

Urban Land Development for Industrial and Commercial Use: A Case Study of Beijing

Chuanzhun Sun, Chao Sun, Zhenshan Yang, Jikang Zhang and Yu Deng

Table S1. All indicators selected in the article.

Indicators' Name	Code	Type of Variable	Statistics of the Variable			
			Min	Max	Mean	SD
Transportation accessibility indicators						
Distance to the urban center in 2000	X1	Continuous	0	193.22	51.75	48.01
Distance to the urban center in 2010	X2	Continuous	0	169.84	43.99	40.31
Distance to the CBD in 2000	X3	Continuous	0	191.13	47.91	45.90
Distance to the CBD in 2010	X4	Continuous	0	164.37	40.65	38.21
Distance to the employment center in 2000	X5	Continuous	0	186.63	41.30	41.84
Distance to the employment center in 2010	X6	Continuous	0	164.37	33.16	33.78
Distance to the industrial center in 2000	X7	Continuous	0	186.63	39.84	39.80
Distance to the industrial center in 2010	X8	Continuous	0	154.53	30.59	30.50
Distance to the subway station in 2000	X9	Continuous	0	174.47	62.46	34.75
Distance to the subway station in 2010	X10	Continuous	0	147.40	37.41	25.92
Distance to the expressway in 2000	X11	Continuous	0	154.79	35.99	29.42
Distance to the expressway in 2010	X12	Continuous	0	100.52	13.71	13.62
Distance changes from urban center (2000–2010)	X13	Continuous	-6.28	78.26	7.77	11.64
Distance changes from CBD (2000–2010)	X14	Continuous	-4.99	78.89	7.35	11.47
Distance changes from employment center (2000–2010)	X15	Continuous	-7.22	74.26	8.15	11.30
Distance changes from industrial center (2000–2010)	X16	Continuous	-7.41	79.39	9.25	12.62
Distance changes from subway station (2000–2010)	X17	Continuous	-4.5	91.13	25.03	19.32
Distance changes from expressway (2000–2010)	X18	Continuous	-0.07	114.44	22.25	23.92
Neighborhood indicators						
Construction land in neighborhood	X19	Continuous	0	1	0.42	0.32
Forest land in neighborhood	X20	Continuous	0	1	0.33	0.28
Agriculture land in the neighborhood	X21	Continuous	0	1	0.11	0.18
Water area in neighborhood	X22	Continuous	0	1	0.06	0.13
Natural indicators						
DEM	X23	Continuous	-126	1234	53.62	88.05
Urban planning indicator						
Urban planning control	X24	Binary				
Economic and social indicators						
Population in 2000	X25	Continuous	2542	215,532	47,221	32,033
Population in 2010	X26	Continuous	5000	359,400	88,742	57,245
Population growth during 2000–2010	X27	Continuous	-0.63	8.36	1.09	1.16
Number of enterprises (2000)	X28	Continuous	123	6140	1132	951.62
Number of industrial enterprises (2000)	X29	Continuous	10	1021	168	164.94
Number of service enterprises (2000)	X30	Continuous	46	5895	967	919.99
Number of enterprises (2010)	X31	Continuous	179	8917	1719	1401.38
Number of industrial enterprises (2010)	X32	Continuous	10	1461	190	227.52
Number of service enterprises (2010)	X33	Continuous	82	8683	1528	1357.71
Change rater of enterprises (2000–2010)	X34	Continuous	-0.14	1.87	0.53	0.30
Change rater of industrial enterprises (2000–2010)	X35	Continuous	-0.59	0.91	0.06	0.23
Change rater of service enterprises (2000–2010)	X36	Continuous	-0.05	2.00	0.65	0.35

Table S2. Result of the correlation analysis of the population indicators.

		X25	X26	X27
X25	Pearson Correlation	1	0.531 **	-0.143 **
	Sig. (2-tailed)		0.000	0.000
	N	2678	2678	2678
X26	Pearson Correlation	0.531 **	1	0.655 **
	Sig. (2-tailed)	0.000		0.000
	N	2678	2678	2678
X27	Pearson Correlation	-0.143 **	0.655 **	1
	Sig. (2-tailed)	0.000	0.000	
	N	2678	2678	2678

Note: ** the correlation is significant at the 0.01 level (2-tailed).

Table S3. Results of the correlation analysis of economic and employment indicators.

	X28	X29	X30	X31	X32	X33	X34	X35	X36
X28	Pearson Correlation	1	0.626 **	0.913 **	0.975 **	0.582 **	0.938 **	0.249 **	0.165 **
	Sig. (2-tailed)		0.000	0.000	0.000	0.000	0.000	0.000	0.000
	N	2678	2678	2678	2678	2678	2678	2678	2678
X29	Pearson Correlation	0.626 **	1	0.256 **	0.662 **	0.983 **	0.378 **	0.290 **	0.476 **
	Sig. (2-tailed)	0.000		0.000	0.000	0.000	0.000	0.000	0.000
	N	2678	2678	2678	2678	2678	2678	2678	2678
X30	Pearson Correlation	0.913 **	0.256 **	1	0.862 **	0.207 **	0.966 **	0.158 **	-0.059 **
	Sig. (2-tailed)	0.000	0.0000		0.000	0.000	0.000	0.002	0.765
	N	2678	2678	2678	2678	2678	2678	2678	2678
X31	Pearson Correlation	0.975 **	0.662 **	0.862 **	1	0.645 **	0.941 **	0.431 **	0.308 **
	Sig. (2-tailed)	0.000	0.000	0.000		0.000	0.000	0.000	0.000
	N	2678	2678	2678	2678	2678	2678	2678	2678
X32	Pearson Correlation	0.582 **	0.983 **	0.207 **	0.645 **	1	0.350 **	0.384 **	0.601 **
	Sig. (2-tailed)	0.000	0.000	0.000	0.000		0.000	0.000	0.000
	N	2678	2678	2678	2678	2678	2678	2678	2678
X33	Pearson Correlation	0.938 **	0.378 **	0.966 **	0.941 **	0.350 **	1	0.359 **	0.112 **
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000		0.000	0.000
	N	2678	2678	2678	2678	2678	2678	2678	2678
X34	Pearson Correlation	0.249 **	0.290 **	0.158 **	0.431 **	0.384 **	0.359 **	1	0.711 **
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000		0.000
	N	2678	2678	2678	2678	2678	2678	2678	2678
X35	Pearson Correlation	0.165 **	0.476 **	-0.059 **	0.308 **	0.601 **	0.112 **	0.711 **	1
	Sig. (2-tailed)	0.000	0.000	0.002	0.000	0.000	0.000	0.000	
	N	2678	2678	2678	2678	2678	2678	2678	2678
X36	Pearson Correlation	0.213 **	0.481 **	0.006	0.384 **	0.566 **	0.221 **	0.907 **	0.757 **
	Sig. (2-tailed)	0.000	0.000	0.765	0.000	0.000	0.000	0.000	
	N	2678	2678	2678	2678	2678	2678	2678	2678

Note: ** the correlation is significant at the 0.01 level (2-tailed).