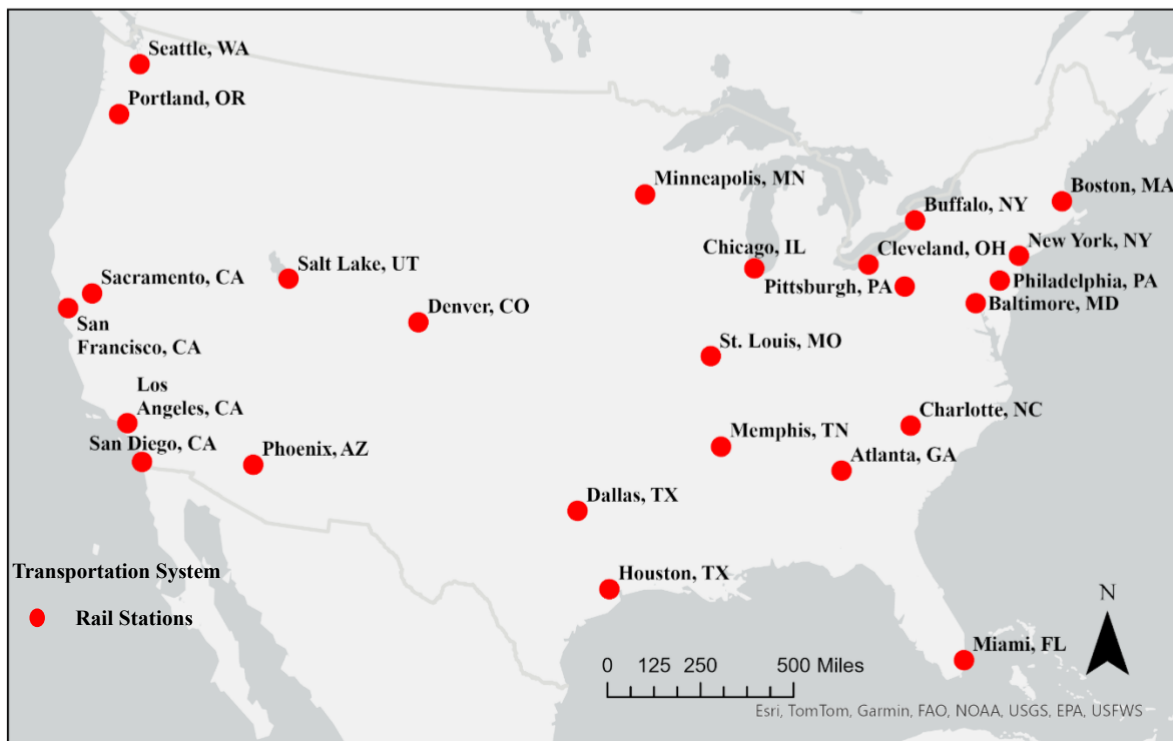
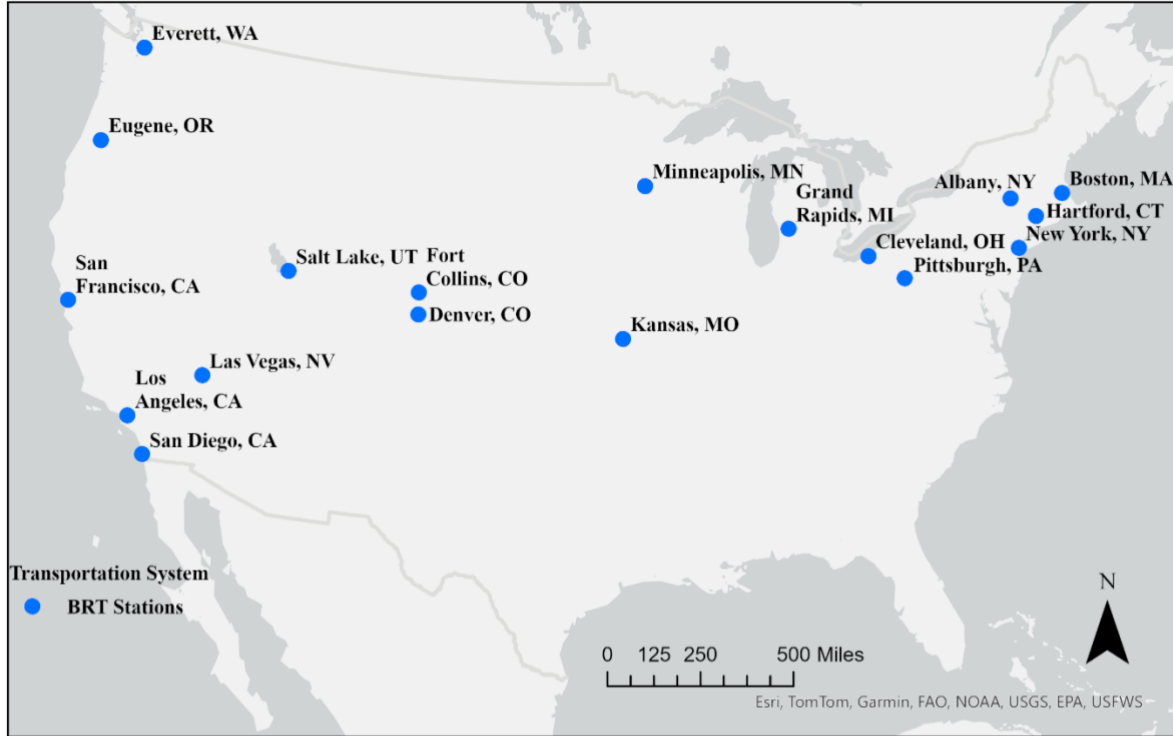


Fig. A1-1. Spatial distribution of BRT and Rail systems across the United States

Appendix A2: Data aggregation methods

We extracted relevant data from the American Community Survey (ACS) and the State Land Development (SLD) database at the block group level (polygon data) and overlaid the station locations (point data). We then employed four distinct methods to extract data.

1. Block Group Level Extraction: Using the spatial join function in ArcGIS Pro, we joined station locations to the corresponding block groups to extract data at this level (Fig. A2-1a).

2. Circular Buffers: We generated buffers of various radii (200-meter, 400-meter, 600-meter, 800-meter, 1000-meter, and 1200-meter) around each station using the buffer function in ArcGIS Pro to extract data (Fig. A2-1b).

3. Thiessen Polygons: We applied the Thiessen polygon approach by first creating buffers of different sizes (200-meter, 400-meter, 600-meter, 800-meter, 1000-meter, and 1200-meter) around each station in ArcGIS Pro. We then used the Remove Overlap Geoprocessing Tool to eliminate overlapping areas among these buffers (Fig. A2-1c).

4. Network Buffers: We utilized the street network along with station locations in ArcGIS Pro to create service areas based on the Network Analysis toolbox. Similar to the circular and Thiessen polygons, we considered different buffer sizes (200-meter, 400-meter, 600-meter, 800-meter, 1000-meter, and 1200-meter) for this method (Fig. A2-1d).

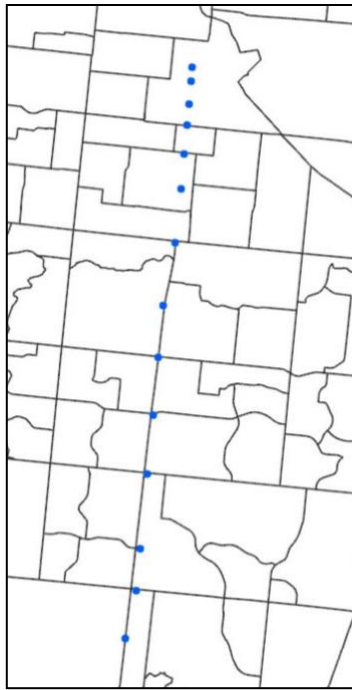
After establishing the catchment areas according to different methods and sizes, we employed an approach that is widely applied in previous studies – calculating area weighted means of each factor within a buffer based on the proportion of a census block group within a buffer (Park et al., 2018, Yang et al., 2021; Otsuka, 2021, Chen et al., 2022). After establishing the stations' catchment areas, we intersected the polygons (ACS and SLD) with the station's catchment areas and

segmented the block shapefile based on each station's area. In the subsequent step, the Tabulation Intersection function was employed in ArcGIS Pro to compute the area of each block within its corresponding buffer. This approach allowed us to obtain both the block group area within the buffer and the values of the variables of interest. Then, we calculated an area-weighted value for the variables of interest, accounting for the proportional representation of each block group within its respective buffer.

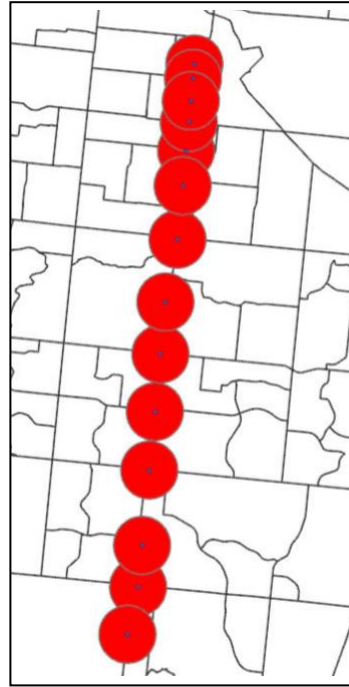
To calculate the area-weighted mean, we employed the following method, as utilized in previous studies (Liu et al., 2020). The proportion of each block (percentage of each block) was subsequently utilized as a weight to calculate the weighted average value of variables. Equation (1) illustrates how these weights were used to calculate values attributed to census blocks where they intersected with the catchment areas:

$$\text{Weighted Mean of Variable} = \frac{\sum_{i=1}^n (X_i * W_i)}{\sum_{i=1}^n W_i} \quad (1)$$

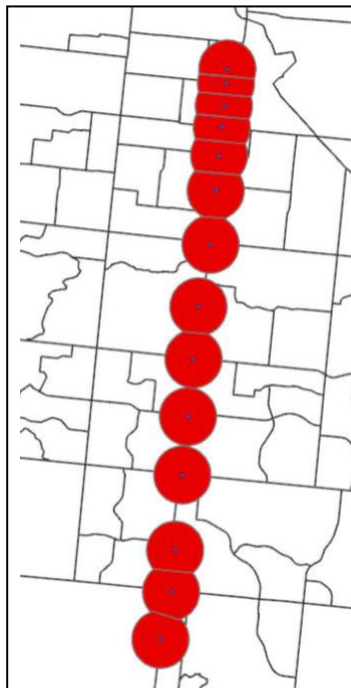
Where X_i is an original value; W_i is the weight (i.e. the proportion of the area occupied by a specific census block in station catchment area)". Fig. A2-2 provide an example of the overall process.



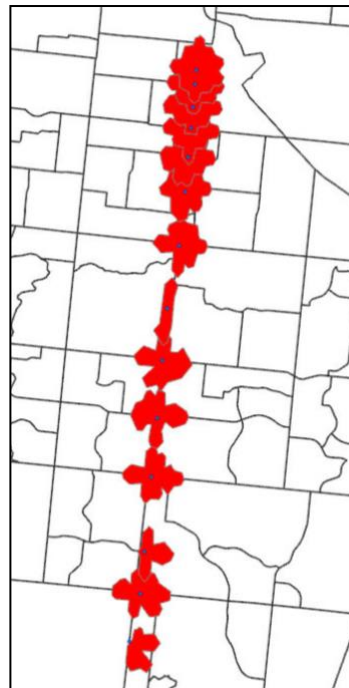
a. Block group level



b. Circular buffers

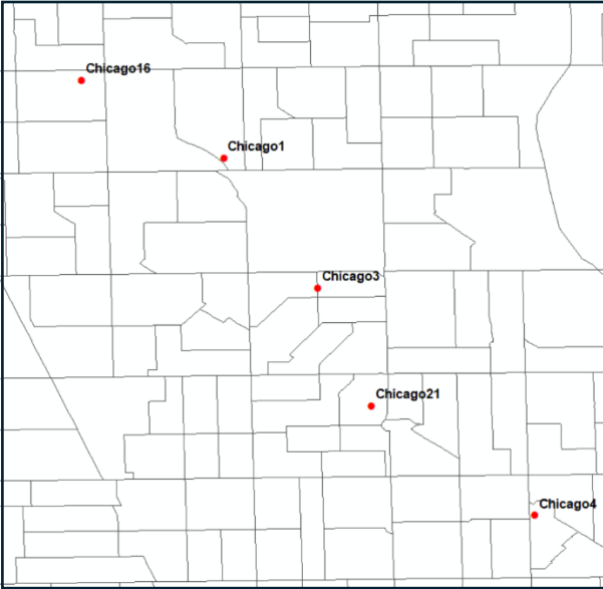


c. Thiessen polygons

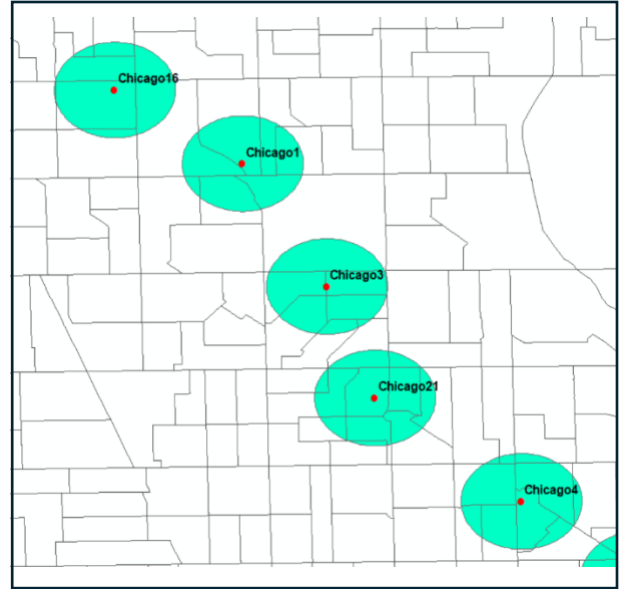


d. Network buffers

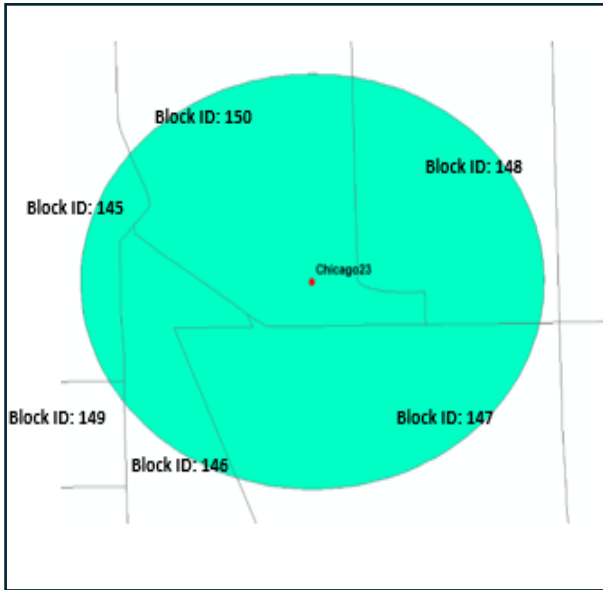
Fig. A2-1. An example of data aggregation methods for block group level, circular buffers, network buffers and Thiessen polygon at 400-meter size



a. Location of each station and block level



b. Creating 600-meter buffer for each station



c. Clipping block level features based on Buffers

Station	Block ID	% Area	Car Mode Share
Chicago23	145	5.222	60.997
Chicago23	146	10.775	67.066
Chicago23	147	29.625	70.709
Chicago23	148	22.855	71.299
Chicago23	149	0.107	76.020
Chicago23	150	31.416	80.366

d. Computing the proportion blocks' area in buffers

Fig. A2-2. The process of extracting car mode share as an example based on buffers for sample stations in Chicago, LA

References

- Chen, L., Lu, Y., Liu, Y., Yang, L., Peng, M., & Liu, Y. (2022). Association between built environment characteristics and metro usage at station level with a big data approach. *Travel Behaviour and Society*, 28, 38-49.
- Otsuka, N., Wittowsky, D., Damerau, M., & Gerten, C. (2021). Walkability assessment for urban areas around railway stations along the Rhine-Alpine Corridor. *Journal of transport geography*, 93, 103081.
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- Park, K., Ewing, R., Scheer, B. C., & Tian, G. (2018). The impacts of built environment characteristics of rail station areas on household travel behavior. *Cities*, 74, 277-283.
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Appendix A3: Descriptive statistics

Table A3-1. Variables, explanations, data sources and descriptive statistics (for a few scales as an example)

Variables	Description	Block group		800-meter network buffer		800-meter circular buffer		800-meter Thiessen buffer	
		BRT	Rail	BRT	Rail	BRT	Rail	BRT	Rail
		Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Outcome variables									
Private vehicles ¹	Percent private vehicles commuting mode share within catchment areas	65.93 (25.3)	49.03 (28.48)	65.78 (23.47)	48.98 (27.14)	66.07 (23.1)	48.93 (27.07)	66.18 (23.7)	48.73 (27.6)
Public transit ¹	Percent transit commuting mode share within catchment areas	13.17 (16.4)	28.75 (23.33)	13.06 (14.13)	27.26 (20.56)	12.85 (13)	26.25 (19.71)	12.88 (14.4)	26.20 (20)
Active modes ¹	Percent active (walking and cycling) commuting mode share within catchment areas	13.5 (16.6)	14.47 (16.53)	13.00 (13.99)	13.86 (13.92)	12.57 (13)	13.47 (13.42)	12.30 (13.7)	13.44 (14.1)
Explanatory variables – station area level									
Residential density ¹	Number of households within catchment areas	10.03 (18.4)	16.93 (22.76)	9.51 (12.52)	18.13 (19.83)	9.23 (11.8)	17.30 (18.6)	9.39 (13.74)	16.78 (19.6)
Employment density ²	Number of jobs within catchment areas	44.68 (111)	96.7 (474.6)	42.87 (95.80)	78.25 (268.2)	39.02 (88.5)	70.19 (200.9)	39.2 (112.2)	73.63 (226)
Job per household ³	The number of jobs per each household	54.72 (116)	113.1 (478.2)	13.07 (42.89)	15.73 (61.21)	12.75 (32)	16.04 (62.72)	12.44 (43.8)	16.97 (77.4)
Destination accessibility ⁴	Distance from CBD (km)	12.4 (17.1)	9.3 (8.6)	12.48 (17.15)	9.36 (8.58)	12.4 (17.1)	9.3 (8.6)	12.4 (17.1)	9.3 (8.6)
Land use diversity ³	Job housing land use diversity	0.66 (0.19)	0.61 (0.20)	0.63 (0.13)	0.59 (0.14)	0.61 (0.13)	0.58 (0.13)	0.61 (0.15)	0.58 (0.15)
Block size ⁴	Average block size (Acre)	324.6 (697)	310.8 (978.6)	324.6 (603.9)	287.2 (723)	376.5 (670)	418.9 (1154)	401.7 (873)	444.2 (1422)
Intersection density ³	Intersection density with respect to the multi-modal intersections	144.5 (106)	174.6 (138.3)	144.6 (76.2)	169.7 (94.08)	144.7 (79.5)	168.90 (94.7)	144.2 (95.3)	168.6 (108)
Road density ³	The length of road (km)	25.74 (10.1)	30.2 (11.46)	25.97 (8.49)	29.79 (8.59)	25.6 (8.7)	29.30 (9.06)	25.59 (9.99)	29.17 (9.70)
Station density ⁵	Number of public transit stations within the catchment areas (all types of stations)	3.92 (2.58)	4.53 (2.8)	18.63 (6.24)	20.05 (8.02)	18.63 (6.24)	20.05 (8.03)	13.30 (4.77)	14.50 (6.3)
Job accessibility by private vehicle ³	Total jobs reachable within a 45-minute drive by private vehicles	321084 (678601)	869657 (1201689)	168959 (162287)	323450 (239882)	304629 (615601)	803871 (107310)	301890 (631886)	805301 (109265)
Job accessibility by active transit ³	Total jobs reachable within a 45-minute transit and walking commute	169764 (164211)	324217 (244456)	312234.8 (638738)	838585 (1132952)	167064 (156206)	319295 (236107)	167271 (160271)	320843 (237126)
Control variables: socio-economic									
Transit service ³	Aggregate transit service frequency, afternoon peak period (number of trips or departures per hour) within catchment areas	47.67 (61.12)	85.41 (118.30)	46.78 (64.48)	79.47 (100.9)	45.2 (61.69)	76.89 (95.87)	44.16 (68.29)	77.82 (107)
Income ¹	Percent low-income workers within the catchment areas	0.25 (0.14)	0.24 (0.13)	0.23 (0.06)	0.20 (0.06)	0.25 (0.09)	0.24 (0.08)	0.25 (0.09)	0.24 (0.09)
Car ownership ¹	Percent household without car within the catchment areas	0.23 (0.22)	0.31 (0.26)	0.21 (0.18)	0.30 (0.23)	0.20 (0.17)	0.29 (0.22)	0.20 (0.18)	0.29 (0.23)
Bachelor and higher degree ¹	Percent population having Bachelor and higher degree within the catchment areas	40.41 (24.5)	47.62 (26.33)	40.29 (21.7)	46.89 (22.99)	40.05 (20.9)	46.12 (22.41)	39.92 (21.9)	46.06 (23.6)
Pop 65 and over ¹	Percent population over 65 within the catchment areas	13.12 (9.79)	12.69 (9.34)	13.11 (6.29)	13 (6.06)	13.07 (5.94)	12.91 (5.72)	13.14 (6.94)	12.85 (6.61)
Population under 20	Percent population under 20 within the catchment areas	18.93 (12.7)	18.30 (11.81)	18.94 (9.02)	18.17 (8.57)	19.14 (8.58)	18.15 (8.32)	19.08 (9.42)	18.16 (8.95)
Race ¹	White = 1; others = 0	1=53% 0=47%	1=51% 0=49%	1=57% 0=43%	1=58% 0=42%	1=50% 0=50%	1=55% 0=45%	1=56% 0=44%	1=55% 0=43%
Gender ¹	Male = 1; Female = 0	1=60% 0=40%	1=62% 0=38%	1=69% 0=31%	1=57% 0=43%	1=63% 0=37%	1=65% 0=35%	1=55% 0=45%	1=69% 0=31%
Urban form: regional level		BRT				Rail			
		Mean		SD		Mean		SD	
Population density ⁶	Number of people per square Kilometer	348		342		603		376	
Polycentric development ⁴	Population shares of a region's centers to its total population	0.5		0.1		0.48		0.12	

¹ Data source: American Community Survey 2019 (5-year estimates), ² Data source: The Longitudinal Employer-Household Dynamics (LEHD) 2019, ³ Data source: Smart Location Database (SLD) 2019, ⁴ Data source: Calculated by using Census/TIGER 2019, ⁵ Data source: Points of Interests (POIs) 2019, ⁶ Data source: The Bureau of Economic Analysis (BEA) 2019.

Table A3-2. Descriptive statistics for circular buffers around BRT stations (mean (std))

	Block group	200-meter	400-meter	600-meter	800-meter	1000-meter	1200-meter
Active Mode	13.50(16.06)	13.27(15.00)	13.18(14.54)	12.96(13.99)	12.57(13.29)	12.10(12.49)	11.61(11.73)
Public transit	13.17(16.45)	13.30(15.41)	13.23(14.82)	13.03(14.17)	12.85(13.68)	12.74(13.33)	12.63(13.04)
Private vehicles	65.93(25.34)	64.96(24.83)	65.13(24.25)	65.58(23.63)	66.07(23.17)	66.52(22.88)	66.94(22.72)
Residential density	10.03(18.47)	9.66(14.90)	9.49(13.21)	9.38(12.46)	9.23(11.80)	9.06(11.29)	8.86(10.88)
Employment density	44.68(111.04)	47.18(116.02)	45.95(109.02)	42.62(98.12)	39.02(88.50)	35.64(81.47)	32.80(75.79)
Job per household	54.72(116.41)	12.72(45.21)	12.82(39.65)	12.96(36.27)	12.75(32.00)	12.53(29.21)	12.31(27.47)
CBD	12.48(17.15)	12.48(17.15)	12.48(17.15)	12.48(17.15)	12.48(17.15)	12.48(17.15)	12.48(17.15)
Land use entropy	0.66(0.19)	0.63(0.14)	0.64(0.15)	0.62(0.14)	0.61(0.13)	0.60(0.12)	0.60(0.11)
Block size	324.65(697.67)	325.42(638.79)	333.40(638.29)	343.73(624.94)	376.50(670.37)	438.82(824.17)	509.55(1029.65)
Intersection density	144.54(106.58)	145.30(87.80)	145.44(85.03)	145.12(82.18)	144.72(79.57)	143.82(77.20)	142.39(75.02)
Road density	25.74(10.18)	25.92(9.19)	25.94(9.06)	25.82(8.90)	25.64(8.79)	25.44(8.72)	25.21(8.63)
Stations density	3.92(2.58)	7.13(5.25)	10.97(5.24)	14.83(5.61)	18.63(6.24)	22.50(7.14)	26.33(8.14)
Jobs accessibility by car (45 minutes)	169764(164736)	168596(162648)	168003(160533)	167591(158558)	167064(156206)	166296(153796)	165326.15(151323)
Jobs accessibility by active modes (45 minutes)	321084(678601)	316669(654146)	312675(638383)	309620(630796)	304629(615601)	298807(599581)	292521.20(583524)
Transit service	47.67(61.12)	48.46(68.98)	48.28(68.25)	47.10(65.54)	45.20(61.69)	43.03(57.92)	40.94(54.22)
Income	0.25(0.14)	0.24(0.11)	0.24(0.10)	0.24(0.09)	0.25(0.09)	0.25(0.08)	0.25(0.07)
Car ownership	0.23(0.22)	0.22(0.20)	0.22(0.19)	0.21(0.18)	0.20(0.17)	0.20(0.17)	0.19(0.16)
Bachelor and higher degree	40.41(24.52)	40.12(23.25)	40.13(22.45)	40.13(21.62)	40.05(20.94)	39.90(20.30)	39.72(19.64)
Pop 65 and over	13.12(9.79)	13.06(7.90)	13.13(7.25)	13.10(6.49)	13.07(5.94)	13.08(5.60)	13.07(5.37)
Population under 20	18.93(12.72)	18.61(10.89)	18.61(9.98)	18.83(9.22)	19.14(8.58)	19.40(7.99)	19.62(7.48)
Race	0.72(0.45)	0.73(0.45)	0.73(0.44)	0.74(0.44)	0.76(0.43)	0.76(0.43)	0.77(0.42)
Gender	0.54(0.50)	0.50(0.50)	0.51(0.50)	0.51(0.50)	0.50(0.50)	0.50(0.50)	0.48(0.50)

Table A3-3. Descriptive statistics for network buffers around BRT stations (mean (std))

	Block group	200-meter	400-meter	600-meter	800-meter	1000-meter	1200-meter
Active Mode	13.50(16.06)	13.33(15.19)	13.33(14.84)	13.22(14.49)	13.00(13.99)	12.72(13.42)	13.33(15.19)
Public transit	13.17(16.45)	13.27(15.37)	13.27(15.04)	13.18(14.54)	13.06(14.13)	12.95(13.85)	13.27(15.37)
Private vehicles	65.93(25.34)	64.95(24.95)	65.03(24.50)	65.40(23.93)	65.78(23.47)	66.17(23.10)	64.95(24.95)
Residential density	10.03(18.47)	9.71(14.91)	9.59(13.63)	9.54(12.99)	9.51(12.52)	9.51(12.52)	9.46(12.09)
Employment density	44.68(111.04)	47.59(116.55)	46.86(110.63)	45.07(103.02)	42.87(95.80)	42.87(95.80)	38.52(84.80)
Job per household	54.72(116.41)	14.27(63.14)	14.62(66.43)	14.00(54.79)	13.07(42.89)	13.07(42.89)	12.20(34.44)
CBD	12.48(17.15)	12.48(17.15)	12.48(17.15)	12.48(17.15)	12.48(17.15)	12.48(17.15)	12.48(17.15)
Land use entropy	0.66(0.19)	0.65(0.15)	0.64(0.15)	0.63(0.14)	0.63(0.13)	0.63(0.13)	0.61(0.12)
Block size	324.65(697.67)	323.95(643.68)	325.84(642.89)	325.16(619.42)	324.66(603.94)	324.66(603.94)	327.01(586.07)
Intersection density	144.54(106.58)	144.61(84.86)	144.46(81.40)	144.30(78.20)	144.67(76.20)	144.67(76.20)	144.81(72.23)
Road density	25.74(10.18)	25.95(9.13)	25.98(8.92)	25.99(8.68)	25.97(8.49)	25.97(8.49)	25.87(8.15)
Stations density	3.92(2.58)	7.13(5.25)	10.97(5.24)	14.83(5.61)	18.63(6.24)	22.50(7.14)	26.33(8.14)
Jobs accessibility by car (45 minutes)	169764(164736)	316819(651540)	315149(644603)	313507(640975)	312234(638738)	312234(638738)	308805(632943)
Jobs accessibility by active modes (45 minutes)	321084(678601)	168840(163304)	168789(162901)	168764(162278)	168959(162287)	168959(162287)	169070(161556)
Transit service	47.67(61.12)	48.61(69.66)	48.46(68.73)	47.78(66.60)	46.78(64.48)	46.78(64.48)	44.30(60.16)
Income	0.25(0.14)	0.22(0.06)	0.22(0.06)	0.22(0.06)	0.23(0.06)	0.23(0.06)	0.23(0.06)
Car ownership	0.23(0.22)	0.22(0.20)	0.22(0.19)	0.22(0.19)	0.21(0.18)	0.21(0.18)	0.20(0.17)
Bachelor and higher degree	40.41(24.52)	40.27(23.31)	40.29(22.82)	40.28(22.22)	40.29(21.77)	40.24(21.32)	40.27(23.31)
Pop 65 and over	13.12(9.79)	13.11(7.94)	13.14(7.39)	13.14(6.81)	13.11(6.29)	13.08(5.85)	13.11(7.94)
Population under 20	18.93(12.72)	18.57(10.92)	18.55(10.23)	18.70(9.56)	18.94(9.02)	19.19(8.56)	18.57(10.92)
Race	0.72(0.45)	0.73(0.44)	0.73(0.44)	0.74(0.44)	0.75(0.43)	0.76(0.43)	0.73(0.44)
Gender	0.54(0.50)	0.51(0.50)	0.52(0.50)	0.52(0.50)	0.51(0.50)	0.50(0.50)	0.51(0.50)

Table A3-4. Descriptive statistics for Thiessen polygons around BRT stations (mean (std))

	Block group	200-meter	400-meter	600-meter	800-meter	1000-meter	1200-meter
Active Mode	13.50(16.06)	13.26(15.04)	13.17(14.91)	12.76(14.31)	12.30(13.73)	11.92(13.34)	11.63(13.09)
Public transit	13.17(16.45)	13.36(15.57)	13.22(15.08)	13.01(14.64)	12.88(14.41)	12.77(14.34)	12.58(14.26)
Private vehicles	65.93(25.34)	64.88(24.94)	65.06(24.59)	65.69(23.99)	66.18(23.71)	66.57(23.65)	66.89(23.67)
Residential density	10.03(18.47)	9.72(15.11)	9.64(14.14)	9.58(14.10)	9.39(13.74)	9.20(13.53)	9.06(13.41)
Employment density	44.68(111.04)	46.70(116.68)	44.54(115.18)	41.30(113.01)	39.25(112.24)	37.71(111.73)	36.69(111.49)
Job per household	54.72(116.41)	12.90(49.83)	12.79(46.24)	12.64(43.07)	12.44(43.86)	12.22(44.72)	11.98(44.74)
CBD	12.48(17.15)	12.50(17.19)	12.50(17.19)	12.50(17.19)	12.50(17.19)	12.50(17.19)	12.50(17.19)
Land use entropy	0.66(0.19)	0.65(0.16)	0.64(0.16)	0.62(0.15)	0.61(0.15)	0.60(0.14)	0.59(0.14)
Block size	324.65(697.67)	322.58(637.53)	333.96(649.92)	346.99(672.40)	401.72(873.30)	475.01(1243.43)	524.98(1523.40)
Intersection density	144.54(106.58)	145.77(91.74)	145.96(94.82)	145.32(94.93)	144.22(95.37)	143.13(95.29)	141.72(94.92)
Road density	25.74(10.18)	25.93(9.19)	25.96(9.56)	25.82(9.85)	25.59(9.99)	25.36(10.01)	25.14(10.01)
Stations density	3.92(2.58)	5.60(3.54)	8.24(3.48)	10.75(3.90)	13.30(4.77)	12.21(5.02)	19.33(6.83)
Jobs accessibility by car (45 minutes)	169764(16473)	168794(16261)	168239(16159)	167893(16083)	167271(160271)	166460(159683)	165737(158931)
Jobs accessibility by active modes (45 minutes)	321084(67860)	315842(65254)	311217(64019)	307179(63630)	301890.14(63188)	296379.75(62893)	291640.37(626719)
Transit service	47.67(61.12)	48.21(70.83)	47.82(71.12)	46.22(70.00)	44.16(68.29)	42.20(66.92)	40.66(66.07)
Income	0.25(0.14)	0.24(0.11)	0.24(0.10)	0.24(0.10)	0.25(0.09)	0.25(0.09)	0.25(0.09)
Car ownership	0.23(0.22)	0.22(0.20)	0.22(0.20)	0.21(0.19)	0.20(0.18)	0.20(0.18)	0.19(0.18)
Bachelor and higher degree	40.41(24.52)	40.04(23.31)	40.05(22.83)	40.04(22.38)	39.92(21.98)	39.75(21.58)	39.65(21.24)
Pop 65 and over	13.12(9.79)	13.05(8.03)	13.09(7.55)	13.11(7.16)	13.14(6.94)	13.20(6.82)	13.26(6.74)
Population under 20	18.93(12.72)	18.57(11.01)	18.63(10.27)	18.88(9.76)	19.08(9.42)	19.26(9.17)	19.38(8.99)
Race	0.72(0.45)	0.73(0.44)	0.72(0.45)	0.74(0.44)	0.75(0.44)	0.75(0.43)	0.75(0.43)
Gender	0.54(0.50)	0.51(0.50)	0.52(0.50)	0.51(0.50)	0.50(0.50)	0.50(0.50)	0.48(0.50)

Table A3-4. Descriptive statistics for circular buffers around Rail stations (mean (std))

	Block group	200-meter	400-meter	600-meter	800-meter	1000-meter	1200-meter
Active Mode	14.47(16.53)	14.12(15.14)	14.02(14.50)	13.80(13.98)	13.47(13.42)	13.12(12.84)	12.77(12.30)
Public transit	28.75(23.33)	28.11(21.89)	27.49(21.07)	26.84(20.35)	26.25(19.71)	25.67(19.18)	25.14(18.70)
Private vehicles	49.03(28.48)	47.92(27.91)	48.15(27.50)	48.51(27.23)	48.93(27.07)	49.36(26.93)	49.77(26.83)
Residential density	16.93(22.76)	17.46(20.99)	17.61(20.27)	17.56(19.54)	17.30(18.65)	16.90(17.71)	16.46(16.90)
Employment density	96.08(474.65)	90.25(383.81)	83.32(283.82)	76.23(230.19)	70.19(200.09)	64.06(167.28)	58.74(142.69)
Job per household	113.01(478.65)	17.82(91.45)	17.02(75.01)	16.62(67.35)	16.04(62.72)	15.34(57.92)	14.69(53.40)
CBD	9.38(8.63)	9.38(8.63)	9.38(8.63)	9.38(8.63)	9.38(8.63)	9.38(8.63)	9.38(8.63)
Land use entropy	0.61(0.20)	0.59(0.14)	0.60(0.15)	0.59(0.14)	0.58(0.13)	0.57(0.13)	0.57(0.12)
Block size	310.88(978.69)	301.68(820.69)	315.58(836.00)	355.61(928.85)	418.99(1154.29)	524.80(1716.14)	668.99(2697.22)
Intersection density	174.60(138.30)	171.75(112.42)	170.70(104.94)	170.18(99.47)	168.90(94.71)	167.19(90.82)	165.15(87.18)
Road density	30.00(11.46)	29.82(9.69)	29.63(9.30)	29.49(9.12)	29.30(9.06)	29.07(9.04)	28.79(8.96)
Stations density	4.53(2.88)	8.39(5.84)	12.27(6.11)	16.17(6.90)	20.05(8.03)	23.94(9.38)	27.82(10.85)
Jobs accessibility by car (45 minutes)	324217(244456)	323596(242297)	322360(240255)	321183(238705)	319295(236107)	317091(233086)	314614(229659)
Jobs accessibility by active modes (45 minutes)	869657(1201689)	861038(1174239)	844747(1146294)	826532(1116443)	803871(1073100)	777578(1021232)	750936(968734)
Transit service	85.41(118.30)	84.05(113.21)	83.56(109.46)	80.96(103.27)	76.89(95.87)	72.78(88.84)	68.97(82.46)
Income	0.24(0.13)	0.24(0.10)	0.24(0.09)	0.24(0.08)	0.24(0.08)	0.24(0.07)	0.24(0.07)
Car ownership	0.31(0.26)	0.31(0.24)	0.31(0.24)	0.30(0.23)	0.29(0.22)	0.28(0.21)	0.28(0.20)
Bachelor and higher degree	47.60(26.34)	47.15(24.71)	46.84(23.91)	46.50(23.10)	46.12(22.41)	45.75(21.82)	45.39(21.34)
Pop 65 and over	12.68(9.34)	12.67(7.43)	12.77(6.72)	12.85(6.16)	12.91(5.72)	12.93(5.41)	12.94(5.15)
Population under 20	18.30(11.81)	17.88(10.00)	17.98(9.29)	18.04(8.74)	18.15(8.32)	18.26(7.95)	18.38(7.62)
Race	0.64(0.48)	0.64(0.48)	0.63(0.48)	0.64(0.48)	0.64(0.48)	0.63(0.48)	0.62(0.48)
Gender	0.50(0.50)	0.47(0.50)	0.45(0.50)	0.44(0.50)	0.42(0.49)	0.41(0.49)	0.39(0.49)

Table A3-5. Descriptive statistics for Thiessen polygons around Rail stations (mean (std))

	Block group	200-meter	400-meter	600-meter	800-meter	1000-meter	1200-meter
Active Mode	14.47(16.53)	14.18(15.22)	14.00(14.69)	13.72(14.36)	13.44(14.12)	13.24(14.00)	13.05(13.93)
Public transit	28.75(23.33)	28.48(22.02)	27.69(21.23)	26.90(20.53)	26.20(20.03)	25.62(19.71)	25.16(19.50)
Private vehicles	49.03(28.48)	47.63(28.00)	47.95(27.69)	48.37(27.59)	48.73(27.61)	49.05(27.67)	49.37(27.73)
Residential density	16.93(22.76)	17.67(21.37)	17.73(21.07)	17.32(20.47)	16.78(19.65)	16.35(19.12)	16.05(18.81)
Employment density	96.08(474.65)	90.61(389.67)	82.61(291.89)	77.14(248.15)	73.63(226.67)	71.27(213.53)	69.68(205.57)
Job per household	113.01(478.65)	18.16(95.44)	17.46(84.13)	17.11(78.90)	16.97(77.46)	16.83(75.72)	16.66(74.12)
CBD	9.38(8.63)	9.44(8.68)	9.42(8.67)	9.42(8.67)	9.42(8.67)	9.42(8.67)	9.42(8.67)
Land use entropy	0.61(0.20)	0.61(0.16)	0.60(0.16)	0.59(0.15)	0.58(0.15)	0.57(0.15)	0.57(0.15)
Block size	310.88(978.69)	302.29(827.95)	323.34(868.07)	377.47(1100.76)	444.28(1422.23)	585.85(2494.18)	775.58(4227.95)
Intersection density	174.60(138.30)	172.70(115.28)	171.23(111.70)	170.24(109.68)	168.61(108.09)	167.04(107.19)	165.75(106.63)
Road density	30.00(11.46)	29.92(9.80)	29.69(9.69)	29.46(9.68)	29.17(9.70)	28.89(9.81)	28.65(9.92)
Stations density	4.53(2.88)	5.30(2.63)	9.12(4.17)	11.75(5.08)	14.50(6.39)	13.47(7.18)	5.30(2.63)
Jobs accessibility by car (45 minutes)	324217.54(244456.25)	327593.32(243541.47)	325217.83(241277.21)	323429.88(239564.45)	320843.57(237126.59)	318609.98(235512.73)	317059.66(234481.17)
Jobs accessibility by active modes (45 minutes)	869657(1201689)	872748(1182554)	851829(1153003)	830072(1123506)	805301(1092652)	783835(1073522)	767352(1063232)
Transit service	85.41(118.30)	84.41(114.51)	83.48(111.63)	80.89(108.97)	77.82(107.04)	75.33(105.97)	73.45(105.59)
Income	0.24(0.13)	0.24(0.10)	0.24(0.10)	0.24(0.09)	0.24(0.09)	0.24(0.09)	0.24(0.08)
Car ownership	0.31(0.26)	0.31(0.25)	0.31(0.24)	0.30(0.23)	0.29(0.23)	0.28(0.22)	0.28(0.22)
Bachelor and higher degree	47.60(26.34)	47.15(24.83)	46.81(24.34)	46.44(23.91)	46.06(23.63)	45.78(23.46)	45.61(23.33)
Pop 65 and over	12.68(9.34)	12.64(7.55)	12.78(7.09)	12.84(6.79)	12.85(6.61)	12.90(6.52)	12.95(6.45)
Population under 20	18.30(11.81)	17.93(10.07)	18.01(9.48)	18.09(9.12)	18.16(8.95)	18.20(8.79)	18.26(8.66)
Race	0.64(0.48)	0.64(0.48)	0.64(0.48)	0.64(0.48)	0.63(0.48)	0.63(0.48)	0.62(0.48)
Gender	0.50(0.50)	0.47(0.50)	0.45(0.50)	0.44(0.50)	0.42(0.49)	0.41(0.49)	0.41(0.49)

Table A3-6. Descriptive statistics for network buffers around Rail stations (mean (std))

	Block group	200-meter	400-meter	600-meter	800-meter	1000-meter	1200-meter
Active Mode	14.47(16.53)	14.14(15.11)	14.09(14.67)	14.02(14.31)	13.86(13.92)	13.68(13.55)	14.14(15.11)
Public transit	28.75(23.33)	28.24(21.99)	27.89(21.39)	27.53(20.93)	27.26(20.56)	26.97(20.25)	28.24(21.99)
Private vehicles	49.03(28.48)	48.00(27.98)	48.27(27.62)	48.60(27.35)	48.98(27.14)	49.39(26.96)	48.00(27.98)
Residential density	16.93(22.76)	17.68(21.13)	17.96(20.74)	18.07(20.25)	18.13(19.83)	18.13(19.83)	17.98(18.96)
Employment density	96.08(474.65)	92.13(423.19)	87.19(346.72)	82.09(289.12)	78.25(268.23)	78.25(268.23)	70.13(212.66)
Job per household	113.01(478.65)	17.99(94.58)	17.30(84.58)	16.54(70.73)	15.73(61.21)	15.73(61.21)	14.60(49.21)
CBD	9.38(8.63)	9.36(8.58)	9.36(8.58)	9.36(8.58)	9.36(8.58)	9.36(8.58)	9.36(8.58)
Land use entropy	0.61(0.20)	0.61(0.16)	0.60(0.15)	0.60(0.15)	0.59(0.14)	0.59(0.14)	0.58(0.13)
Block size	310.88(978.69)	289.20(779.31)	288.06(756.83)	286.93(736.68)	287.24(723.01)	287.24(723.01)	290.52(714.25)
Intersection density	174.60(138.30)	172.27(110.61)	171.33(103.70)	170.53(98.51)	169.78(94.08)	169.78(94.08)	168.24(86.98)
Road density	30.00(11.46)	29.94(9.43)	29.89(9.09)	29.84(8.79)	29.79(8.59)	29.79(8.59)	29.63(8.28)
Stations density	4.53(2.88)	8.39(5.84)	12.28(6.11)	16.17(6.89)	20.05(8.02)	23.94(9.38)	27.83(10.84)
Jobs accessibility by car (45 minutes)	324217.54(244456.25)	863917.96(117683.234)	855426.91(116255.470)	846932.41(114724.649)	838585.80(113295.237)	838585.80(113295.237)	816578.78(109449.304)
Jobs accessibility by active modes (45 minutes)	869657.67(1201689.53)	323990.39(242198.97)	323618.68(240958.71)	323473.32(240300.65)	323450.44(239882.65)	323450.44(239882.65)	323229.15(238726.81)
Transit service	85.41(118.30)	84.04(113.56)	83.45(110.33)	81.99(106.08)	79.47(100.96)	79.47(100.96)	73.98(91.03)
Income	0.24(0.13)	0.20(0.06)	0.20(0.06)	0.20(0.06)	0.20(0.06)	0.20(0.06)	0.20(0.05)
Car ownership	0.31(0.26)	0.31(0.25)	0.31(0.24)	0.31(0.23)	0.30(0.23)	0.30(0.23)	0.30(0.22)
Bachelor and higher degree	47.60(26.34)	47.22(24.64)	47.12(24.12)	46.99(23.50)	46.89(22.99)	46.76(22.51)	47.22(24.64)
Pop 65 and over	12.68(9.34)	12.70(7.43)	12.80(6.88)	12.92(6.43)	13.00(6.06)	13.07(5.75)	12.70(7.43)
Population under 20	18.30(11.81)	17.93(9.95)	17.98(9.45)	18.04(8.96)	18.17(8.57)	18.30(8.25)	17.93(9.95)
Race	0.64(0.48)	0.64(0.48)	0.64(0.48)	0.65(0.48)	0.65(0.48)	0.65(0.48)	0.64(0.48)
Gender	0.50(0.50)	0.47(0.50)	0.46(0.50)	0.45(0.50)	0.44(0.50)	0.44(0.50)	0.47(0.50)

Appendix A4: Multicollinearity among explanatory variables

Tables A4-1 and A4-6 present the Variance Inflation Factor (VIF) results for data according to different methods, separately for each rail and BRT system.

Table A4-1. Variance inflation factors (VIFs) for circular buffer for BRT stations

Variable	Block group	200-meter	400-meter	600-meter	800-meter	1000-meter	1200-meter
Residential density	4.3	5.21	7.05	7.85	8.61	15.01	1.41
Employment density	3.4	4.13	4.59	5.33	6.44	4.68	8.62
Job per household	3.3	1.57	1.70	1.71	1.71	1.78	1.99
CBD	1.83	1.87	1.92	1.96	2.00	2.04	2.07
Land use entropy	1.66	8.86	1.06	3.62	7.95	2.67	3.56
Block size	1.49	1.58	1.59	1.65	1.68	1.63	1.57
Intersection density	1.61	1.58	2.39	1.96	1.65	1.31	4.86
Road density	9.44	1.38	2.61	1.42	5.07	7.07	1.97
Stations density	7.53	1.64	1.71	1.87	2.68	2.65	3.51
Jobs accessibility by car (45 minutes)	2.82	3.33	3.05	4.75	1.87	5.28	4.51
Jobs accessibility by active modes (45 minutes)	5.13	7.82	9.44	1.58	3.99	6.89	2.20
Transit service	4.79	4.34	5.05	8.05	4.60	7.92	2.71
Income	5.11	6.45	7.02	7.49	8.09	8.80	9.34
Car ownership	5.57	6.73	8.21	1.21	1.53	2.97	4.11
Bachelor and higher degree	6.76	7.94	8.80	9.86	1.78	1.80	2.32
Pop 65 and over	3.21	4.09	4.62	5.35	6.16	6.94	7.75
Population under 20	4.53	6.06	7.24	8.69	8.11	1.62	3.48
Race	5.02	5.61	5.70	6.29	6.68	7.11	7.49
Gender	2.32	2.41	2.57	2.71	2.74	2.65	2.58

Table A4-2. Variance inflation factors (VIFs) for network buffer for BRT stations

Variable	Block group	200-meter	400-meter	600-meter	800-meter	1000-meter	1200-meter
Residential density	2.4	5.23	7.08	8.39	9.77	9.63	2.67
Employment density	3.4	4.10	4.47	4.98	5.79	5.81	7.88
Job per household	4.5	1.41	1.40	1.46	1.56	1.55	1.68
CBD	1.83	1.90	1.94	2.00	2.06	2.08	2.13
Land use entropy	1.66	7.15	8.95	2.25	5.55	6.36	8.69
Block size	1.49	1.56	1.58	1.63	1.68	1.68	1.73
Intersection density	1.61	1.60	2.84	1.63	4.96	4.95	9.40
Road density	9.44	1.79	2.36	2.83	3.35	3.46	4.78
Stations density	7.53	2.12	4.06	6.82	9.50	9.31	6.29
Jobs accessibility by car (45 minutes)	2.82	3.40	7.35	4.66	5.98	5.70	7.57

Jobs accessibility by active modes (45 minutes)	5.13	6.63	8.90	1.80	5.38	6.57	9.76
Transit service	4.79	4.26	1.00	8.35	6.50	3.50	3.83
Income	5.11	6.57	7.19	7.69	7.96	7.87	8.74
Car ownership	5.57	7.37	8.87	1.58	2.63	1.43	4.06
Bachelor and higher degree	6.76	8.04	8.64	9.45	1.16	8.58	9.03
Pop 65 and over	3.21	4.00	4.39	4.88	5.54	6.11	4.02
Population under 20	4.53	5.97	6.65	7.47	8.34	9.41	5.78
Race	5.02	5.56	5.80	6.08	6.52	6.64	5.97
Gender	2.32	2.43	2.59	2.66	2.70	2.68	2.46

Table A4-3. Variance inflation factors (VIFs) for Thiessen polygons for BRT stations

Variable	Block group	200-meter	400-meter	600-meter	800-meter	1000-meter	1200-meter
Residential density	3.4	5.23	7.08	8.39	9.77	9.63	2.67
Employment density	4.2	4.10	4.47	4.98	5.79	5.81	7.88
Job per household	4.4	1.41	1.40	1.46	1.56	1.55	1.68
CBD	1.83	1.90	1.94	2.00	2.06	2.08	2.13
Land use entropy	1.66	7.15	8.95	2.25	2.55	6.36	8.69
Block size	1.49	1.56	1.58	1.63	1.68	1.68	1.73
Intersection density	1.61	1.60	2.84	3.63	4.96	4.95	9.40
Road density	9.44	1.79	2.36	2.83	3.35	3.46	1.78
Stations density	7.53	2.12	4.06	1.82	9.50	9.31	6.29
Jobs accessibility by car (45 minutes)	1.82	2.40	7.35	3.66	5.98	5.70	7.57
Jobs accessibility by active modes (45 minutes)	5.13	6.63	8.90	2.80	5.38	6.57	9.76
Transit service	4.79	4.26	3.4	8.35	6.50	3.50	4.83
Income	5.11	6.57	7.19	7.69	7.96	7.87	8.74
Car ownership	5.57	7.37	8.87	1.58	2.63	2.43	4.06
Bachelor and higher degree	6.76	8.04	8.64	9.45	1.16	1.58	9.03
Pop 65 and over	3.21	4.00	4.39	4.88	5.54	6.11	4.02
Population under 20	4.53	5.97	6.65	7.47	8.34	9.41	5.78
Race	5.02	5.56	5.80	6.08	6.52	6.64	5.97
Gender	2.32	2.43	2.59	2.66	2.70	2.68	2.46

Table A4-4. Variance inflation factors (VIFs) for circular buffers for rail stations

Variable	Block group	200-meter	400-meter	600-meter	800-meter	1000-meter	1200-meter
Residential density	3.4	4.49	5.63	6.83	7.86	9.06	1.29
Employment density	4.5	1.33	1.55	1.73	1.80	1.97	2.12
Job per household	3.6	1.23	1.26	1.27	1.25	1.25	1.25
CBD	2.71	2.92	2.99	3.03	3.09	3.10	3.10
Land use entropy	1.04	5.59	6.21	8.75	2.65	2.12	4.05
Block size	1.28	1.41	1.39	1.35	1.31	1.19	1.11
Intersection density	8.3	6.19	8.72	6.18	7.46	1.63	1.78
Road density	5.58	6.31	6.75	7.16	7.74	8.70	9.93
Stations density	6.33	6.75	2.94	6.31	8.86	2.38	7.08
Jobs accessibility by car (45 minutes)	2.08	3.82	3.70	4.62	5.79	5.29	9.96
Jobs accessibility by active modes (45 minutes)	5.08	7.78	6.61	1.68	1.71	5.67	7.48
Transit service	4.55	4.31	7.83	7.55	4.54	2.16	2.00
Income	3.87	4.11	4.73	5.32	5.60	5.72	5.77
Car ownership	6.46	8.56	1.30	1.58	2.36	3.17	3.74
Bachelor and higher degree	7.19	8.14	8.66	9.07	5.46	4.80	2.32
Pop 65 and over	3.02	4.20	5.11	6.16	7.19	8.08	9.02
Population under 20	4.03	5.31	6.25	7.28	8.18	9.26	1.38
Race	3.94	3.95	4.01	4.11	4.06	3.93	3.94
Gender	2.18	2.21	2.21	2.30	2.27	2.26	2.25

Table A4-5. Variance inflation factors (VIFs) for network buffers for rail stations

Variable	Block group	200-meter	400-meter	600-meter	800-meter	1000-meter	1200-meter
Residential density	3.4	4.46	5.27	6.34	7.41	7.22	9.40
Employment density	4.5	1.29	1.38	1.50	1.52	1.52	1.64
Job per household	3.6	1.23	1.23	1.29	1.32	1.32	1.36
CBD	2.71	2.90	2.95	3.00	3.06	3.08	2.99
Land use entropy	1.04	5.84	7.80	1.84	2.82	2.92	4.57
Block size	1.28	1.41	1.45	1.47	1.51	1.50	1.55
Intersection density	8.33	6.44	6.71	7.00	7.29	7.29	8.06
Road density	5.58	9.33	9.78	5.16	6.48	1.68	1.57
Stations density	6.33	9.91	2.14	4.50	6.92	1.64	2.89
Jobs accessibility by car (45 minutes)	2.08	2.74	8.70	5.55	5.10	5.03	6.95
Jobs accessibility by active modes (45 minutes)	5.08	7.25	1.43	2.59	3.60	3.40	2.04
Transit service	4.55	4.37	9.95	7.83	4.96	3.21	6.65
Income	3.87	3.97	4.50	5.08	5.44	4.67	5.67
Car ownership	6.46	8.83	9.39	1.81	2.88	2.74	4.83
Bachelor and higher degree	7.19	6.18	9.3	1.46	1.01	1.30	9.30
Pop 65 and over	3.02	4.40	5.09	5.74	6.39	7.13	4.36

Population under 20	4.03	6.74	7.55	8.59	9.63	1.74	6.39
Race	3.94	3.94	4.04	4.07	4.10	4.00	3.95
Gender	2.18	2.22	2.26	2.32	2.31	2.41	2.26

Table A4-6. Variance inflation factors (VIFs) for Thiessen polygons for rail stations

Variable	Block group	200-meter	400-meter	600-meter	800-meter	1000-meter	1200-meter
Residential density	3.4	4.15	4.94	5.14	5.20	5.28	4.97
Employment density	4.5	1.28	1.54	1.77	2.00	2.28	2.35
Job per household	3.6	1.23	1.27	1.30	1.32	1.34	1.37
CBD	2.71	2.84	2.93	2.88	2.88	2.86	2.85
Land use entropy	1.04	2.91	4.92	5.78	5.95	5.68	1.31
Block size	1.28	1.36	1.35	1.25	1.20	1.09	1.05
Intersection density	8.33	8.72	9.36	9.35	9.22	8.99	8.94
Road density	5.58	6.21	6.46	6.70	6.91	7.14	7.23
Stations density	6.33	5.79	1.59	1.40	1.90	2.45	2.72
Jobs accessibility by car (45 minutes)	2.08	7.94	3.29	3.31	3.40	3.44	3.46
Jobs accessibility by active modes (45 minutes)	5.08	6.99	8.46	9.23	9.77	1.12	1.46
Transit service	4.55	6.25	1.79	6.74	9.73	6.94	6.10
Income	3.87	3.75	4.59	4.96	5.12	5.43	4.92
Car ownership	6.46	7.91	9.15	9.16	8.94	8.79	8.86
Bachelor and higher degree	7.19	7.63	8.36	8.37	8.39	8.36	8.53
Pop 65 and over	3.02	4.06	4.64	5.03	5.29	5.48	5.65
Population under 20	4.03	5.16	5.85	6.34	6.62	6.93	7.19
Race	3.94	3.93	4.07	4.10	4.04	4.10	4.22
Gender	2.18	2.11	2.17	2.19	2.15	2.11	2.10

Appendix A5: Model performance

Table A5-1. Active models performance for BRT stations

	OLS			HLM			RF			XGBT		
	RMSE	MAE	R2	RMSE	MAE	R2	RMSE	MAE	R2	RMSE	MAE	R2
Block group	10.86	7.57	0.53	11.28	8.35	0.50	8.07	4.7	0.69	7.83	4.26	0.71
Circular (200m)	9.72	6.8	0.58	10.6	7.9	0.51	5.6	3.63	0.86	5.3	3.36	0.88
Circular (400m)	9.03	6.47	0.61	10.11	7.63	0.52	5.14	3.46	0.88	4.53	2.96	0.91
Circular (600m)	8.13	5.9	0.66	9.22	6.99	0.56	5.55	3.68	0.85	4.57	2.85	0.9
Circular (800m)	7.27	5.29	0.70	8.27	6.21	0.61	4.17	2.79	0.9	3.54	2.12	0.93
Circular (1000m)	6.96	5.22	0.73	7.41	5.51	0.65	4.44	2.96	0.9	3.28	2.09	0.93
Circular (1200m)	6.45	4.79	0.73	8.01	6.19	0.64	2.9	1.92	0.92	4.07	2.51	0.92
Thiessen (200m)	11.04	7.91	0.46	11.63	8.91	0.4	6.72	4.07	0.75	6.91	3.96	0.73
Thiessen (400m)	9.73	6.89	0.57	10.61	7.87	0.49	60	3.84	0.8	7.37	4.22	0.70
Thiessen (600m)	9.03	6.48	0.60	9.66	7.18	0.54	6.03	4.08	0.8	6.27	3.95	0.78
Thiessen (800m)	8.34	6.03	0.63	8.89	6.56	0.58	5.92	3.92	0.8	5.91	3.81	0.80
Thiessen (1000m)	7.76	5.53	0.65	8.47	6.18	0.6	6.39	4.26	0.81	6.53	4.15	0.81
Thiessen (1200m)	8.01	5.75	0.64	8.11	5.89	0.62	5.8	3.9	0.8	5.83	3.64	0.79
Network (200m)	9.54	6.76	0.6	10.54	7.77	0.52	6.49	4.03	0.83	5.83	3.31	0.86
Network (400m)	8.94	6.42	0.64	10.06	7.58	0.54	6.12	3.76	0.84	5.46	3.37	0.87
Network (600m)	8.2	5.99	0.68	9.21	7.01	0.6	4.91	3.3	0.89	5.37	3.2	0.87
Network (800m)	5.78	4.38	0.76	6.75	5.02	0.67	3.33	2.28	0.93	2.79	1.82	0.94
Network (1000m)	7.48	5.55	0.71	8.46	6.49	0.63	4.41	2.87	0.9	4.13	2.43	0.91
Network (1200m)	8.96	6.34	0.65	9.72	7.2	0.59	6.56	3.99	0.82	6.28	3.55	0.84

Table A5-2. Public transit models performance for BRT stations

	OLS			HLM			RF			XGBT		
	RMSE	MAE	R2	RMSE	MAE	R2	RMSE	MAE	R2	RMSE	MAE	R2
Block group	10.22	7.27	0.61	12.62	8.8	0.41	7.17	4.08	0.76	8.93	4.66	0.63
Circular (200m)	9.11	6.49	0.65	10.95	7.39	0.49	6.72	4.33	0.8	6.31	3.82	0.83
Circular (400m)	8.39	5.99	0.68	10.36	7.03	0.51	4.92	3.36	0.88	4.92	3.16	0.88
Circular (600m)	7.67	5.47	0.71	9.66	6.59	0.53	4.25	2.94	0.91	4.24	2.71	0.91
Circular (800m)	6.93	4.91	0.74	8.82	6.05	0.58	3.77	2.5	0.92	3.9	2.13	0.91
Circular (1000m)	6.28	4.46	0.78	7.99	5.67	0.64	3.65	2.17	0.92	3.67	2.62	0.94
Circular (1200m)	6.93	4.88	0.75	9.82	6.7	0.59	3.35	2.03	0.92	3.01	1.72	0.95
Thiessen (200m)	9.86	6.92	0.6	11.67	7.91	0.44	7.51	4.92	0.74	7.38	4.65	0.75
Thiessen (400m)	9.05	6.45	0.64	10.76	7.31	0.49	5.85	3.91	0.84	5.78	3.55	0.85
Thiessen (600m)	8.69	6.24	0.65	10.29	7.08	0.51	6.09	3.98	0.82	5.75	3.71	0.84
Thiessen (800m)	8.42	6.18	0.66	10.02	6.99	0.52	5.25	3.53	0.86	5.48	3.47	0.85
Thiessen (1000m)	8.32	6.12	0.67	9.83	6.94	0.54	5.91	4.05	0.81	5.19	3.66	0.85
Thiessen (1200m)	8.08	5.98	0.68	9.43	6.67	0.56	5	3.34	0.86	4.8	3.25	0.87
Network (200m)	9.09	6.4	0.65	11.35	7.61	0.45	6.96	4.52	0.79	6.08	3.66	0.84
Network (400m)	8.53	6.04	0.68	10.98	7.43	0.47	5.34	3.76	0.87	5.35	3.45	0.87
Network (600m)	7.86	5.61	0.71	10.43	7.1	0.48	4.46	3.17	0.9	4.42	2.93	0.9
Network (800m)	5.71	4.1	0.81	7.26	5.3	0.69	2.04	2.79	0.93	2.8	1.5	0.95
Network (1000m)	7.24	5.14	0.74	10.09	6.82	0.49	2.14	2.56	0.9	4.17	2.37	0.9
Network (1200m)	8.28	5.8	0.71	9.93	6.66	0.48	6.34	4.07	0.83	6.23	3.76	0.83

Table A5-3. Private vehicles models performance for BRT stations

	OLS			HLM			RF			XGBT		
	RMSE	MAE	R2	RMSE	MAE	R2	RMSE	MAE	R2	RMSE	MAE	R2
Block group	13.74	10.73	0.71	16.08	13.05	0.6	10.14	6.49	0.8	9.38	5.37	0.83
Circular (200m)	13.1	9.71	0.72	13.98	11.03	0.68	7.23	5.08	0.91	7.5	4.75	0.9
Circular (400m)	11.57	8.68	0.77	12.5	9.83	0.73	6.41	4.47	0.93	6.02	4.23	0.93
Circular (600m)	10.23	7.74	0.81	11.35	8.86	0.77	5.71	3.83	0.94	5.67	3.6	0.94
Circular (800m)	9.29	7.02	0.84	10.66	8.15	0.79	5.65	3.29	0.94	5.02	3.02	0.95
Circular (1000m)	9.89	7.6	0.82	10.22	7.7	0.8	5.02	2.91	0.95	4.46	2.5	0.96
Circular (1200m)	8.46	6.49	0.86	10.75	8.43	0.78	4.74	2.51	0.96	4.68	2.59	0.96
Thiessen (200m)	14.19	10.89	0.68	15.19	12.31	0.63	9.59	6.39	0.83	8.92	6.19	0.85
Thiessen (400m)	12.58	9.33	0.74	13.65	10.67	0.69	10.17	6.41	0.81	10.02	6.19	0.81
Thiessen (600m)	11.75	8.78	0.76	13.07	10.08	0.7	9.74	6.04	0.82	9.68	5.77	0.82
Thiessen (800m)	11.33	8.36	0.77	13.06	9.82	0.7	9.53	5.58	0.82	9.69	5.65	0.81
Thiessen (1000m)	11.23	8.23	0.78	13.21	9.88	0.71	9.66	5.54	0.84	10.1	5.34	0.83
Thiessen (1200m)	11.2	8.2	0.78	13.47	10.05	0.7	9.88	5.76	0.81	9.89	5.76	0.81
Network (200m)	13.13	9.67	0.72	13.98	11	0.69	6.97	4.81	0.92	7.07	4.95	0.91
Network (400m)	11.96	8.89	0.76	12.73	9.93	0.73	6.31	4.5	0.93	6.64	4.52	0.92
Network (600m)	11.71	8.8	0.78	11.51	9.02	0.77	5.11	3.69	0.95	6.14	4.18	0.93
Network (800m)	9.47	7.26	0.83	10.1	8.36	0.78	1.66	2.37	0.96	4.81	2.8	0.96
Network (1000m)	10.68	8.14	0.80	12.36	9.72	0.75	1.4	2.13	0.96	4.45	3.05	0.96

Network (1200m)	7.98	6.12	0.88	10.19	7.6	0.8	5.82	4.07	0.94	4.1	2.83	0.97
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Table A5-4. Active models performance for Rail stations

	OLS			HLM			RF			XGBT		
	RMSE	MAE	R2	RMSE	MAE	R2	RMSE	MAE	R2	RMSE	MAE	R2
Block group	9.32	6.84	0.6	11.27	7.93	0.53	8.1	4.87	0.73	8.19	4.8	0.73
Circular (200m)	6.44	4.68	0.82	8.82	6.45	0.66	6	3.8	0.85	6.06	3.89	0.85
Circular (400m)	5.79	4.25	0.84	7.88	5.86	0.7	5.43	3.5	0.87	5.66	3.49	0.86
Circular (600m)	5.34	3.93	0.85	7.08	5.24	0.74	4.79	3.02	0.89	4.58	2.74	0.9
Circular (800m)	4.93	3.65	0.87	7.03	5.23	0.74	4.25	2.64	0.91	4.13	2.42	0.91
Circular (1000m)	4.85	3.43	0.87	5.86	4.38	0.79	3.76	2.35	0.92	3.38	2.04	0.93
Circular (1200m)	4.61	3.47	0.87	6.41	4.76	0.77	3.55	2.21	0.92	3.68	2.07	0.93
Thiessen (200m)	7.1	5.08	0.78	9.57	7.06	0.6	6.28	4.28	0.82	6.53	4.2	0.8
Thiessen (400m)	6.14	4.53	0.83	8.28	6.14	0.68	6.1	4.14	0.83	5.77	3.85	0.85
Thiessen (600m)	6	4.45	0.83	7.92	5.83	0.7	6.11	4.1	0.82	5.95	3.91	0.83
Thiessen (800m)	5.9	4.36	0.83	7.68	5.58	0.7	5.67	3.88	0.84	5.44	3.55	0.85
Thiessen (1000m)	5.81	4.31	0.83	7.51	5.38	0.71	5.43	3.55	0.85	5.22	3.42	0.86
Thiessen (1200m)	5.86	4.35	0.82	7.49	5.31	0.71	5.36	3.56	0.85	5.11	3.42	0.87
Network (200m)	6.53	4.61	0.81	9.02	6.66	0.64	5.52	3.82	0.86	5.76	3.97	0.85
Network (400m)	5.93	4.22	0.84	8.25	6.12	0.68	5.07	3.47	0.88	4.83	3.34	0.89
Network (600m)	5.47	3.88	0.85	7.59	5.64	0.72	4.65	3.12	0.9	4.21	2.88	0.92
Network (800m)	5.12	3.59	0.86	6.72	5.05	0.75	4.29	2.86	0.91	4.07	2.69	0.92
Network (1000m)	4.35	3.28	0.88	5.45	4.06	0.8	3.04	2.1	0.93	2.9	2.5	0.94
Network (1200m)	6.61	4.65	0.81	8.37	6.11	0.69	5.52	3.65	0.86	5.76	3.75	0.85

Table A5-5. Public transit model performance for Rail stations

	OLS			HLM			RF			XGBT		
	RMSE	MAE	R2	RMSE	MAE	R2	RMSE	MAE	R2	RMSE	MAE	R2
Block group	8.2	9.8	0.58	19.73	15.1	0.28	10.08	9.6	0.54	8.98	6.16	0.84
Circular (200m)	7.88	5.64	0.87	17.2	13.34	0.38	7.62	5.43	0.88	7.63	5.46	0.88
Circular (400m)	7.27	5.27	0.88	16.18	12.67	0.41	6.85	4.84	0.9	6.47	4.5	0.91
Circular (600m)	6.9	5.08	0.88	15.24	12.03	0.44	6.12	4.24	0.91	5.73	4.09	0.92
Circular (800m)	6.56	4.92	0.89	14.43	11.41	0.46	5.45	3.71	0.92	5.06	3.45	0.93
Circular (1000m)	6.53	4.66	0.9	13.72	10.88	0.49	5.14	3.38	0.93	6.8	3.69	0.93
Circular (1200m)	6.32	4.83	0.89	14.44	11.79	0.47	5.05	3.66	0.92	3.5	3.4	0.94
Thiessen (200m)	8.61	5.97	0.85	18.89	14.74	0.26	9.92	6.56	0.79	9.76	6.44	0.8
Thiessen (400m)	7.74	5.66	0.87	16.61	12.95	0.39	8.57	5.63	0.84	8.29	5.31	0.85
Thiessen (600m)	7.68	5.74	0.84	15.82	12.35	0.41	8.39	5.43	0.83	7.95	5.21	0.85
Thiessen (800m)	7.65	5.8	0.85	14.99	11.69	0.44	8.06	5.28	0.84	7.7	4.97	0.85
Thiessen (1000m)	7.58	5.78	0.85	14.44	11.23	0.46	6.74	4.92	0.87	6.88	4.93	0.86
Thiessen (1200m)	7.58	5.81	0.85	14.06	10.83	0.48	7.11	4.77	0.87	6.95	4.63	0.87
Network (200m)	8	5.56	0.87	18.7	14.52	0.28	8.96	5.63	0.84	8.69	5.45	0.85
Network (400m)	7.34	5.11	0.88	17.96	14.08	0.29	8.15	4.88	0.86	7.72	4.59	0.87
Network (600m)	6.87	4.76	0.89	17.47	13.77	0.3	7.67	4.3	0.87	7.28	4.07	0.88
Network (800m)	6.05	4.46	0.9	17.05	13.45	0.31	7.15	3.84	0.88	4.61	3.09	0.94
Network (1000m)	5.9	4.25	0.9	13.02	10.38	0.51	4.51	2.96	0.94	4.19	2.88	0.95
Network (1200m)	8.21	5.67	0.86	17.26	13.51	0.27	8.77	5.55	0.84	8.55	5.52	0.85

Table A5-6. Private vehicle models performance for Rail stations

	OLS			HLM			RF			XGBT		
	RMSE	MAE	R2	RMSE	MAE	R2	RMSE	MAE	R2	RMSE	MAE	R2
Block group	8.2	8.5	0.54	RMSE	MAE	R2	10.19	9.45	0.86	10.12	6.42	0.87
Circular (200m)	9.66	6.11	0.88	18.42	15.23	0.58	8.84	5.78	0.9	8.44	5.69	0.91
Circular (400m)	9.16	5.97	0.89	19.69	16.13	0.5	8.76	5.42	0.9	7.92	5.09	0.92
Circular (600m)	8.83	5.9	0.89	19.75	16.1	0.48	7.95	5	0.92	7.31	4.7	0.93
Circular (800m)	8.46	5.8	0.9	19.66	15.83	0.48	7.39	4.7	0.93	6.75	4.39	0.94
Circular (1000m)	8.16	5.68	0.91	19.51	15.54	0.48	6.7	4.22	0.94	7.13	4.19	0.94
Circular (1200m)	7.83	5.51	0.91	19.42	15.36	0.48	6.58	4	0.94	5.58	3.61	0.94
Thiessen (200m)	9.93	6.22	0.87	19.32	15.15	0.48	10.97	7.61	0.84	10.5	7.4	0.86
Thiessen (400m)	9.9	6.48	0.87	21.02	17.34	0.44	8.73	6.07	0.9	8.48	5.97	0.91
Thiessen (600m)	9.96	6.81	0.87	20.46	16.69	0.45	8.25	5.89	0.91	7.72	5.52	0.92
Thiessen (800m)	10.03	7.07	0.87	20.75	16.69	0.43	8.24	5.97	0.91	7.9	5.53	0.92
Thiessen (1000m)	10.1	7.26	0.87	21	16.7	0.42	8.61	6.16	0.9	8.23	5.91	0.91
Thiessen (1200m)	10.04	7.28	0.87	21.31	16.81	0.44	7.56	5.5	0.93	7.08	5.32	0.94
Network (200m)	9.73	5.9	0.88	21.36	16.81	0.44	7.96	5.31	0.92	7.88	5.38	0.92
Network (400m)	9.05	5.45	0.89	19.63	16.06	0.51	7.58	4.8	0.93	7.18	4.58	0.93
Network (600m)	8.5	5.09	0.9	19.03	15.54	0.53	7.1	4.28	0.93	6.78	4.29	0.94
Network (800m)	8.07	4.77	0.91	18.6	15.18	0.54	6.5	4.04	0.94	6.08	3.9	0.95

Network (1000m)	9.59	5.84	0.88	18.22	14.83	0.55	7.98	5.2	0.92	7.7	5.34	0.93
Network (1200m)	7.66	4.53	0.92	18.18	14.74	0.54	6.11	3.89	0.95	5.7	3.7	0.96

Appendix A6: Relative Importance

Table A6-1. Relative Importance (RI) of Rail stations' active models according to network buffers (RI % (rank))

Feature	Block	200m	400m	600m	800m	1000m	1200m
Residential density	1.53 (16)	0.95 (19)	0.72 (18)	0.52 (21)	0.38 (21)	0.37 (21)	0.71 (19)
Employment density	20.77 (1)	40.52 (1)	43.15 (1)	49.22 (1)	52.83 (1)	54.23 (1)	47.14 (1)
Job per household	15.31 (2)	1.97 (11)	3.31 (6)	2.77 (8)	3.01 (6)	2.62 (7)	4.4 (5)
CBD	9.86 (3)	7.74 (3)	6.35 (4)	4.06 (5)	3.39 (5)	3.96 (5)	2.55 (11)
Land-use entropy	1.78 (14)	1.21 (17)	0.63 (19)	0.91 (19)	1.27 (16)	0.79 (18)	1.13 (18)
Block size	1.2 (19)	1.38 (13)	1.0 (17)	1.43 (14)	1.42 (15)	1.56 (12)	1.36 (16)
Intersection density	3.88 (8)	4.75 (6)	5.93 (5)	7.33 (2)	5.59 (3)	6.21 (2)	6.02 (2)
Road density	3.0 (10)	1.25 (15)	1.93 (12)	1.71 (12)	1.21 (17)	1.25 (16)	1.62 (14)
# Stations density	0.79 (21)	0.61 (21)	0.43 (20)	0.54 (20)	1.93 (12)	0.53 (19)	3.23 (8)
Job accessibility (car)	1.73 (15)	1.23 (16)	1.56 (15)	1.26 (16)	2.12 (11)	2.1 (11)	1.96 (12)
Job accessibility (active)	3.46 (9)	2.57 (9)	3.08 (7)	2.45 (10)	2.8 (7)	2.54 (8)	3.9 (7)
Transit service	2.64 (12)	2.04 (10)	1.48 (16)	1.32 (15)	0.83 (19)	0.51 (20)	1.83 (13)
Low salary worker	1.49 (17)	1.04 (18)	1.62 (14)	1.17 (17)	1.68 (13)	1.43 (14)	1.28 (17)
Carless household	6.94 (5)	8.18 (2)	6.54 (3)	7.11 (3)	6.3 (2)	5.93 (3)	5.52 (3)
Higher degree	2.67 (11)	3.99 (8)	2.83 (9)	2.94 (7)	2.73 (8)	3.1 (6)	2.69 (10)
Population over 64	1.43 (18)	1.76 (12)	1.68 (13)	1.86 (11)	1.58 (14)	1.31 (15)	1.52 (15)
Population under 20	4.42 (7)	4.16 (7)	2.98 (8)	2.6 (9)	2.32 (10)	2.26 (10)	4.04 (6)
Race	2.5 (13)	1.3 (14)	2.68 (11)	1.61 (13)	1.16 (18)	1.48 (13)	0.69 (20)
Gender	1.04 (20)	0.77 (20)	0.3 (21)	1.03 (18)	0.58 (20)	0.84 (17)	0.51 (21)
Population density	8.96 (4)	7.27 (4)	8.98 (2)	4.38 (4)	4.35 (4)	4.46 (4)	2.99 (9)
Polycentricity	4.59 (6)	5.3 (5)	2.81 (10)	3.76 (6)	2.51 (9)	2.5 (9)	4.91 (4)

Table A6-2. Relative Importance (RI) of Rail stations' active models according to circular buffers (RI % (rank))

Feature	Block	200m	400m	600m	800m	1000m	1200m
Residential density	1.53 (16)	0.98 (19)	1.12 (15)	0.74 (21)	0.53 (21)	0.66 (21)	0.56 (19)
Employment density	20.77 (1)	39.17 (1)	43.03 (1)	44.45 (1)	52.94 (1)	53.13 (1)	57.11 (1)
Job per household	15.31 (2)	2.11 (12)	3.62 (8)	3.24 (7)	3.42 (6)	2.39 (7)	1.25 (15)
CBD	9.86 (3)	9.22 (2)	5.47 (5)	3.74 (6)	3.05 (7)	2.56 (6)	1.73 (12)
Land-use entropy	1.78 (14)	0.99 (18)	0.91 (18)	1.5 (14)	2.12 (11)	1.52 (14)	0.67 (18)
Block size	1.2 (19)	1.66 (14)	1.05 (16)	1.32 (17)	1.05 (16)	0.9 (20)	1.51 (13)
Intersection density	3.88 (8)	4.26 (6)	6.23 (4)	7.04 (3)	6.54 (3)	6.81 (2)	5.88 (3)
Road density	3.0 (10)	1.45 (15)	2.52 (10)	2.08 (11)	1.09 (15)	1.05 (17)	0.51 (20)
# Stations density	0.79 (21)	0.83 (21)	0.66 (21)	0.88 (19)	1.42 (13)	1.57 (13)	2.07 (8)
Job accessibility (car)	1.73 (15)	3.13 (8)	2.34 (11)	1.44 (16)	2.34 (10)	2.03 (9)	3.08 (5)
Job accessibility (active)	3.46 (9)	1.84 (13)	1.4 (14)	1.9 (12)	1.45 (12)	1.98 (10)	2.1 (7)
Transit service	2.64 (12)	2.47 (10)	0.87 (19)	1.51 (13)	1.0 (17)	1.65 (12)	1.32 (14)
Low salary worker	1.49 (17)	1.08 (17)	1.49 (13)	0.85 (20)	0.75 (19)	0.94 (19)	0.68 (17)
Carless household	6.94 (5)	6.09 (4)	6.48 (3)	6.51 (4)	6.9 (2)	6.32 (3)	5.9 (2)
Higher degree	2.67 (11)	3.1 (9)	2.9 (9)	2.83 (9)	3.81 (4)	3.91 (5)	5.64 (4)
Population over 64	1.43 (18)	2.25 (11)	1.75 (12)	0.96 (18)	1.2 (14)	1.06 (16)	0.95 (16)
Population under 20	4.42 (7)	3.86 (7)	3.97 (7)	3.09 (8)	2.73 (9)	2.1 (8)	1.96 (10)
Race	2.5 (13)	1.15 (16)	0.93 (17)	1.48 (15)	0.66 (20)	1.13 (15)	1.76 (11)
Gender	1.04 (20)	0.88 (20)	0.82 (20)	2.15 (10)	0.78 (18)	1.04 (18)	0.4 (21)
Population density	8.96 (4)	9.21 (3)	7.5 (2)	7.14 (2)	3.46 (5)	1.92 (11)	1.96 (9)
Polycentricity	4.59 (6)	4.28 (5)	4.93 (6)	5.12 (5)	2.77 (8)	5.34 (4)	2.96 (6)

Table A6-3. Relative Importance (RI) of Rail stations' active models according to Thiessen polygons (RI % (rank))

Feature	Block	200m	400m	600m	800m	1000m	1200m
Residential density	1.53 (16)	1.4 (14)	1.31 (14)	0.95 (17)	0.71 (20)	0.89 (18)	1.08 (17)
Employment density	20.77 (1)	4.22 (10)	43.54 (1)	44.47 (1)	42.55 (1)	49.18 (1)	41.15 (1)
Job per household	15.31 (2)	1.89 (12)	2.49 (10)	1.5 (12)	1.86 (12)	1.49 (12)	2.07 (11)
CBD	9.86 (3)	30.17 (1)	5.73 (5)	5.67 (4)	5.74 (5)	4.59 (5)	4.47 (5)
Land-use entropy	1.78 (14)	1.38 (15)	0.85 (20)	0.72 (19)	0.85 (19)	0.87 (19)	0.9 (19)
Block size	1.2 (19)	1.35 (16)	1.97 (11)	1.14 (16)	1.37 (13)	1.34 (15)	1.31 (16)
Intersection density	3.88 (8)	5.28 (6)	2.87 (8)	2.44 (10)	2.68 (8)	2.47 (7)	2.66 (9)
Road density	3.0 (10)	1.13 (17)	1.18 (17)	1.22 (14)	1.0 (16)	2.25 (9)	1.81 (13)
# Stations density	0.79 (21)	1.05 (18)	0.44 (21)	0.62 (21)	1.04 (15)	1.67 (11)	0.5 (21)
Job accessibility (car)	1.73 (15)	2.38 (11)	1.54 (13)	1.64 (11)	2.0 (11)	1.46 (13)	1.97 (12)
Job accessibility (active)	3.46 (9)	5.65 (5)	1.88 (12)	2.5 (9)	3.21 (7)	2.27 (8)	4.74 (4)
Transit service	2.64 (12)	8.61 (3)	2.62 (9)	2.66 (8)	2.13 (10)	1.42 (14)	2.65 (10)
Low salary worker	1.49 (17)	0.89 (20)	1.28 (15)	1.3 (13)	1.24 (14)	1.24 (16)	1.69 (14)
Carless household	6.94 (5)	10.9 (2)	7.76 (3)	8.39 (3)	9.17 (2)	8.26 (3)	10.08 (2)
Higher degree	2.67 (11)	4.74 (8)	3.5 (6)	3.13 (6)	3.58 (6)	3.69 (6)	4.39 (6)
Population over 64	1.43 (18)	1.56 (13)	1.24 (16)	0.87 (18)	0.91 (18)	0.89 (17)	1.6 (15)
Population under 20	4.42 (7)	4.64 (9)	3.09 (7)	2.83 (7)	2.58 (9)	2.05 (10)	2.76 (8)
Race	2.5 (13)	0.98 (19)	0.99 (19)	1.16 (15)	0.93 (17)	0.43 (21)	0.89 (20)
Gender	1.04 (20)	0.59 (21)	1.08 (18)	0.63 (20)	0.51 (21)	0.63 (20)	1.03 (18)
Population density	8.96 (4)	5.14 (7)	8.14 (2)	5.32 (5)	8.17 (3)	4.64 (4)	8.48 (3)
Polycentricity	4.59 (6)	6.04 (4)	6.51 (4)	10.81 (2)	7.78 (4)	8.28 (2)	3.75 (7)

Table A6-4. Relative Importance (RI) of Rail stations' private vehicle models according to network buffers (RI % (rank))

Feature	Block	200m	400m	600m	800m	1000m	1200m
Residential density	1.27 (11)	1.26 (11)	1.16 (11)	2.34 (8)	3.29 (7)	6.1 (3)	3.43 (5)
Employment density	0.53 (18)	1.66 (9)	1.2 (10)	0.77 (16)	0.67 (18)	0.49 (18)	1.72 (11)
Job per household	5.96 (3)	0.51 (16)	0.53 (17)	0.57 (19)	0.68 (16)	0.45 (19)	0.39 (20)
CBD	1.83 (7)	1.25 (12)	0.74 (15)	0.65 (17)	0.66 (19)	0.53 (16)	0.51 (19)
Land-use entropy	0.6 (16)	0.48 (17)	0.42 (19)	0.51 (20)	0.68 (17)	0.57 (15)	0.74 (15)
Block size	1.48 (9)	0.45 (18)	0.54 (16)	1.08 (12)	0.86 (14)	0.81 (13)	0.85 (14)
Intersection density	1.2 (12)	2.36 (8)	1.35 (9)	1.69 (10)	0.97 (13)	1.52 (12)	0.99 (13)
Road density	1.35 (10)	0.8 (14)	0.91 (12)	0.6 (18)	0.56 (20)	0.43 (20)	0.69 (18)
# Stations density	0.4 (21)	0.42 (19)	0.33 (21)	1.4 (11)	2.52 (8)	3.54 (8)	0.25 (21)
Job accessibility (car)	1.17 (13)	1.4 (10)	0.77 (14)	1.03 (14)	0.72 (15)	0.52 (17)	0.73 (16)
Job accessibility (active)	25.89 (2)	54.54 (1)	15.27 (2)	14.49 (2)	32.7 (1)	42.56 (1)	49.97 (1)
Transit service	1.7 (8)	3.49 (6)	3.12 (7)	4.92 (5)	4.66 (4)	4.45 (5)	3.35 (6)
Low salary worker	0.55 (17)	0.53 (15)	0.4 (20)	0.29 (21)	0.37 (21)	0.63 (14)	0.71 (17)
Carless household	39.27 (1)	14.99 (2)	45.62 (1)	42.83 (1)	27.72 (2)	16.67 (2)	13.27 (2)
Higher degree	3.79 (6)	2.73 (7)	3.27 (6)	2.74 (7)	2.28 (9)	2.1 (10)	2.16 (9)
Population over 64	0.83 (15)	1.05 (13)	0.78 (13)	1.04 (13)	1.48 (11)	1.55 (11)	1.78 (10)
Population under 20	1.07 (14)	3.59 (5)	6.43 (4)	5.05 (4)	4.03 (5)	3.59 (7)	3.66 (4)
Race	0.49 (19)	0.31 (20)	5.24 (5)	2.27 (9)	2.14 (10)	4.21 (6)	3.08 (7)
Gender	0.47 (20)	0.29 (21)	0.48 (18)	0.95 (15)	1.14 (12)	0.41 (21)	1.52 (12)
Population density	5.03 (5)	3.77 (4)	8.4 (3)	10.44 (3)	7.95 (3)	5.86 (4)	7.19 (3)
Polycentricity	5.11 (4)	4.12 (3)	3.04 (8)	4.34 (6)	3.9 (6)	3.0 (9)	2.99 (8)

Table A6-5. Relative Importance (RI) of Rail stations' private vehicle models according to circular buffers (RI % (rank))

Feature	Block	200m	400m	600m	800m	1000m	1200m
Residential density		1.27 (11)	2.63 (8)	6.92 (3)	36.46 (1)	36.37 (1)	48.96 (1)
Employment density		0.53 (18)	1.38 (9)	0.92 (14)	0.76 (16)	0.74 (20)	0.55 (20)
Job per household		5.96 (3)	0.48 (19)	0.82 (15)	1.02 (12)	1.02 (15)	0.5 (21)
CBD		1.83 (7)	1.07 (11)	1.09 (11)	0.92 (13)	0.96 (17)	0.78 (18)
Land-use entropy		0.6 (16)	0.56 (17)	0.52 (19)	0.78 (15)	0.8 (19)	0.82 (17)
Block size		1.48 (9)	0.53 (18)	0.48 (20)	0.7 (17)	1.07 (14)	1.55 (11)
Intersection density		1.2 (12)	1.05 (12)	1.0 (12)	1.61 (9)	1.31 (11)	1.5 (12)
Road density		1.35 (10)	0.63 (16)	0.69 (16)	0.63 (20)	0.86 (18)	1.08 (15)
# Stations density		0.4 (21)	0.42 (20)	0.35 (21)	0.67 (18)	1.22 (13)	1.49 (13)
Job accessibility (car)		1.17 (13)	0.9 (14)	0.94 (13)	0.89 (14)	0.97 (16)	0.52 (19)
Job accessibility (active)		25.89 (2)	18.09 (2)	12.2 (2)	6.81 (4)	7.4 (3)	8.99 (3)
Transit service		1.7 (8)	3.52 (4)	5.13 (5)	7.98 (3)	4.98 (4)	3.64 (6)

Low salary worker	0.55 (17)	0.34 (21)	0.53 (18)	0.63 (19)	1.32 (10)	1.86 (10)	1.16 (13)
Carless household	39.27 (1)	51.55 (1)	50.32 (1)	21.17 (2)	22.9 (2)	13.34 (2)	10.91 (2)
Higher degree	3.79 (6)	2.92 (6)	3.54 (6)	2.96 (8)	2.24 (8)	1.93 (9)	1.57 (10)
Population over 64	0.83 (15)	1.1 (10)	1.14 (10)	1.16 (11)	1.3 (12)	1.31 (14)	1.48 (11)
Population under 20	1.07 (14)	2.87 (7)	3.04 (7)	4.66 (6)	4.09 (6)	4.05 (4)	4.72 (4)
Race	0.49 (19)	0.65 (15)	1.75 (8)	1.3 (10)	0.35 (21)	0.26 (21)	0.59 (18)
Gender	0.47 (20)	0.99 (13)	0.6 (17)	0.21 (21)	1.34 (9)	2.01 (8)	0.85 (16)
Population density	5.03 (5)	5.21 (3)	6.29 (4)	5.17 (5)	4.97 (5)	3.21 (7)	3.16 (7)
Polycentricity	5.11 (4)	3.1 (5)	1.74 (9)	3.51 (7)	3.78 (7)	4.03 (5)	4.54 (5)

Table A6-6. Relative Importance (RI) of Rail stations' private vehicle models according to Thiessen polygons (RI % (rank))

Feature	Block	200m	400m	600m	800m	1000m	1200m
Residential density	1.27 (11)	1.69 (10)	2.98 (7)	18.44 (2)	34.67 (1)	37.13 (1)	42.22 (1)
Employment density	0.53 (18)	1.5 (11)	1.18 (11)	1.37 (10)	1.18 (12)	1.1 (11)	0.82 (16)
Job per household	5.96 (3)	0.47 (20)	0.63 (19)	0.75 (15)	0.88 (14)	0.7 (14)	0.67 (19)
CBD	1.83 (7)	0.89 (15)	0.99 (14)	1.16 (11)	1.06 (13)	1.21 (10)	0.87 (15)
Land-use entropy	0.6 (16)	0.59 (18)	0.53 (20)	0.48 (16)	0.58 (17)	0.37 (19)	0.75 (17)
Block size	1.48 (9)	0.6 (17)	0.64 (17)	0.41 (18)	0.4 (19)	0.43 (16)	0.54 (20)
Intersection density	1.2 (12)	1.16 (14)	1.02 (13)	0.88 (14)	0.68 (16)	0.53 (15)	2.38 (9)
Road density	1.35 (10)	0.74 (16)	0.66 (16)	0.35 (19)	0.44 (18)	0.33 (20)	0.71 (18)
# Stations density	0.4 (21)	0.5 (19)	0.64 (18)	0.47 (17)	1.27 (11)	0.4 (18)	1.9 (11)
Job accessibility (car)	1.17 (13)	13.95 (2)	10.5 (2)	7.38 (3)	6.26 (3)	7.26 (3)	5.54 (4)
Job accessibility (active)	25.89 (2)	1.39 (12)	1.06 (12)	1.05 (13)	0.81 (15)	1.09 (12)	1.41 (13)
Transit service	1.7 (8)	3.53 (6)	2.99 (6)	5.27 (4)	5.46 (4)	6.42 (4)	5.76 (3)
Low salary worker	0.55 (17)	1.99 (8)	2.2 (8)	2.38 (8)	2.55 (9)	1.85 (9)	2.46 (8)
Carless household	39.27 (1)	49.08 (1)	55.1 (1)	44.24 (1)	29.16 (2)	24.88 (2)	18.61 (2)
Higher degree	3.79 (6)	3.75 (5)	3.9 (5)	3.89 (6)	3.38 (5)	3.76 (6)	3.34 (6)
Population over 64	0.83 (15)	1.75 (9)	5.27 (3)	1.12 (12)	1.53 (10)	1.01 (13)	1.9 (12)
Population under 20	1.07 (14)	4.3 (4)	2.17 (10)	3.35 (7)	3.29 (6)	3.85 (5)	4.07 (5)
Race	0.49 (19)	1.34 (13)	0.81 (15)	0.29 (21)	0.39 (20)	0.27 (21)	0.94 (14)
Gender	0.47 (20)	0.38 (21)	0.27 (21)	0.35 (20)	0.27 (21)	0.43 (17)	0.0 (21)
Population density	5.03 (5)	7.32 (3)	4.27 (4)	4.17 (5)	2.91 (7)	3.37 (8)	2.0 (10)
Polycentricity	5.11 (4)	3.06 (7)	2.18 (9)	2.2 (9)	2.82 (8)	3.62 (7)	3.11 (7)

Table A6-7. Relative Importance (RI) of BRT stations' active models according to circular buffers (RI % (rank))

Feature	Block	200m	400m	600m	800m	1000m	1200m
Residential density	1.45 (15)	0.63 (20)	0.61 (20)	0.98 (18)	0.97 (13)	2.11 (10)	0.3 (20)
Employment density	5.71 (3)	28.77 (1)	31.89 (1)	34.4 (1)	23.48 (2)	32.35 (1)	17.74 (3)
Job per household	46.16 (1)	2.47 (9)	1.21 (15)	1.22 (15)	3.1 (5)	2.22 (9)	1.56 (12)
CBD	2.18 (12)	1.67 (15)	1.3 (14)	3.46 (6)	2.62 (7)	2.93 (7)	1.27 (16)
Land-use entropy	3.55 (6)	0.74 (19)	2.09 (12)	1.42 (14)	0.53 (16)	0.8 (17)	1.31 (15)
Block size	0.53 (20)	2.04 (12)	3.48 (6)	1.94 (11)	0.29 (19)	0.17 (20)	0.28 (21)
Intersection density	0.72 (18)	1.26 (17)	0.81 (18)	2.29 (7)	0.32 (18)	1.34 (16)	1.9 (11)
Road density	2.44 (10)	1.94 (13)	1.18 (16)	0.69 (20)	0.58 (15)	0.59 (19)	2.08 (10)
# Stations density	1.87 (13)	1.62 (16)	5.04 (4)	3.46 (5)	1.05 (11)	2.67 (8)	21.71 (2)
Job accessibility (car)	2.72 (9)	2.2 (11)	1.07 (17)	0.69 (19)	1.0 (12)	2.08 (11)	0.58 (18)
Job accessibility (active)	1.74 (14)	6.38 (3)	2.25 (9)	2.05 (9)	2.06 (8)	3.49 (6)	2.49 (8)
Transit service	1.02 (16)	2.49 (8)	2.24 (10)	1.01 (17)	0.52 (17)	1.93 (12)	1.44 (14)
Low salary worker	0.9 (17)	5.54 (5)	2.98 (7)	4.43 (4)	2.92 (6)	4.53 (5)	3.09 (7)
Carless household	2.24 (11)	2.36 (10)	2.4 (8)	1.94 (10)	1.74 (9)	1.42 (14)	1.55 (13)
Higher degree	4.42 (5)	5.65 (4)	3.86 (5)	5.72 (3)	4.53 (4)	5.23 (4)	3.92 (5)
Population over 64	2.87 (8)	1.25 (18)	6.22 (3)	2.27 (8)	0.96 (14)	1.63 (13)	2.49 (9)
Population under 20	5.18 (4)	3.13 (6)	2.23 (11)	1.44 (13)	1.33 (10)	1.41 (15)	5.6 (4)
Race	0.27 (21)	0.32 (21)	0.15 (21)	0.48 (21)	0.0 (21)	8.65 (3)	0.47 (19)
Gender	0.57 (19)	1.86 (14)	0.79 (19)	1.14 (16)	0.03 (20)	0.05 (21)	1.18 (17)
Population density	3.07 (7)	3.11 (7)	1.69 (13)	1.79 (12)	7.09 (3)	0.62 (18)	3.14 (6)
Polycentricity	10.4 (2)	24.57 (2)	26.5 (2)	27.17 (2)	44.89 (1)	23.78 (2)	25.88 (1)

Table A6-8. Relative Importance (RI) of BRT stations' active models according to network buffers (RI % (rank))

Feature	Block	200m	400m	600m	800m	1000m	1200m
Residential density	1.45 (15)	0.52 (20)	0.93 (17)	0.96 (17)	0.5 (21)	0.32 (20)	0.87 (16)
Employment density	5.71 (3)	31.32 (1)	26.32 (2)	39.68 (1)	34.42 (1)	24.66 (1)	38.48 (1)
Job per household	46.16 (1)	2.9 (11)	3.42 (5)	2.44 (7)	2.32 (8)	2.61 (7)	1.72 (10)
CBD	2.18 (12)	2.47 (12)	2.94 (7)	2.32 (8)	2.42 (7)	1.65 (10)	1.46 (13)
Land-use entropy	3.55 (6)	1.75 (14)	0.83 (18)	1.01 (16)	0.68 (18)	0.46 (19)	0.36 (19)
Block size	0.53 (20)	1.19 (18)	1.03 (16)	0.57 (19)	0.91 (15)	0.14 (21)	0.09 (20)
Intersection density	0.72 (18)	3.02 (10)	2.63 (10)	1.91 (9)	1.27 (12)	1.56 (11)	3.79 (7)
Road density	2.44 (10)	2.11 (13)	2.23 (11)	1.79 (10)	0.86 (17)	0.95 (17)	1.66 (11)

# Stations density	1.87 (13)	0.77 (19)	1.12 (15)	1.18 (14)	4.17 (6)	4.67 (5)	5.42 (5)
Job accessibility (car)	2.72 (9)	3.28 (8)	2.9 (8)	2.85 (6)	2.25 (9)	2.02 (9)	4.4 (6)
Job accessibility (active)	1.74 (14)	1.33 (15)	1.39 (13)	0.58 (18)	0.88 (16)	1.1 (15)	0.43 (18)
Transit service	1.02 (16)	1.32 (16)	1.49 (12)	1.36 (11)	1.7 (11)	1.01 (16)	1.62 (12)
Low salary worker	0.9 (17)	1.19 (17)	0.41 (19)	1.26 (12)	1.0 (13)	0.78 (18)	0.7 (17)
Carless household	2.24 (11)	3.87 (7)	2.72 (9)	3.02 (5)	0.92 (14)	1.41 (12)	2.84 (9)
Higher degree	4.42 (5)	3.93 (6)	3.34 (6)	4.68 (4)	2.1 (10)	3.16 (6)	3.33 (8)
Population over 64	2.87 (8)	4.52 (3)	5.98 (4)	5.04 (3)	4.93 (4)	1.13 (14)	0.97 (15)
Population under 20	5.18 (4)	4.02 (5)	1.26 (14)	1.2 (13)	0.6 (20)	1.26 (13)	1.05 (14)
Race	0.27 (21)	0.47 (21)	0.04 (21)	0.14 (20)	9.29 (3)	16.91 (3)	8.77 (3)
Gender	0.57 (19)	3.05 (9)	0.14 (20)	0.13 (21)	0.67 (19)	2.14 (8)	0.07 (21)
Population density	3.07 (7)	4.07 (4)	6.7 (3)	1.16 (15)	4.69 (5)	13.11 (4)	7.81 (4)
Polycentricity	10.4 (2)	22.89 (2)	32.18 (1)	26.73 (2)	23.43 (2)	18.93 (2)	14.16 (2)

Table A6-9. Relative Importance (RI) of BRT stations' active models according to Thiessen polygons (RI % (rank))

Feature	Block	200m	400m	600m	800m	1000m	1200m
Residential density	1.45 (15)	0.33 (20)	0.56 (20)	0.37 (21)	0.34 (20)	0.93 (19)	0.51 (21)
Employment density	5.71 (3)	3.89 (9)	29.88 (1)	31.91 (1)	32.24 (1)	32.18 (1)	38.24 (1)
Job per household	46.16 (1)	0.71 (16)	4.43 (7)	2.5 (11)	2.57 (11)	2.72 (10)	3.75 (8)
CBD	2.18 (12)	10.53 (4)	3.1 (10)	4.72 (5)	3.59 (7)	2.82 (9)	1.78 (12)
Land-use entropy	3.55 (6)	0.71 (17)	0.76 (18)	2.36 (12)	1.27 (16)	1.61 (15)	1.45 (13)
Block size	0.53 (20)	1.88 (14)	2.1 (13)	2.59 (9)	0.92 (19)	0.68 (21)	1.34 (15)
Intersection density	0.72 (18)	2.62 (13)	1.22 (15)	0.99 (19)	1.55 (15)	1.56 (16)	4.06 (5)
Road density	2.44 (10)	0.64 (18)	1.83 (14)	1.51 (16)	1.95 (13)	1.74 (14)	0.97 (19)
# Stations density	1.87 (13)	5.21 (8)	10.09 (3)	4.6 (7)	5.6 (4)	3.67 (7)	11.7 (3)
Job accessibility (car)	2.72 (9)	6.24 (6)	3.05 (11)	2.5 (10)	4.14 (6)	2.96 (8)	1.91 (11)
Job accessibility (active)	1.74 (14)	7.64 (5)	0.65 (19)	0.4 (20)	2.05 (12)	1.83 (12)	2.82 (9)
Transit service	1.02 (16)	3.47 (11)	1.04 (16)	1.44 (18)	0.98 (18)	1.03 (18)	0.75 (20)
Low salary worker	0.9 (17)	0.34 (19)	0.9 (17)	1.94 (13)	1.92 (14)	0.82 (20)	1.21 (17)
Carless household	2.24 (11)	6.06 (7)	4.2 (8)	4.66 (6)	3.01 (9)	4.93 (5)	1.94 (10)
Higher degree	4.42 (5)	11.76 (3)	5.94 (5)	5.85 (4)	4.52 (5)	6.31 (3)	3.79 (7)
Population over 64	2.87 (8)	3.35 (12)	6.78 (4)	5.9 (3)	3.21 (8)	1.83 (11)	1.28 (16)
Population under 20	5.18 (4)	3.56 (10)	2.43 (12)	1.57 (15)	1.27 (17)	1.81 (13)	1.42 (14)
Race	0.27 (21)	0.19 (21)	0.53 (21)	3.07 (8)	12.26 (3)	1.21 (17)	3.9 (6)
Gender	0.57 (19)	0.74 (15)	4.51 (6)	1.61 (14)	0.28 (21)	5.59 (4)	1.12 (18)
Population density	3.07 (7)	13.02 (2)	3.22 (9)	1.5 (17)	2.84 (10)	4.52 (6)	4.21 (4)
Polycentricity	10.4 (2)	17.1 (1)	12.81 (2)	18.01 (2)	13.5 (2)	19.26 (2)	11.84 (2)

Table A6-10. Relative Importance (RI) of BRT stations' private vehicles according to circular buffers (RI % (rank))

Feature	Block	200m	400m	600m	800m	1000m	1200m
Residential density	1.19 (12)	0.62 (19)	0.44 (20)	0.54 (19)	11.7 (3)	9.3 (3)	7.24 (3)
Employment density	1.29 (11)	1.26 (14)	1.36 (13)	1.71 (10)	3.51 (6)	3.19 (7)	1.36 (14)
Job per household	7.96 (4)	0.84 (17)	0.39 (21)	1.55 (11)	0.82 (14)	0.86 (16)	1.95 (11)
CBD	1.72 (9)	3.47 (6)	3.96 (6)	2.36 (8)	1.82 (11)	1.52 (12)	1.6 (13)
Land-use entropy	0.62 (19)	0.42 (20)	1.4 (12)	0.27 (21)	0.41 (21)	0.36 (20)	0.68 (20)
Block size	0.77 (17)	1.99 (10)	0.87 (18)	0.37 (20)	0.53 (19)	0.19 (21)	0.7 (19)
Intersection density	0.84 (16)	1.17 (15)	1.09 (15)	0.72 (15)	0.77 (15)	0.75 (18)	1.19 (17)
Road density	1.05 (13)	1.84 (11)	1.45 (10)	2.05 (9)	2.44 (10)	2.23 (10)	4.75 (5)
# Stations density	0.2 (21)	0.34 (21)	0.98 (16)	2.43 (7)	3.4 (7)	5.25 (5)	1.29 (15)
Job accessibility (car)	1.94 (7)	41.83 (1)	44.61 (1)	52.47 (1)	38.51 (1)	40.11 (1)	27.99 (1)
Job accessibility (active)	41.86 (1)	0.8 (18)	0.83 (19)	0.65 (16)	0.72 (17)	0.72 (19)	0.9 (18)
Transit service	3.4 (5)	2.18 (9)	2.02 (8)	1.45 (12)	0.64 (18)	1.11 (15)	4.37 (7)
Low salary worker	0.44 (20)	8.85 (2)	6.6 (4)	3.27 (5)	2.99 (8)	2.6 (8)	4.44 (6)
Carless household	11.22 (3)	8.72 (3)	13.08 (2)	17.12 (2)	13.16 (2)	13.35 (2)	23.9 (2)
Higher degree	1.33 (10)	1.59 (12)	1.41 (11)	0.59 (18)	0.76 (16)	0.85 (17)	0.52 (21)
Population over 64	1.81 (8)	1.32 (13)	1.19 (14)	1.07 (13)	1.11 (13)	1.25 (14)	2.57 (9)
Population under 20	1.03 (14)	2.39 (8)	1.71 (9)	0.61 (17)	1.78 (12)	2.27 (9)	1.2 (16)
Race	0.95 (15)	7.69 (5)	2.64 (7)	3.09 (6)	5.68 (5)	4.54 (6)	1.63 (12)
Gender	0.66 (18)	0.97 (16)	0.97 (17)	0.79 (14)	0.45 (20)	1.7 (11)	2.93 (8)
Population density	2.06 (6)	3.05 (7)	5.38 (5)	3.31 (4)	2.47 (9)	1.35 (13)	2.53 (10)
Polycentricity	17.66 (2)	8.66 (4)	7.63 (3)	3.59 (3)	6.3 (4)	6.5 (4)	6.26 (4)

Table A6-11. Relative Importance (RI) of BRT stations' private vehicles according to network buffers (RI % (rank))

Feature	Block	200m	400m	600m	800m	1000m	1200m
Residential density	1.19 (12)	0.44 (18)	0.25 (18)	0.96 (13)	2.24 (7)	0.93 (12)	0.52 (17)
Employment density	1.29 (11)	0.97 (13)	0.84 (12)	0.64 (15)	1.33 (12)	0.76 (14)	1.01 (11)

Job per household	7.96 (4)	0.14 (21)	0.23 (19)	0.56 (17)	0.64 (18)	0.69 (15)	0.76 (14)
CBD	1.72 (9)	4.38 (4)	2.96 (5)	2.46 (6)	1.79 (9)	1.77 (8)	1.32 (8)
Land-use entropy	0.62 (19)	0.76 (15)	0.74 (13)	0.52 (18)	0.39 (19)	0.28 (20)	0.13 (21)
Block size	0.77 (17)	1.59 (7)	0.59 (14)	0.6 (16)	0.18 (20)	0.52 (17)	0.21 (20)
Intersection density	0.84 (16)	0.39 (19)	0.47 (16)	0.67 (14)	1.12 (15)	1.26 (9)	0.89 (12)
Road density	1.05 (13)	1.42 (9)	1.05 (11)	1.63 (9)	2.62 (6)	2.27 (7)	1.03 (10)
# Stations density	0.2 (21)	0.2 (20)	0.41 (17)	0.99 (12)	1.4 (11)	3.41 (5)	4.61 (4)
Job accessibility (car)	1.94 (7)	0.48 (17)	1.07 (10)	1.5 (10)	1.19 (14)	0.41 (18)	0.52 (16)
Job accessibility (active)	41.86 (1)	50.69 (1)	45.82 (1)	47.92 (1)	45.16 (1)	55.09 (1)	53.2 (1)
Transit service	3.4 (5)	1.22 (11)	1.1 (9)	2.68 (5)	2.8 (5)	0.82 (13)	2.99 (6)
Low salary worker	0.44 (20)	0.77 (14)	0.19 (20)	0.33 (20)	0.18 (21)	0.25 (21)	0.35 (18)
Carless household	11.22 (3)	8.79 (3)	10.44 (3)	13.09 (3)	16.23 (2)	13.85 (2)	17.6 (2)
Higher degree	1.33 (10)	1.19 (12)	0.56 (15)	0.45 (19)	0.87 (16)	0.66 (16)	1.06 (9)
Population over 64	1.81 (8)	1.39 (10)	1.38 (8)	1.67 (8)	1.68 (10)	1.0 (11)	0.8 (13)
Population under 20	1.03 (14)	0.52 (16)	2.72 (6)	1.27 (11)	1.23 (13)	1.01 (10)	0.29 (19)
Race	0.95 (15)	2.95 (5)	1.8 (7)	2.01 (7)	2.09 (8)	0.37 (19)	0.69 (15)
Gender	0.66 (18)	1.53 (8)	0.12 (21)	0.07 (21)	0.67 (17)	5.31 (4)	6.69 (3)
Population density	2.06 (6)	2.87 (6)	6.63 (4)	2.87 (4)	7.65 (4)	3.36 (6)	3.7 (5)
Polycentricity	17.66 (2)	17.32 (2)	20.63 (2)	17.11 (2)	8.54 (3)	5.98 (3)	1.63 (7)

Table A6-12. Relative Importance (RI) of BRT stations' private vehicles according to Thiessen polygons (RI % (rank))

Feature	Block	200m	400m	600m	800m	1000m	1200m
Residential density	1.19 (12)	0.39 (19)	0.12 (21)	0.18 (21)	0.47 (20)	0.41 (20)	0.42 (19)
Employment density	1.29 (11)	0.57 (16)	0.85 (13)	1.96 (7)	2.05 (7)	1.31 (12)	1.33 (12)
Job per household	7.96 (4)	0.51 (17)	0.75 (15)	0.87 (16)	1.65 (9)	1.81 (8)	1.51 (9)
CBD	1.72 (9)	4.06 (6)	4.06 (5)	2.25 (6)	1.91 (8)	1.67 (9)	1.49 (10)
Land-use entropy	0.62 (19)	0.2 (21)	0.77 (14)	0.9 (15)	0.45 (21)	0.55 (18)	0.8 (15)
Block size	0.77 (17)	0.6 (15)	1.19 (10)	0.91 (14)	0.75 (16)	0.63 (17)	0.49 (18)
Intersection density	0.84 (16)	0.62 (14)	0.45 (19)	0.57 (18)	0.59 (18)	0.51 (19)	0.63 (17)
Road density	1.05 (13)	0.47 (18)	4.2 (4)	4.14 (3)	3.33 (5)	2.2 (7)	1.71 (7)
# Stations density	0.2 (21)	0.65 (13)	1.16 (11)	1.42 (12)	1.2 (12)	1.04 (13)	1.65 (8)
Job accessibility (car)	1.94 (7)	1.48 (8)	1.88 (7)	1.38 (13)	1.49 (10)	1.31 (11)	1.35 (11)
Job accessibility (active)	41.86 (1)	41.67 (1)	45.17 (1)	56.5 (1)	57.08 (1)	58.06 (1)	64.97 (1)
Transit service	3.4 (5)	4.93 (5)	1.81 (8)	1.88 (8)	3.61 (4)	3.75 (4)	3.0 (4)
Low salary worker	0.44 (20)	0.34 (20)	0.6 (16)	1.64 (10)	0.67 (17)	0.73 (16)	0.85 (13)
Carless household	11.22 (3)	7.38 (4)	10.47 (3)	14.3 (2)	10.83 (2)	12.34 (2)	7.97 (2)
Higher degree	1.33 (10)	0.73 (12)	0.97 (12)	0.85 (17)	0.83 (15)	1.44 (10)	1.91 (6)
Population over 64	1.81 (8)	1.3 (9)	1.64 (9)	1.66 (9)	1.48 (11)	0.88 (14)	0.84 (14)
Population under 20	1.03 (14)	0.88 (11)	0.51 (17)	0.57 (19)	0.59 (19)	0.77 (15)	0.65 (16)
Race	0.95 (15)	12.03 (3)	0.41 (20)	0.31 (20)	0.91 (14)	0.29 (21)	0.23 (20)
Gender	0.66 (18)	1.12 (10)	0.47 (18)	1.53 (11)	0.98 (13)	2.22 (6)	0.21 (21)
Population density	2.06 (6)	2.62 (7)	2.18 (6)	2.53 (5)	2.1 (6)	3.37 (5)	2.44 (5)
Polycentricity	17.66 (2)	17.45 (2)	20.33 (2)	3.65 (4)	7.01 (3)	4.7 (3)	5.55 (3)

Table A6-13. Average variance of relative importance at different buffer sizes across different methods (200m, 400m, etc.)

Scale	Active modes of Rail stations	Public transit of Rail stations	Private vehicles of Rail stations	Active modes of BRT stations	Public transit of BRT stations	Private vehicles of BRT stations
200m	44.14	1.92	33.33	15.52	30.29	79.59
400m	52.81	1.31	4.36	2.08	16.99	71.65
600m	35.21	0.53	2.35	1.41	9.39	98.69
800m	19.68	0.3	2.47	1.36	5.97	76.94
1000m	5.41	0.27	1.87	2.45	29.59	88.12
1200m	72.21	0.98	1.37	12.17	55.46	70.49

Table A6-14. Average variance of relative importance across different methods (Circular, Network and Thiessen)

Methods	Active modes of Rail stations	Public transit of Rail stations	Private vehicles of Rail stations	Active modes of BRT stations	Public transit of BRT stations	Private vehicles of BRT stations
Circular	13.44	0.66	36.03	31.95	26.85	39.37
Network	11.56	0.64	19.24	29.60	8.40	2.64
Thiessen	27.89	0.68	30.70	35.61	13.45	7.18

Appendix A7: Nonlinearity

Appendix A7-2: Nonlinearity association

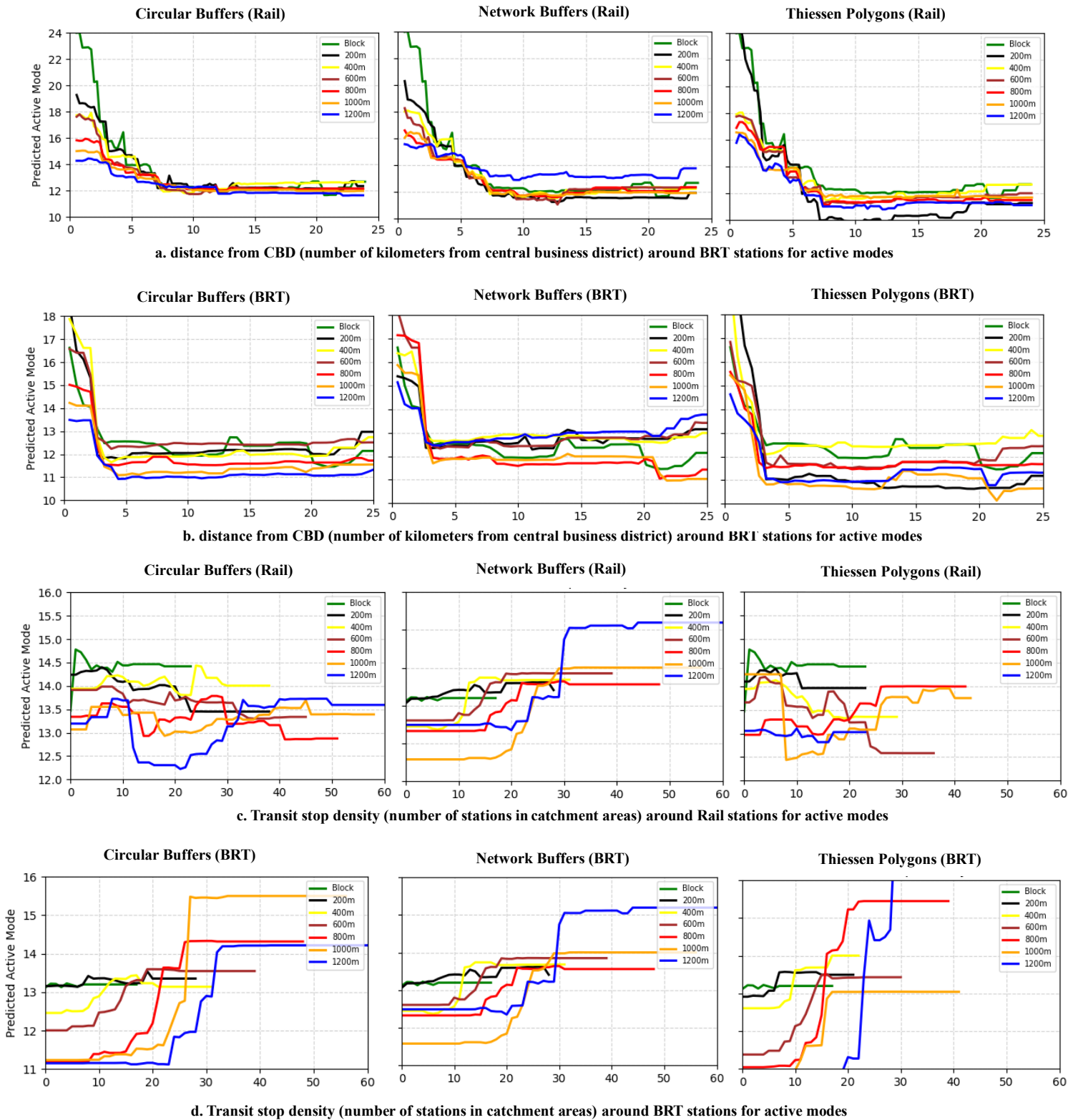


Fig.A7-2.1. Nonlinearity association between predictors and active modes

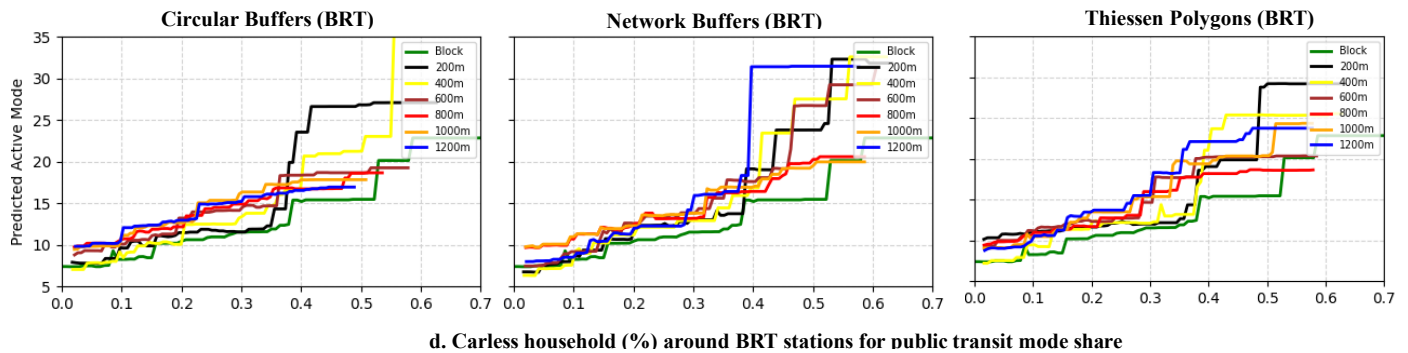
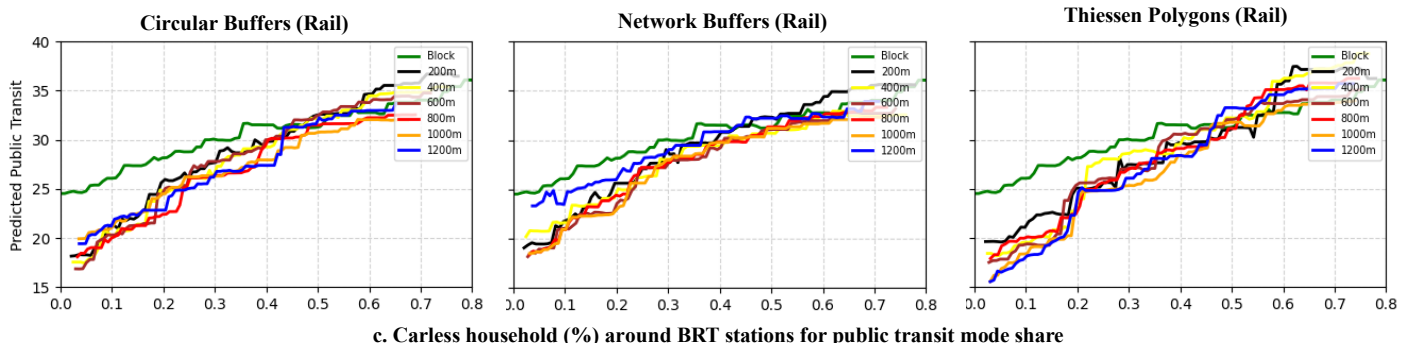
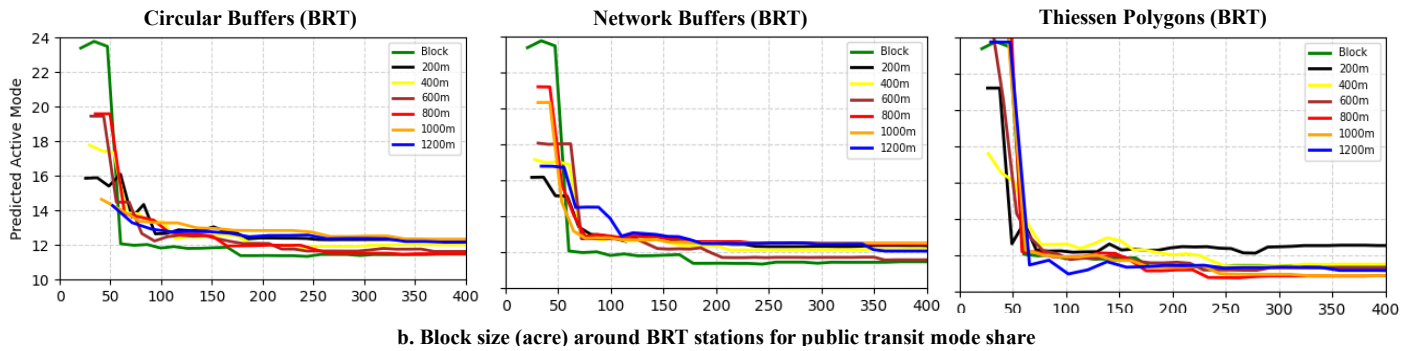
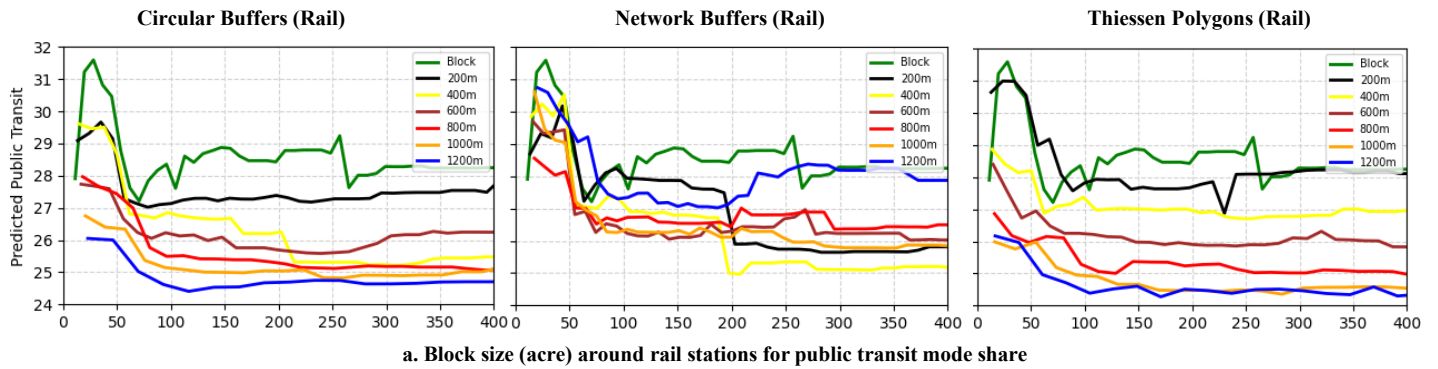
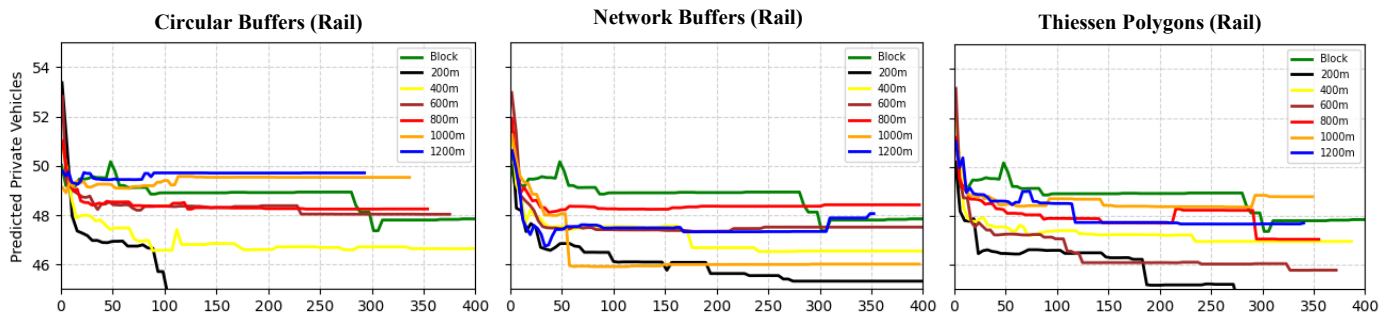
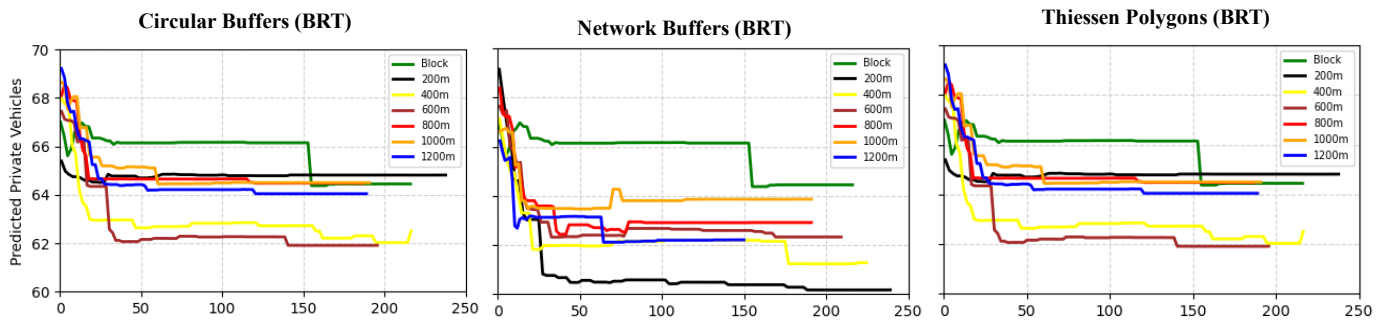


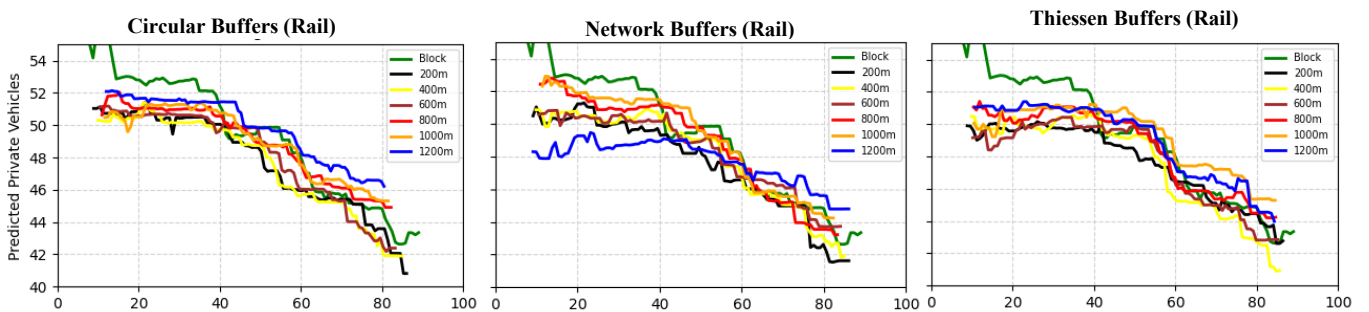
Fig.A7-2.2. Nonlinearity association between predictors and public transit mode share



a. Employment density (number of jobs in catchment area) around rail stations for private vehicles



b. Employment density (number of jobs in catchment area) around BRT stations for private vehicles



c. Bachelor and higher degree (%) around rail stations for private vehicles

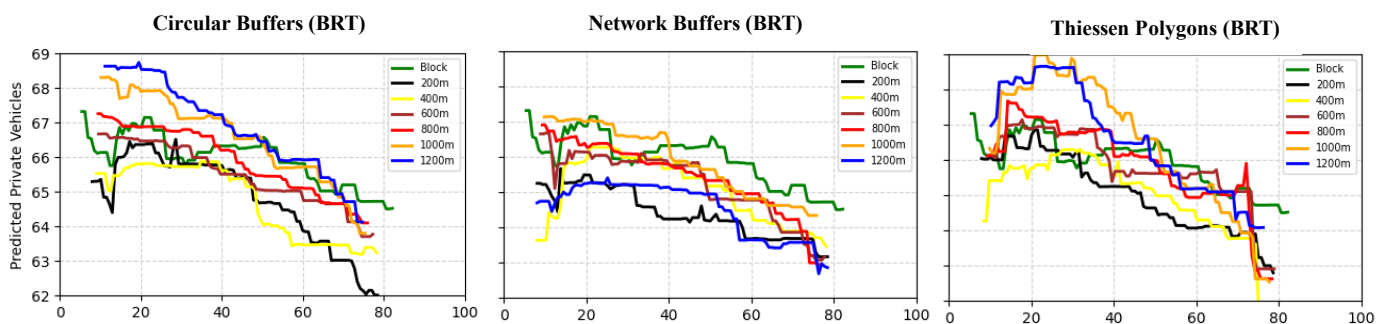


Fig.A7-2.3. Nonlinearity association between predictors and public transit mode share

Appendix A8: HLM regression results

Table A8-1. HLM regression coefficients for active mode around BRT stations

Unit	Residential_ density	Emp_ density	Job_ perhouse	CBD	Entropy	Block	Intersect_ density	Road_ density	Stations	Jobs45auto	Jobs45transit	Transit service	Low Salary	Nocar	Degree	Over64	Under2
Block group	-0.123	-0.2	0.141	0.07	-0.167	-0.028	-0.155 *	0.831 ***	0.141 *	0.106	-0.114 *	0.036	-0.158 *	0.343 ***	0.567 ***	-0.248 ***	0.321
Circular(200m)	0.108 ***	0.101 ***	0.039 ***	0.131 **	-0.071	-0.024	0.208 **	0.583 ***	0.083	0.277 *	-0.128 **	-0.114 **	-0.192 **	0.441 ***	0.749 ***	-0.345 ***	0.342
Circular(400m)	0.098 **	0.087 ***	0.045 ***	0.153 ***	-0.075	-0.031 *	0.274 ***	0.383 *	0.167 *	0.266 *	-0.117 *	-0.118 **	-0.274 ***	0.462 ***	0.851 ***	-0.412 ***	0.267
Circular(600m)	0.080 *	0.097 ***	0.054 ***	0.152 ***	-0.143	-0.038 **	0.314 ***	0.262	0.316 **	0.219	-0.102 *	-0.151 ***	-0.283 ***	0.428 ***	0.887 ***	-0.493 ***	0.190
Circular(800m)	0.055	0.122 ***	0.061 ***	0.123 ***	-0.149	-0.026	0.327 ***	0.246	0.398 ***	0.135	-0.101 *	-0.183 ***	-0.219 **	0.394 ***	0.888 ***	-0.571 ***	0.087
Circular(1000m)	0.04	0.149 ***	0.062 ***	0.095 **	-0.143	-0.007	0.376 ***	0.191	0.476 ***	0.067	-0.126 **	-0.203 ***	-0.127	0.398 ***	0.881 ***	-0.645 ***	0.004
Circular(1200m)	0.04	0.161 ***	0.058 ***	0.081 *	-0.088	-0.004	0.471 ***	0.065	0.452 ***	0.028	-0.154 ***	-0.182 ***	-0.077	0.412 ***	0.848 ***	-0.669 ***	-0.017
Thiessen (200m)	-0.014	0.005	0.016	0.074	-0.419 **	-0.044 *	0.461 ***	-0.046	0.228 ***	0.258	0.012	0.027	-0.158 *	0.291 ***	0.697 ***	-0.293 ***	0.255
Thiessen (400m)	0.082 *	0.079 ***	0.038 ***	0.135 **	-0.051	-0.038 *	0.092	0.505 ***	0.204 *	0.234	-0.104 *	-0.139 **	-0.270 ***	0.498 ***	0.892 ***	-0.390 ***	0.250
Thiessen (600m)	0.05	0.063 **	0.041 ***	0.127 **	0.01	-0.042 **	0.098	0.413 **	0.515 ***	0.128	-0.07	-0.172 ***	-0.265 ***	0.503 ***	0.919 ***	-0.394 ***	0.186
Thiessen (800m)	0.05	0.075 ***	0.033 ***	0.114 **	0.017	-0.02	0.092	0.371 **	0.714 ***	0.095	-0.08	-0.198 ***	-0.250 **	0.487 ***	0.908 ***	-0.396 ***	0.166
Thiessen (1000m)	0.063	0.082 ***	0.033 ***	0.112 **	0.039	-0.008	0.114	0.340 *	0.716 ***	0.106	-0.104 *	-0.213 ***	-0.255 **	0.474 ***	0.879 ***	-0.382 ***	0.137
Thiessen (1200m)	0.049	0.087 ***	0.026 **	0.104 **	0.091	-0.006	0.136	0.265 *	0.876 ***	0.084	-0.094 *	-0.212 ***	-0.264 **	0.476 ***	0.875 ***	-0.347 ***	0.141
Network(200m)	0.098 **	0.101 ***	0.036 ***	0.127 **	-0.188	-0.005	0.229 **	0.625 ***	0.121 **	0.095	0.270 *	-0.116 **	0.336 *	0.409 ***	0.746 ***	-0.349 ***	0.228
Network(400m)	0.086 *	0.101 ***	0.034 ***	0.145 ***	-0.183	-0.006	0.235 **	0.545 ***	0.264 ***	0.088	0.268 *	-0.128 **	0.410 **	0.418 ***	0.813 ***	-0.378 ***	0.156
Network(600m)	0.079 *	0.109 ***	0.041 ***	0.141 ***	-0.230 *	-0.01	0.209 *	0.493 **	0.488 ***	0.101 *	0.218	-0.145 ***	0.514 ***	0.379 ***	0.894 ***	-0.424 ***	0.094
Network(800m)	0.079 *	0.107 ***	0.052 ***	0.128 ***	-0.201	-0.014	0.190 *	0.521 **	0.522 ***	0.100 *	0.16	-0.147 ***	0.514 ***	0.368 ***	0.916 ***	-0.481 ***	0.059
Network(1000m)	0.081 *	0.096 ***	0.049 ***	0.129 ***	-0.15	-0.017	0.177 *	0.524 ***	0.553 ***	0.094 *	0.14	-0.135 ***	0.494 ***	0.346 ***	0.936 ***	-0.557 ***	0.01
Network(1200m)	0.089	0.137 ***	0.050 ***	0.125 **	-0.181	-0.001	0.382 **	0.695 **	0.551 **	0.188 **	0.209	-0.121 *	0.352	0.357 ***	0.748 ***	-0.299 ***	0.300

Note¹: Coefficients with * are significant at p<0.05. Coefficients with ** are significant at p<0.01. Coefficients with *** are significant at p<0.001

Note²: Control variables include age, gender, income, car ownership, race, and education.

Table A8-2. HLM regression performances for active mode around BRT stations

Models	RMSE	MAE	R2
Block group	11.28	8.35	0.5
Circular(200m)	10.6	7.9	0.5
Circular(400m)	10.11	7.63	0.52
Circular(600m)	9.22	6.99	0.56
Circular(800m)	8.27	6.21	0.61
Circular(1000m)	7.41	5.51	0.65
Circular(1200m)	8.01	6.19	0.64
Thiessen (200m)	11.63	8.91	0.4
Thiessen (400m)	10.61	7.87	0.49
Thiessen (600m)	9.66	7.18	0.54
Thiessen (800m)	8.89	6.56	0.58
Thiessen (1000m)	8.47	6.18	0.6
Thiessen (1200m)	8.11	5.89	0.62
Network(200m)	10.54	7.77	0.52
Network(400m)	10.06	7.58	0.54
Network(600m)	9.21	7.01	0.6
Network(800m)	6.75	5.02	0.67
Network(1000m)	8.46	6.49	0.63
Network(1200m)	9.72	7.2	0.59

Table A8-3. HLM regression results for active mode around Rail stations

Unit	Residential_ density	Emp_ density	Job_ perhouse	CBD	Entropy	Block	Intersect_ density	Road_ density	Stations	Jobs45auto	Jobs45transit	Transit service	Low Salary	Nocar	Degree	Over64	Under20	Race	Gender
Block group	0.021	0.21	0.01	-0.180 ***	0.203 ***	0.01	0.158 ***	0.326 ***	-0.009	0.252 ***	-0.074 **	0.279 ***	-0.152 ***	0.550 ***	0.205 ***	-0.029	0.192 ***	0.168 ***	0.03
Circular(200m)	0.046 *	0.019 ***	0.028 ***	-0.145 ***	0.464 ***	0.009	0.254 ***	0.184 *	-0.029	0.288 ***	-0.090 ***	0.209 ***	-0.199 ***	0.685 ***	0.339 ***	-0.013	0.181 ***	0.081 ***	0.02
Circular(400m)	0.066 ***	0.030 ***	0.022 ***	-0.134 ***	0.334 ***	0.012	0.313 ***	0.139	0.009	0.286 ***	-0.100 ***	0.185 ***	-0.263 ***	0.673 ***	0.347 ***	-0.012	0.146 ***	0.072 ***	0.01
Circular(600m)	0.064 **	0.040 ***	0.020 ***	-0.115 ***	0.384 ***	0.012	0.334 ***	0.11	0.102 *	0.296 ***	-0.110 ***	0.158 ***	-0.264 ***	0.679 ***	0.356 ***	-0.022	0.099 ***	0.052 **	0.01
Circular(800m)	0.060 **	0.047 ***	0.016 ***	-0.099 ***	0.448 ***	-0.275 ***	0.326 ***	0.125	0.206 ***	0.298 ***	-0.126 ***	0.140 ***	-0.275 ***	0.671 ***	0.367 ***	-0.016	0.092 **	0.034	0.01
Circular(1000m)	0.059 **	0.060 ***	0.012 ***	-0.090 ***	0.539 ***	0.006 *	0.330 ***	0.112	0.245 ***	0.295 ***	-0.143 ***	0.122 ***	-0.295 ***	0.650 ***	0.377 ***	-0.011	0.086 **	0.011	0.03
Circular(1200m)	0.048 *	0.072 ***	0.009 ***	-0.084 ***	0.613 ***	0.004	0.361 ***	0.058	0.261 ***	0.281 ***	-0.162 ***	0.115 ***	-0.292 ***	0.651 ***	0.370 ***	-0.007	0.072 *	0.01	0.02
Thiessen (200m)	0.059 **	0.010 **	0.025 ***	-0.182 ***	0.181 **	0.004	0.465 ***	-0.373 ***	0.035	0.176 **	-0.063 **	0.251 ***	-0.120 **	0.563 ***	0.330 ***	-0.014	0.138 ***	0.086 ***	0.03
Thiessen (400m)	0.077 ***	0.027 ***	0.022 ***	-0.138 ***	0.322 ***	0.01	0.253 ***	0.162 *	0.013	0.287 ***	-0.096 ***	0.182 ***	-0.230 ***	0.684 ***	0.346 ***	-0.029	0.143 ***	0.076 ***	0.02
Thiessen (600m)	0.090 ***	0.036 ***	0.019 ***	-0.126 ***	0.342 ***	0.009 *	0.235 ***	0.157 *	0.159 **	0.270 ***	-0.118 ***	0.140 ***	-0.227 ***	0.662 ***	0.341 ***	-0.038	0.106 ***	0.064 **	0.02

Thiessen (800m)	0.097 ***	0.043 ***	0.017 ***	-0.118 ***	0.377 ***	0.007	0.229 ***	0.146	0.279 ***	0.236 ***	-0.150 ***	0.111 ***	-0.219 ***	0.625 ***	0.341 ***	-0.024	0.086 **	0.042	0.02
Thiessen (1000m)	0.098 ***	0.050 ***	0.016 ***	-0.115 ***	0.435 ***	0.002	0.243 ***	0.097	0.251 ***	0.207 ***	-0.182 ***	0.105 ***	-0.227 ***	0.624 ***	0.325 ***	-0.009	0.055	0.036	0.02
Thiessen (1200m)	-0.005	0.037 ***	0.027 ***	-0.074 ***	0.669 ***	0.017 **	0.339 ***	0.392 ***	0.285 ***	0.172 ***	-0.323 ***	0.191 ***	-0.187 *	0.771 ***	0.270 ***	0.023	0.198 ***	0.037	0.02
Network(200m)	0.037 *	0.020 ***	0.026 ***	-0.144 ***	0.323 ***	0.018 **	0.263 ***	0.215 **	-0.03	0.089 ***	-0.266 ***	0.233 ***	-0.076	0.705 ***	0.342 ***	-0.007	0.166 ***	0.074 **	0.02
Network(400m)	0.048 *	0.022 ***	0.023 ***	-0.135 ***	0.386 ***	0.021*	0.310 ***	0.207 *	0.012	0.101 ***	-0.270 ***	0.217 ***	-0.061	0.708 ***	0.349 ***	-0.004	0.157 ***	0.082 ***	0.01
Network(600m)	0.047 *	0.026 ***	0.024 ***	-0.123 ***	0.417 ***	-0.084 ***	0.329 ***	0.217 **	0.108 *	0.105 ***	-0.285 ***	0.193 ***	-0.084	0.708 ***	0.333 ***	0.005	0.137 ***	0.074 ***	0.01
Network(800m)	0.042 *	0.027 ***	0.023 ***	-0.108 ***	0.454 ***	-0.021	0.331 ***	0.244 **	0.223 ***	0.118 ***	-0.291 ***	0.177 ***	-0.084	0.700 ***	0.322 ***	0.009	0.116 ***	0.063 **	0.02
Network(1000m)	0.056 **	0.027 ***	0.021 ***	-0.108 ***	0.467 ***	-0.108 ***	0.320 ***	0.226 **	0.189 ***	0.102 ***	-0.283 ***	0.190 ***	-0.053	0.684 ***	0.333 ***	0.008	0.089 **	0.054 **	0.02
Network(1200m)	0.133 ***	0.060 ***	0.014 ***	-0.119 ***	0.509 ***	0.001	0.262 ***	0.06	0.058 *	0.214 ***	-0.166 ***	0.121 ***	-0.209 ***	0.621 ***	0.325 ***	-0.007	0.033	0.029	0.03

Note: Coefficients with * are significant at $p < 0.05$. Coefficients with ** are significant at $p < 0.01$. Coefficients with *** are significant at $p < 0.001$

Table A8-4. HLM regression performances for active mode around Rail stations

Models	RMSE	MAE	R2
Block group	11.27	7.93	0.53
Circular(200m)	8.82	6.45	0.66
Circular(400m)	7.88	5.86	0.7
Circular(600m)	7.08	5.24	0.74
Circular(800m)	7.03	5.23	0.74
Circular(1000m)	5.86	4.38	0.79
Circular(1200m)	6.41	4.76	0.77
Thiessen (200m)	9.57	7.06	0.6
Thiessen (400m)	8.28	6.14	0.68
Thiessen (600m)	7.92	5.83	0.7
Thiessen (800m)	7.68	5.58	0.7
Thiessen (1000m)	7.51	5.38	0.71
Thiessen (1200m)	7.49	5.31	0.71
Network(200m)	9.02	6.66	0.64
Network(400m)	8.25	6.12	0.68
Network(600m)	7.59	5.64	0.72
Network(800m)	6.72	5.05	0.75
Network(1000m)	5.45	4.06	0.8
Network(1200m)	8.37	6.11	0.69

Table A8-5. HLM regression results for public mode around BRT stations

Unit	Residential_ density	Emp_ density	Job_ perhouse	CBD	Entropy	Block	Intersect_ density	Road_ density	Stations	Jobs45auto	Jobs45transit	Transit Service	Low Salary	Nocar	Degree	Over64	Under20	Race	Gender
Block group	0.34	0.22	-0.019	-0.100 *	0.03	-0.004	0.232 ***	-0.678 ***	0.003	-0.126	0.041	0.139 **	0.041	0.515 ***	-0.047	0.06	-0.052	-0.346 ***	0.009
Circular(200m)	0.014	0.085**	-0.019 *	-0.087 *	0.178	-0.001	0.073	-0.554 ***	0.038	-0.135	0.023	0.192 ***	0.143 *	0.597 ***	0.001	0.087	-0.112	-0.281 ***	0.014
Circular(400m)	0.063	0.087**	-0.023 **	-0.081 *	0.141	-0.001	0.06	-0.534 ***	0.001	-0.089	0.082	0.220 ***	0.143 *	0.616 ***	-0.054	0.104 *	-0.074	-0.237 ***	0.014
Circular(600m)	0.074 *	0.106**	-0.022 **	-0.074 *	0.126	-0.002	0.057	-0.487 ***	0.036	-0.032	0.112 *	0.251 ***	0.181 **	0.637 ***	-0.052	0.134 **	-0.045	-0.223 ***	0.004
Circular(800m)	0.066	0.149**	-0.025 **	-0.055	0.095	-0.001	0.12	-0.491 ***	0.033	-0.021	0.085 *	0.271 ***	0.179 **	0.655 ***	-0.033	0.145 **	-0.014	-0.198 ***	-0.004
Circular(1000m)	0.062	0.198**	-0.031 ***	-0.039	0.116	-0.014	0.15	-0.393 **	0.125	-0.073	0.03	0.295 ***	0.157 *	0.659 ***	-0.016	0.161 ***	0.008	-0.129 **	0.009
Circular(1200m)	0.052	0.227**	-0.032 ***	-0.029	0.194 *	-0.029 **	0.123	-0.304 *	0.166	-0.11	0.017	0.295 ***	0.148 *	0.668 ***	0.003	0.148 ***	-0.023	-0.097 *	-0.004
Thiessen (200m)	0.005	0.071**	0.014	-0.092 *	0.05	-0.002	-0.025	-0.199	0.107	-0.092	0.016	0.091 *	0.052	0.442 ***	-0.055	0.144 **	-0.025	-0.349 ***	0.021
Thiessen (400m)	0.059	0.067**	-0.014	-0.061	0.083	-0.009	0.111	-0.484 ***	0.013	-0.002	0.108 *	0.196 ***	0.14	0.601 ***	-0.013	0.119 *	-0.001	-0.207 ***	0.021
Thiessen (600m)	0.085 *	0.064**	-0.012	-0.064	0.064	-0.011	0.102	-0.387 **	0.021	-0.055	0.134 *	0.224 ***	0.149 *	0.604 ***	0.003	0.107 *	0.04	-0.200 ***	0.014
Thiessen (800m)	0.083 **	0.070**	-0.01	-0.081 *	0.047	-0.026 *	0.114	-0.366 **	0.440**	-0.069	0.122 *	0.241 ***	0.154 *	0.636 ***	0.004	0.086	0.013	-0.163 **	-0.004
Thiessen (1000m)	0.068 *	0.071**	-0.01	-0.089 *	0.146	-0.052 ***	0.116	-0.382 ***	0.460**	-0.076	0.108	0.244 ***	0.183 *	0.676 ***	0.01	0.099 *	0.008	-0.150 **	-0.014
Thiessen (1200m)	0.058	0.076**	-0.011	-0.083 *	0.209	-0.042 ***	0.125 *	-0.364 **	0.710**	-0.118	0.098	0.258 ***	0.174 *	0.689 ***	0.027	0.081	-0.005	-0.137 **	-0.004
Network(200m)	0.019	0.094**	-0.015 *	-0.098 *	0.102	-0.008	0.098	-0.616 ***	0.038	-0.006	0.216	0.200 ***	0.109	0.577 ***	-0.015	0.092 *	-0.091	-0.286 ***	-0.004
Network(400m)	0.061	0.106**	-0.013 *	-0.090 *	0.118	-0.008	0.115	-0.640 ***	0.003	-0.056	0.179	0.237 ***	0.107	0.588 ***	-0.054	0.097 *	-0.081	-0.262 ***	0.004
Network(600m)	0.088 *	0.119**	-0.015 *	-0.086 *	0.131	-0.007	0.164 *	-0.676 ***	0.09	-0.075	0.131	0.259 ***	0.057	0.604 ***	-0.075	0.108 *	-0.072	-0.245 ***	0.004
Network(800m)	0.102 **	0.130**	-0.019 **	-0.074 *	0.134	-0.003	0.209 **	-0.733 ***	0.007	-0.072	0.125	0.257 ***	0.127	0.581 ***	-0.05	0.121 **	-0.076	-0.277 ***	-0.004
Network(1000m)	0.090 **	0.131**	-0.014 *	-0.079 **	0.122	-0.001	0.203 **	-0.670 ***	0.043	-0.063	0.115	0.245 ***	0.089	0.564 ***	-0.043	0.104 *	-0.078	-0.285 ***	-0.004
Network(1200m)	0.109	0.216**	-0.029 **	-0.091 *	0.253	-0.001	0.19	-0.789 ***	0.071	-0.083	0.267	0.309 ***	0.312	0.682 ***	-0.009	0.169 ***	-0.061	-0.240 ***	0.004

Note: Coefficients with * are significant at p<0.05. Coefficients with ** are significant at p<0.01. Coefficients with *** are significant at p<0.001

Table A8-6. HLM regression performances for public mode around BRT stations

Models	RMSE	MAE	R2
Block group	12.62	8.8	0.41
Circular(200m)	10.95	7.39	0.49
Circular(400m)	10.36	7.03	0.51
Circular(600m)	9.66	6.59	0.53
Circular(800m)	8.82	6.05	0.58
Circular(1000m)	7.99	5.67	0.64
Circular(1200m)	9.82	6.7	0.59
Thiessen (200m)	11.67	7.91	0.44
Thiessen (400m)	10.76	7.31	0.49
Thiessen (600m)	10.29	7.08	0.51
Thiessen (800m)	10.02	6.99	0.52
Thiessen (1000m)	9.83	6.94	0.54
Thiessen (1200m)	9.43	6.67	0.56
Network(200m)	11.35	7.61	0.45
Network(400m)	10.98	7.43	0.47
Network(600m)	10.43	7.1	0.48
Network(800m)	7.26	5.3	0.69
Network(1000m)	10.09	6.82	0.49
Network(1200m)	9.93	6.66	0.48

Table A8-7. HLM regression results for public mode around Rail stations

Unit	Residential_ density	Emp_ density	Job_ perhouse	CBD	Entropy	Block	Intersect_ density	Road_ density	Stations	Jobs45auto	Jobs45transit	Transit service	Low Salary	Nocar	Degree	Over64	Under20	Race	G
Block group	0.012	0.031	0.04	-0.040 ***	0.162 ***	-0.003	0.005	-0.086 *	0.01	-0.255 ***	0.053 ***	0.104 ***	0.062 ***	0.246 ***	0.085 ***	-0.110 ***	-0.092 ***	-0.089 ***	0
Circular(200m)	0.011	0.010 ***	0.01	-0.031 **	0.294 ***	-0.006 *	-0.033	-0.087 *	0.01	-0.243 ***	0.042 ***	0.122 ***	0.115 ***	0.357 ***	0.187 ***	-0.130 ***	-0.034 *	-0.065 ***	0
Circular(400m)	0.034 **	0.017 ***	0.001	-0.025 **	0.258 ***	-0.007 *	-0.042 *	-0.07	0.019	-0.256 ***	0.04**	0.117 ***	0.171 ***	0.412 ***	0.213 ***	-0.131 ***	-0.02	-0.066 ***	0
Circular(600m)	0.047 ***	0.023 ***	0.001	-0.030 ***	0.297 ***	-0.006 *	-0.021	-0.086	0.085 **	-0.291 ***	-0.031 **	0.106 ***	0.186 ***	0.434 ***	0.214 ***	-0.121 ***	-0.014	-0.054 ***	0
Circular(800m)	0.056 ***	0.025 ***	0.002	-0.036 ***	0.295 ***	-0.002	-0.008	-0.084	0.156 ***	-0.312 ***	0.022 *	0.097 ***	0.224 ***	0.457 ***	0.231 ***	-0.124 ***	-0.008	-0.054 ***	0
Circular(1000m)	0.068 ***	0.032 ***	0.003	-0.040 ***	0.279 ***	0.003	-0.002	-0.066	0.201 ***	-0.328 ***	-0.015	0.083 ***	0.273 ***	0.493 ***	0.233 ***	-0.132 ***	0.01	-0.038 ***	0
Circular(1200m)	0.068 ***	0.039 ***	0.003 *	-0.040 ***	0.268 ***	0.004 **	0.004	-0.051	0.231 ***	-0.340 ***	0.01	0.073 ***	0.306 ***	0.516 ***	0.236 ***	-0.136 ***	0.011	-0.034 ***	0
Thiessen (200m)	0.012	0.008 ***	0.002	-0.047 ***	0.105 **	-0.003	-0.025	0.003	0.013	-0.247 ***	0.043 ***	0.123 ***	0.078 ***	0.255 ***	0.132 ***	-0.109 ***	-0.017	-0.076 ***	0
Thiessen (400m)	0.033 **	0.015 ***	0.001	-0.025 * ***	0.234 ***	-0.007 *	-0.037	-0.068	0.034	-0.266 ***	0.046 ***	0.108 ***	0.145 ***	0.397 ***	0.212 ***	-0.107 ***	-0.011	-0.065 ***	0
Thiessen (600m)	0.041 ***	0.019 ***	0.001	-0.032 **	0.232 ***	-0.005	-0.032	-0.052	0.146 ***	-0.275 ***	-0.225	0.089 ***	0.147 ***	0.422 ***	0.213 ***	-0.096 ***	-0.004	-0.055 ***	0

Thiessen (800m)	0.043 ***	0.022 ***	0.002	-0.034 ***	0.222 ***	-0.008	-0.028	-0.026	0.234 ***	-0.290 ***	-0.004	0.074 ***	0.170 ***	0.448 ***	0.222 ***	-0.090 ***	0.014	-0.045 ***	0
Thiessen (1000m)	0.040 ***	0.025 ***	0.002	-0.036 ***	0.205 ***	0.003	-0.044 *	0.036	0.255 ***	-0.292 ***	0.018	0.065 ***	0.190 ***	0.455 ***	0.227 ***	-0.093 ***	0.025	-0.037 **	0
Thiessen (1200m)	0.081 ***	0.035 ***	0.001	-0.028 **	0.244 ***	0.004 **	-0.061 **	0.058	0.016	-0.313 ***	0.091	0.087 ***	0.201 ***	0.470 ***	0.223 ***	-0.085 ***	0.051 **	-0.028 *	0
Network(200m)	0.002	0.010 ***	-0.002	-0.033 **	0.239 ***	-0.010 **	-0.029	-0.081	0.013	--0.045 ***	0.224 ***	0.129 ***	0.123 **	0.312 ***	0.208 ***	-0.145 ***	-0.052 **	-0.073 ***	0
Network(400m)	0.014	0.013 ***	-0.002	-0.031 ***	0.297 ***	-0.010 ***	-0.029	-0.079	0.016	--0.044 ***	0.225 ***	0.121 ***	0.103 *	0.336 ***	0.214 ***	-0.153 ***	-0.048 **	-0.077 ***	0
Network(600m)	0.019	0.016 ***	-0.001	-0.036 ***	0.332 ***	-0.009 **	-0.018	-0.093 *	0.073 **	--0.039 ***	0.235 ***	0.114 ***	0.114 **	0.350 ***	0.221 ***	-0.159 ***	-0.047 **	-0.071 ***	0
Network(800m)	0.021	0.015 ***	0.006	-0.044 ***	0.357 ***	-0.009 **	-0.008	-0.107 *	0.139 ***	--0.031 **	0.246 ***	0.107 ***	0.123 **	0.353 ***	0.226 ***	-0.166 ***	-0.056 **	-0.068 ***	0
Network(1000m)	0.029 **	0.015 ***	0.007	-0.051 ***	0.365 ***	-0.007 **	-0.011	-0.114 *	0.066 ***	--0.037 ***	0.240 ***	0.117 ***	0.111 **	0.334 ***	0.223 ***	-0.179 ***	-0.053 **	-0.068 ***	0
Network(1200m)	0.022	0.020 ***	-0.001	-0.038 ***	0.456 ***	-0.009 *	-0.009	-0.085	0.193 ***	0.02	0.289 ***	0.112 ***	0.065	0.365 ***	0.204 ***	-0.119 ***	-0.072 ***	-0.064 ***	0

Note: Coefficients with * are significant at p<0.05. Coefficients with ** are significant at p<0.01. Coefficients with *** are significant at p<0.001

Table A8-8. HLM regression results for public mode around Rail stations

Models	RMSE	MAE	R2
Block group	19.73	15.1	0.28
Circular(200m)	17.2	13.34	0.38
Circular(400m)	16.18	12.67	0.41
Circular(600m)	15.24	12.03	0.44
Circular(800m)	14.43	11.41	0.46
Circular(1000m)	13.72	10.88	0.49
Circular(1200m)	14.44	11.79	0.47
Thiessen (200m)	18.89	14.74	0.26
Thiessen (400m)	16.61	12.95	0.39
Thiessen (600m)	15.82	12.35	0.41
Thiessen (800m)	14.99	11.69	0.44
Thiessen (1000m)	14.44	11.23	0.46
Thiessen (1200m)	14.06	10.83	0.48
Network(200m)	18.7	14.52	0.28
Network(400m)	17.96	14.08	0.29
Network(600m)	17.47	13.77	0.3
Network(800m)	17.05	13.45	0.31
Network(1000m)	13.02	10.38	0.51
Network(1200m)	17.26	13.51	0.27

Table A8-9. HLM regression results for private vehicles around BRT stations

Unit	Residential_density	Emp_density	Job_perhouse	CBD	Entropy	Block	Intersect_density	Road_density	Stations	Jobs45auto	Jobs45transit	Transit service	Low Salary	Nocar	Degree	Over64	Under20	Race	G
Block group	-0.14	0.213	0.023	0.007	-0.052	0.007	-0.01	-0.035	-0.012	0.038	0.030 *	-0.040 ***	0.021	-0.168 ***	-0.149 ***	0.028 *	-0.047 **	0.026	-0.001
Circular(200m)	-0.014	-0.008	-0.011 ***	0.004	0.072 *	0.005	-0.077 ***	-0.023	-0.013	0.049	0.021	-0.025 *	0.021	-0.167 ***	-0.124 ***	0.085 ***	0.045 **	0.065 ***	0.001
Circular(400m)	-0.012	-0.012 *	-0.013 ***	-0.005	0.05	0.004	-0.087 ***	-0.009	-0.027	-0.054	0.023	-0.017	0.043 *	-0.194 ***	-0.156 ***	0.085 ***	0.036 *	0.059 ***	0.001
Circular(600m)	-0.009	-0.015 **	-0.015 ***	-0.004	0.060 *	0.001	-0.089 ***	-0.017	-0.042	0.043	0.016	-0.011	0.044 **	-0.197 ***	-0.177 ***	0.085 ***	0.033 *	0.057 ***	0.001
Circular(800m)	-0.006	--0.012 ***	-0.016 ***	-0.001	0.065 **	-0.006 *	-0.078 ***	-0.055	-0.057 *	0.032	0.009	-0.004	0.037 *	-0.197 ***	-0.178 ***	0.096 ***	0.045 **	0.040 ***	0.001
Circular(1000m)	-0.012	-0.020 ***	-0.016 ***	-0.002	0.073 **	0.014 ***	-0.082 ***	-0.069 *	-0.057 *	0.024	0.004	-0.003	0.026	-0.183 ***	-0.177 ***	0.104 ***	0.060 ***	0.032 ***	0.001
Circular(1200m)	-0.013	-0.020 ***	-0.016 ***	-0.002	0.086 ***	0.016 ***	-0.098 ***	-0.047	-0.038	0.02	0.004	-0.007	0.02	-0.178 ***	-0.167 ***	0.110 ***	0.081 ***	0.019 *	0.001
Thiessen (200m)	0.019 *	-0.019 **	-0.004	0.016	0.109 **	0.007	-0.106 ***	0.024	-0.046 **	0.05	-0.009	-0.038 ***	0.008	-0.129 ***	-0.109 ***	0.073 ***	0.050 **	0.088 ***	0.001
Thiessen (400m)	-0.008	-0.012 *	-0.012 ***	0.004	0.056	0.003	-0.078 ***	-0.055	-0.034	0.038	0.013	-0.015	0.049 *	-0.166 ***	-0.146 ***	0.082 ***	0.033 *	0.064 ***	0.001
Thiessen (600m)	-0.001	--0.016 ***	-0.012 ***	0.007	0.051	-0.001	-0.078 ***	-0.063 *	-0.067 *	0.019	0.007	-0.008	0.051 **	-0.162 ***	-0.146 ***	0.082 ***	0.039 *	0.066 ***	0.001
Thiessen (800m)	0.003	--0.016 ***	-0.011 ***	0.014	0.044	-0.007 *	-0.084 ***	-0.054	-0.074 *	0.003	0.003	-0.009	0.048 **	-0.158 ***	-0.137 ***	0.085 ***	0.054 ***	0.062 ***	0.001
Thiessen (1000m)	0.004	-0.014 ***	-0.010 ***	0.014	0.054 *	0.012 ***	-0.088 ***	-0.046	-0.075 *	0.002	0.007	-0.01	0.043 *	-0.154 ***	-0.126 ***	0.080 ***	0.066 ***	0.047 ***	0.001
Thiessen (1200m)	0.008	--0.012 ***	-0.009 ***	0.016	0.051	0.011 ***	-0.090 ***	-0.04	-0.077 *	0.007	0.005	-0.013	0.050 **	-0.151 ***	-0.122 ***	0.076 ***	0.073 ***	0.046 ***	0.001
Network(200m)	-0.011	-0.008	-0.012 ***	0.009	0.046	0.004	-0.081 ***	0.003	-0.016	0.016	-0.04	-0.021	0.015	-0.172 ***	-0.109 ***	0.087 ***	0.056 **	0.064 ***	0.001
Network(400m)	-0.007	-0.01	-0.011 ***	0.008	0.049	0.003	-0.076 ***	0.001	-0.044 *	0.02	-0.048	-0.02	-0.028	-0.192 ***	-0.135 ***	0.088 ***	0.059 ***	0.061 ***	0.001
Network(600m)	-0.008	-0.013 *	-0.011 ***	0.007	0.055 *	0.003	-0.075 ***	-0.007	-0.066 *	0.026 *	-0.053	-0.022 *	-0.079 *	-0.205 ***	-0.182 ***	0.082 ***	0.049 **	0.049 ***	0.001
Network(800m)	-0.014	-0.014 **	-0.012 ***	0.009	0.046	0.003	-0.068 ***	-0.017	-0.073 *	0.029 **	-0.046	-0.023 *	-0.100 **	-0.203 ***	-0.204 ***	0.077 ***	0.033 *	0.041 ***	0.001
Network(1000m)	-0.017 *	-0.013 **	-0.010 ***	0.007	0.034	0.003	-0.057 **	-0.034	-0.073 *	0.030 **	-0.04	-0.023 **	-0.092 **	-0.188 ***	-0.213 ***	0.089 ***	0.039 **	0.041 ***	0.001
Network(1200m)	-0.018	-0.004	-0.023 ***	0.001	0.06	0.001	-0.119 ***	-0.002	-0.014	0.022	-0.037	-0.017	-0.063	-0.246 ***	-0.140 ***	0.067 ***	0.036 *	0.046 **	0.001

Note: Coefficients with * are significant at p<0.05. Coefficients with ** are significant at p<0.01. Coefficients with *** are significant at p<0.001

Table A8-10. HLM regression performances for private vehicles around BRT stations

Models	RMSE	MAE	R2
Block group	16.08	13.05	0.6
Circular(200m)	13.98	11.03	0.68
Circular(400m)	12.5	9.83	0.73
Circular(600m)	11.35	8.86	0.77
Circular(800m)	10.66	8.15	0.79

Circular(1000m)	10.22	7.7	0.8
Circular(1200m)	10.75	8.43	0.78
Thiessen (200m)	15.19	12.31	0.63
Thiessen (400m)	13.65	10.67	0.69
Thiessen (600m)	13.07	10.08	0.7
Thiessen (800m)	13.06	9.82	0.7
Thiessen (1000m)	13.21	9.88	0.71
Thiessen (1200m)	13.47	10.05	0.7
Network(200m)	13.98	11	0.69
Network(400m)	12.73	9.93	0.73
Network(600m)	11.51	9.02	0.77
Network(800m)	10.1	8.36	0.78
Network(1000m)	12.36	9.72	0.75
Network(1200m)	10.19	7.6	0.8

Table A8-11. HLM regression results for private vehicles around Rail stations

Unit	Residential_ density	Emp_ density	Job_ perhouse	CBD	Entropy	Block	Intersect_ density	Road_ density	Stations	Jobs45auto	Jobs45transit	Transit service	Low Salary	Nocar	Degree	Over64	Under20	R
Block group	-0.021	0.059	-0.07	0.087 ***	0.028	0.003	-0.042 ***	-0.058 *	-0.003	0.088 ***	-0.046 ***	-0.028 ***	0.019	-0.300 ***	-0.174 ***	0.052 ***	-0.015	-
Circular(200m)	-0.051 ***	-0.002	-0.007 ***	0.083 ***	0.108 ***	0.011**	-0.106 ***	0.008	-0.015	0.062 **	-0.050 ***	-0.041 ***	0.052 ***	-0.250 ***	-0.068 ***	0.132 ***	0.113 ***	-
Circular(400m)	-0.056 ***	-0.001	-0.006 ***	0.080 ***	0.115 ***	0.012**	-0.115 ***	0.015	-0.023	-0.035	-0.054 ***	-0.042 ***	0.075 ***	-0.250 ***	-0.075 ***	0.150 ***	0.132 ***	0
Circular(600m)	-0.060 ***	-0.001	-0.005 ***	0.075 ***	0.126 ***	0.012**	-0.130 ***	0.043	-0.042 *	-0.019	-0.050 ***	-0.045 ***	0.089 ***	-0.240 ***	-0.079 ***	0.165 ***	0.159 ***	0
Circular(800m)	-0.065 ***	-0.002	-0.004 ***	0.073 ***	0.126 ***	0.011**	-0.132 ***	0.06	-0.062 **	-0.009	-0.047 ***	-0.048 ***	0.111 ***	-0.228 ***	-0.087 ***	0.178 ***	0.176 ***	0
Circular(1000m)	-0.066 ***	-0.003	-0.003 **	0.069 ***	0.127 ***	0.008**	-0.128 ***	0.066 *	-0.082 ***	0.002	-0.042 ***	-0.048 ***	0.134 ***	-0.225 ***	-0.083 ***	0.185 ***	0.191 ***	0
Circular(1200m)	-0.065 ***	-0.002	-0.002 *	0.065 ***	0.127 ***	0.005**	-0.127 ***	0.077 **	-0.092 ***	0.015	-0.038 ***	-0.048 ***	0.153 ***	-0.224 ***	-0.088 ***	0.190 ***	0.201 ***	0
Thiessen (200m)	-0.065 ***	-0.1	-0.006 ***	0.098 ***	0.046 *	0.006	-0.132 ***	0.037	-0.008	0.079 ***	-0.047 ***	-0.048 ***	0.067 ***	-0.178 ***	-0.037 *	0.130 ***	0.112 ***	0
Thiessen (400m)	-0.058 ***	-0.001	-0.006 ***	0.088 ***	0.087 ***	0.011**	-0.095 ***	-0.011	-0.025	-0.033	-0.050 ***	-0.043 ***	0.079 ***	-0.229 ***	-0.054 ***	0.154 ***	0.137 ***	0
Thiessen (600m)	-0.059 ***	-0.001	-0.004 ***	0.083 ***	0.098 ***	0.009**	-0.103 ***	0.002	-0.026	-0.015	-0.045 ***	-0.047 ***	0.096 ***	-0.210 ***	-0.043 **	0.158 ***	0.159 ***	0
Thiessen (800m)	-0.059 ***	-0.21	-0.004 **	0.082 ***	0.099 ***	0.008**	-0.099 ***	0.004	-0.02	0.03	-0.043 ***	-0.048 ***	0.108 ***	-0.195 ***	-0.042 **	0.165 ***	0.174 ***	0
Thiessen (1000m)	-0.055 ***	0.002	-0.003 **	0.081 ***	0.091 ***	0.006**	-0.094 ***	0.002	-0.011	0.016	-0.038 ***	-0.047 ***	0.117 ***	-0.183 ***	-0.034 *	0.168 ***	0.187 ***	0
Thiessen (1200m)	-0.051 ***	0.004	-0.002 *	0.076 ***	0.096 ***	0.004**	-0.094 ***	0.005	-0.005	0.026	-0.037 ***	-0.049 ***	0.123 ***	-0.185 ***	-0.036 **	0.168 ***	0.193 ***	0

Network(200m)	-0.051 ***	-0.002	-0.006 ***	0.080 ***	0.077 ***	0.012**	-0.110 ***	0.014	-0.012	0.049 ***	-0.067 **	-0.042 ***	-0.069 *	-0.260 ***	-0.099 ***	0.139 ***	0.124 ***	-
Network(400m)	-0.050 ***	-0.001	-0.006 ***	0.075 ***	0.087 ***	0.013**	-0.106 ***	0.011	-0.022	0.055 ***	-0.060 **	-0.041 ***	-0.091 **	-0.279 ***	-0.128 ***	0.146 ***	0.132 ***	0
Network(600m)	-0.054 ***	-0.21	-0.007 ***	0.071 ***	0.078 ***	0.012**	-0.116 ***	0.027	-0.039 *	0.055 ***	-0.054 **	-0.040 ***	-0.096 ***	-0.285 ***	-0.138 ***	0.150 ***	0.144 ***	0
Network(800m)	-0.055 ***	-0.001	-0.006 ***	0.067 ***	0.071 ***	0.014**	-0.122 ***	0.049	-0.056 **	0.055 ***	-0.054 **	-0.041 ***	-0.103 ***	-0.289 ***	-0.147 ***	0.154 ***	0.157 ***	0
Network(1000m)	-0.050 ***	-0.001	-0.006 ***	0.065 ***	0.077 ***	0.015**	-0.109 ***	0.053	-0.025	0.055 ***	-0.051 **	-0.030 ***	-0.112 ***	-0.270 ***	-0.158 ***	0.163 ***	0.168 ***	0
Network(1200m)	-0.065 ***	-0.002	-0.008 ***	0.064 ***	0.081 **	0.011**	-0.121 ***	-0.017	-0.059 *	0.071 ***	-0.065 **	-0.048 ***	0.027	-0.312 ***	-0.070 ***	0.120 ***	0.111 ***	0

Note: Coefficients with * are significant at $p < 0.05$. Coefficients with ** are significant at $p < 0.01$. Coefficients with *** are significant at $p < 0.001$

Table A8-12. HLM regression performances for private vehicles around Rail stations

Models	RMSE	MAE	R2
Block group	18.42	15.23	0.58
Circular(200m)	19.69	16.13	0.5
Circular(400m)	19.75	16.1	0.48
Circular(600m)	19.66	15.83	0.48
Circular(800m)	19.51	15.54	0.48
Circular(1000m)	19.42	15.36	0.48
Circular(1200m)	19.32	15.15	0.48
Thiessen (200m)	21.02	17.34	0.44
Thiessen (400m)	20.46	16.69	0.45
Thiessen (600m)	20.75	16.69	0.43
Thiessen (800m)	21	16.7	0.42
Thiessen (1000m)	21.31	16.81	0.44
Thiessen (1200m)	21.36	16.81	0.44
Network(200m)	19.63	16.06	0.51
Network(400m)	19.03	15.54	0.53
Network(600m)	18.6	15.18	0.54
Network(800m)	18.22	14.83	0.55
Network(1000m)	18.18	14.74	0.54
Network(1200m)	18.27	14.88	0.57