Appendix

In this appendix we present the complete estimation results for the models relating different definitions of access to physical activity (in Table 1) and to obesity (in Table 2). In each case we also present a base model with no accessibility statistics for comparison.

Table 1: Estimated Effect of Accessibility on Physical Activity Rates

	No Access	Size and Distance	Tweets	Attributes	10-min walk
(Intercept)	−24.5190*	−24.9755*	−24.5288*	−25.0214*	−24.7176*
	[−41.5947; −7.4433]	[−41.8947; −8.0564]	[−41.4197; −7.6380]	[−41.9710; −8.0719]	[−41.7891; −7.6461]
log(Density)	0.1740*	0.1775*	0.1761*	0.1764*	0.1686*
	[0.0348; 0.3132]	[0.0384; 0.3166]	[0.0371; 0.3152]	[0.0373; 0.3155]	[0.0293; 0.3079]
log(Income)	5.9786*	5.9985*	5.9929*	5.9966*	5.9767*
	[5.5540; 6.4032]	[5.5746; 6.4224]	[5.5693; 6.4164]	[5.5725; 6.4208]	[5.5523; 6.4011]
Fulltime	0.1283*	0.1275*	0.1274*	0.1275*	0.1285*
	[0.1098; 0.1468]	[0.1090; 0.1460]	[0.1089; 0.1458]	[0.1090; 0.1460]	[0.1100; 0.1470]
College-educated	0.0075	0.0076	0.0078	0.0073	0.0083
	[−0.0159; 0.0310]	[−0.0158; 0.0309]	[−0.0155; 0.0312]	[−0.0161; 0.0306]	[−0.0152; 0.0317]
Single Adults	−0.0363*	−0.0362*	−0.0364*	−0.0361*	−0.0366*
	[−0.0527; −0.0198]	[−0.0526; −0.0198]	[−0.0527; −0.0200]	[−0.0525; −0.0197]	[−0.0530; −0.0201]
Youth (0-17)	−0.1306*	−0.1310*	−0.1313*	−0.1309*	−0.1311*
	[−0.1572; −0.1040]	[−0.1576; −0.1045]	[−0.1579; −0.1048]	[−0.1575; −0.1044]	[−0.1577; −0.1045]
Young adults (18-34)	0.0283*	0.0295*	0.0295*	0.0294*	0.0281*
	[0.0081; 0.0484]	[0.0094; 0.0496]	[0.0094; 0.0496]	[0.0093; 0.0496]	[0.0079; 0.0482]
Seniors (65+)	0.0430*	0.0403*	0.0397*	0.0408*	0.0427*
	[0.0157; 0.0704]	[0.0130; 0.0677]	[0.0123; 0.0671]	[0.0135; 0.0682]	[0.0153; 0.0700]
Black population share	−0.0499*	−0.0499*	−0.0498*	−0.0498*	−0.0497*
	[−0.0587; −0.0412]	[−0.0586; −0.0411]	[−0.0586; −0.0411]	[−0.0585; −0.0410]	[−0.0584; −0.0409]
Asian population share	−0.0772*	−0.0767*	−0.0767*	−0.0768*	−0.0774*
	[−0.0877; −0.0666]	[−0.0873; −0.0662]	[−0.0872; −0.0662]	[−0.0874; −0.0663]	[−0.0879; −0.0669]
Hispanic population share	−0.1021*	−0.1025*	−0.1025*	−0.1025*	−0.1020*
	[−0.1112; −0.0929]	[−0.1116; −0.0934]	[−0.1117; −0.0934]	[−0.1116; −0.0934]	[−0.1111; −0.0928]
Other Minorities	0.0006	0.0037	0.0036	0.0038	−0.0005
	[−0.0882; 0.0894]	[−0.0849; 0.0923]	[−0.0850; 0.0922]	[−0.0849; 0.0924]	[−0.0893; 0.0883]
γ: log(Density)	1.1105*	1.0985*	1.0902*	1.1036*	1.0928*
	[0.7245; 1.4964]	[0.7155; 1.4815]	[0.7073; 1.4731]	[0.7202; 1.4870]	[0.7063; 1.4793]
γ: log(Income)	1.9269*	1.9742*	1.9565*	1.9651*	1.9189*
	[0.8913; 2.9625]	[0.9465; 3.0020]	[0.9303; 2.9827]	[0.9361; 2.9942]	[0.8836; 2.9541]
γ: Fulltime	−0.0360	−0.0397	−0.0402	−0.0388	−0.0363
	[−0.0835; 0.0115]	[−0.0869; 0.0076]	[−0.0874; 0.0070]	[−0.0860; 0.0085]	[−0.0837; 0.0112]
γ: College-educated	−0.0707*	−0.0710*	−0.0703*	−0.0720*	−0.0731*
	[−0.1307; −0.0107]	[−0.1305; −0.0115]	[−0.1298; −0.0109]	[−0.1316; −0.0124]	[−0.1332; −0.0131]
γ: Single Adults	−0.0081	−0.0082	−0.0088	−0.0074	−0.0076
	[−0.0506; 0.0344]	[−0.0504; 0.0339]	[−0.0509; 0.0333]	[−0.0497; 0.0348]	[−0.0501; 0.0348]
γ: Youth (0-17)	−0.0111	−0.0108	−0.0113	−0.0097	−0.0120
	[−0.0806; 0.0585]	[−0.0798; 0.0583]	[−0.0803; 0.0577]	[−0.0789; 0.0594]	[−0.0815; 0.0575]
γ: Young adults (18-34)	0.0806*	0.0842*	0.0843*	0.0847*	0.0801*
	[0.0296; 0.1317]	[0.0335; 0.1349]	[0.0337; 0.1350]	[0.0339; 0.1355]	[0.0291; 0.1311]
γ: Seniors (65+)	0.0625	0.0590	0.0572	0.0605	0.0623
	[−0.0071; 0.1322]	[−0.0102; 0.1282]	[−0.0120; 0.1265]	[−0.0088; 0.1297]	[−0.0073; 0.1319]
γ: Black population share	0.0006	0.0010	0.0012	0.0008	0.0006
	[−0.0157; 0.0168]	[−0.0151; 0.0172]	[−0.0149; 0.0173]	[−0.0154; 0.0169]	[−0.0157; 0.0168]
γ: Asian population share	−0.0410*	−0.0397*	−0.0395*	−0.0400*	−0.0409*
	[−0.0597; −0.0223]	[−0.0583; −0.0210]	[−0.0581; −0.0209]	[−0.0587; −0.0214]	[−0.0596; −0.0222]
γ: Hispanic population share	0.0009	−0.0010	−0.0012	−0.0009	0.0008
	[−0.0164; 0.0182]	[−0.0182; 0.0162]	[−0.0184; 0.0160]	[−0.0181; 0.0163]	[−0.0165; 0.0181]
γ: Other Minorities	0.0656	0.0726	0.0715	0.0718	0.0716
	[−0.1926; 0.3239]	[−0.1845; 0.3297]	[−0.1854; 0.3285]	[−0.1856; 0.3291]	[−0.1866; 0.3299]
λ: spatial correlation	0.6985*	0.6905*	0.6896*	0.6917*	0.6987*
	[0.6600; 0.7370]	[0.6513; 0.7296]	[0.6504; 0.7288]	[0.6526; 0.7307]	[0.6602; 0.7372]
Size and Distance		0.1596*			
		[0.0266; 0.2925]			
Tweets			0.1776*		
			[0.0398; 0.3155]		
Attributes				0.1434*	
				[0.0070; 0.2799]	
10-min walk					0.5865
					[−0.1778; 1.3508]
Num. obs.	2099	2099	2099	2099	2099
Parameters	27	28	28	28	28
Log Likelihood	−4438.0569	−4435.3869	−4434.9873	−4436.0034	−4436.9264

* 0 outside the confidence interval. 95% confidence interval in brackets.

Table 2: Estimated Effect of Accessibility on Physical Activity Rates

	No Access	Size and Distance	Twitter	Amenities	10-Minute Walk
(Intercept)	71.6539*	71.8133*	71.7479*	71.8241*	71.7182*
	[61.1144; 82.1933]	[61.2812; 82.3455]	[61.2185; 82.2773]	[61.2874; 82.3609]	[61.1846; 82.2518]
log(Density)	−0.0294	−0.0312	−0.0310	−0.0311	−0.0266
	[−0.1037; 0.0448]	[−0.1055; 0.0431]	[−0.1053; 0.0433]	[−0.1054; 0.0432]	[−0.1009; 0.0478]
log(Income)	−0.4849*	−0.4920*	−0.4916*	−0.4923*	−0.4861*
	[−0.7612; −0.2085]	[−0.7685; −0.2154]	[−0.7681; −0.2151]	[−0.7689; −0.2157]	[−0.7623; −0.2098]
Fulltime	−0.0137*	−0.0137*	−0.0137*	−0.0136*	−0.0139*
	[−0.0244; −0.0031]	[−0.0244; −0.0030]	[−0.0244; −0.0030]	[−0.0243; −0.0030]	[−0.0246; −0.0032]
College-educated	0.0343*	0.0343*	0.0342*	0.0343*	0.0340*
	[0.0211; 0.0474]	[0.0211; 0.0474]	[0.0211; 0.0474]	[0.0212; 0.0475]	[0.0208; 0.0471]
Single Adults	0.0010	0.0010	0.0010	0.0010	0.0012
	[−0.0082; 0.0103]	[−0.0082; 0.0103]	[−0.0082; 0.0103]	[−0.0083; 0.0102]	[−0.0081; 0.0104]
Youth (0-17)	0.0051	0.0052	0.0053	0.0052	0.0054
	[−0.0099; 0.0201]	[−0.0098; 0.0202]	[−0.0097; 0.0202]	[−0.0098; 0.0202]	[−0.0096; 0.0204]
Young adults (18-34)	−0.0095	−0.0098	−0.0098	−0.0098	−0.0094
	[−0.0206; 0.0016]	[−0.0209; 0.0013]	[−0.0209; 0.0013]	[−0.0210; 0.0013]	[−0.0205; 0.0017]
Seniors (65+)	−0.0826*	−0.0820*	−0.0819*	−0.0820*	−0.0825*
	[−0.0977; −0.0675]	[−0.0972; −0.0669]	[−0.0971; −0.0667]	[−0.0972; −0.0669]	[−0.0976; −0.0673]
Black population share	0.0462*	0.0462*	0.0462*	0.0462*	0.0461*
	[0.0414; 0.0511]	[0.0414; 0.0511]	[0.0414; 0.0511]	[0.0413; 0.0510]	[0.0413; 0.0510]
Asian population share	−0.1010*	−0.1010*	−0.1010*	−0.1010*	−0.1009*
	[−0.1069; −0.0950]	[−0.1070; −0.0951]	[−0.1070; −0.0951]	[−0.1070; −0.0951]	[−0.1068; −0.0949]
Hispanic population share	−0.0062*	−0.0061*	−0.0061*	−0.0061*	−0.0062*
	[−0.0118; −0.0007]	[−0.0116; −0.0006]	[−0.0116; −0.0005]	[−0.0116; −0.0006]	[−0.0117; −0.0007]
Other Minorities	−0.0642*	−0.0648*	−0.0648*	−0.0649*	−0.0637*
	[−0.1127; −0.0156]	[−0.1133; −0.0162]	[−0.1133; −0.0163]	[−0.1134; −0.0164]	[−0.1122; −0.0151]
Physical Activity Rate	−0.5545*	−0.5570*	−0.5565*	−0.5575*	−0.5445*
	[−0.7908; −0.3182]	[−0.7932; −0.3209]	[−0.7926; −0.3204]	[−0.7937; −0.3212]	[−0.7812; −0.3079]
γ: log(Density)	−0.0863	−0.1059	−0.1057	−0.1046	−0.0783
	[−0.7966; 0.6240]	[−0.8165; 0.6047]	[−0.8161; 0.6048]	[−0.8152; 0.6061]	[−0.7883; 0.6317]
γ: log(Income)	−0.0118	−0.0115	−0.0114	−0.0116	−0.0116
	[−0.0404; 0.0169]	[−0.0401; 0.0172]	[−0.0401; 0.0172]	[−0.0402; 0.0171]	[−0.0402; 0.0171]
γ: Fulltime	0.0698*	0.0698*	0.0697*	0.0699*	0.0710*
	[0.0334; 0.1062]	[0.0334; 0.1062]	[0.0333; 0.1061]	[0.0335; 0.1063]	[0.0346; 0.1075]
γ: College-educated	−0.0114	−0.0114	−0.0113	−0.0115	−0.0117
	[−0.0368; 0.0140]	[−0.0368; 0.0140]	[−0.0367; 0.0141]	[−0.0369; 0.0139]	[−0.0371; 0.0137]
γ: Single Adults	−0.0330	−0.0331	−0.0329	−0.0333	−0.0326
	[−0.0748; 0.0088]	[−0.0749; 0.0087]	[−0.0747; 0.0089]	[−0.0751; 0.0085]	[−0.0744; 0.0092]
γ: Youth (0-17)	−0.0238	−0.0248	−0.0248	−0.0250	−0.0235
	[−0.0545; 0.0069]	[−0.0555; 0.0059]	[−0.0555; 0.0059]	[−0.0557; 0.0058]	[−0.0542; 0.0071]
γ: Young adults (18-34)	−0.0222	−0.0217	−0.0213	−0.0218	−0.0222
	[−0.0629; 0.0185]	[−0.0624; 0.0190]	[−0.0620; 0.0194]	[−0.0625; 0.0189]	[−0.0628; 0.0185]
γ: Seniors (65+)	0.0186*	0.0186*	0.0186*	0.0186*	0.0185*
	[0.0080; 0.0292]	[0.0080; 0.0292]	[0.0080; 0.0291]	[0.0080; 0.0292]	[0.0079; 0.0291]
γ: Black population share	−0.0460*	−0.0462*	−0.0462*	−0.0462*	−0.0461*
	[−0.0594; −0.0325]	[−0.0597; −0.0328]	[−0.0597; −0.0328]	[−0.0597; −0.0328]	[−0.0595; −0.0327]
γ: Asian population share	0.0257*	0.0264*	0.0264*	0.0264*	0.0258*
	[0.0129; 0.0386]	[0.0135; 0.0392]	[0.0136; 0.0393]	[0.0135; 0.0393]	[0.0130; 0.0386]
γ: Hispanic population share	0.0794	0.0785	0.0785	0.0786	0.0767
	[−0.0648; 0.2236]	[−0.0656; 0.2227]	[−0.0656; 0.2227]	[−0.0655; 0.2227]	[−0.0674; 0.2209]
γ: Other Minorities	−0.4807*	−0.4802*	−0.4801*	−0.4802*	−0.4803*
	[−0.5048; −0.4566]	[−0.5043; −0.4561]	[−0.5042; −0.4560]	[−0.5043; −0.4561]	[−0.5044; −0.4562]
γ: Physical Activity Rate	0.0180	0.0197	0.0201	0.0198	0.0173
	[−0.0397; 0.0757]	[−0.0380; 0.0775]	[−0.0376; 0.0779]	[−0.0380; 0.0775]	[−0.0404; 0.0750]
λ: spatial correlation	0.8363*	0.8356*	0.8356*	0.8359*	0.8361*
	[0.8101; 0.8625]	[0.8093; 0.8619]	[0.8093; 0.8619]	[0.8097; 0.8622]	[0.8099; 0.8624]
Size and Distance		−0.0387			
		[−0.1111; 0.0337]			
Tweets			−0.0419		
			[−0.1176; 0.0338]		
Attributes				−0.0412	
				[−0.1162; 0.0338]	
10-min walk					−0.2630
					[−0.6491; 0.1232]
Num. obs.	2099	2099	2099	2099	2099
Parameters	29	30	30	30	30
Log Likelihood	−3114.3931	−3113.8451	−3113.8061	−3113.8136	−3113.5028

* 0 outside the confidence interval. 95% confidence interval in brackets.

3