New Method 1

Table 1. Housing Project Areas Description

	All		City		Suburb	
	Const.	Unconst.	Const.	Unconst.	Const.	Unconst.
Number of Projects	96	266	55	165	41	101
Area (km2)	4.27	0.89	2.91	0.67	6.09	1.27
Median Construction Yr.	2006	2006	2005	2006	2006	2006
Delivered Houses	700	0	892	0	442	0
House Price in 1 km (R[†])	203,733	220,031	221,568	235,617	180,678	195,406
Distance to CBD[‡] (km)	31.1	28.8	23.2	21.1	41.7	41.3

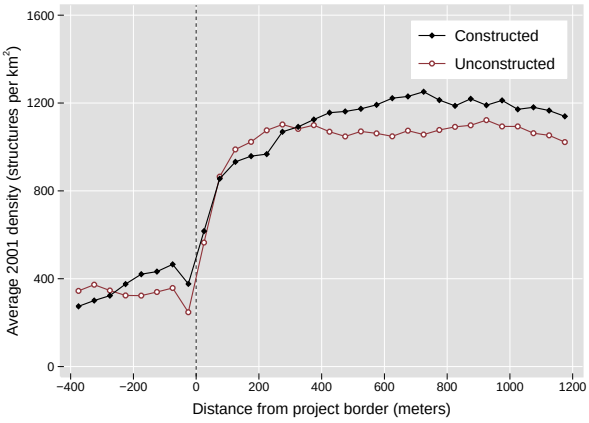
Const. refers to constructed projects and unconst. refers to unconstructed projects.
*Calculated from *expected* completion dates using Gauteng National Treasury budget reports.
† The USD averaged to about 7.70 Rands during the 2001-2011 period.
‡Measured as the average minimum distance with respect to Johannesburg and Pretoria CBDs.
City includes projects whose centroids are within 30.4 km of their nearest CBD.
Suburb includes projects whose centroids are further than 30.4 km from their nearest CBD.

Table 2. Dwelling Characteristics at Baseline from 2001 Census

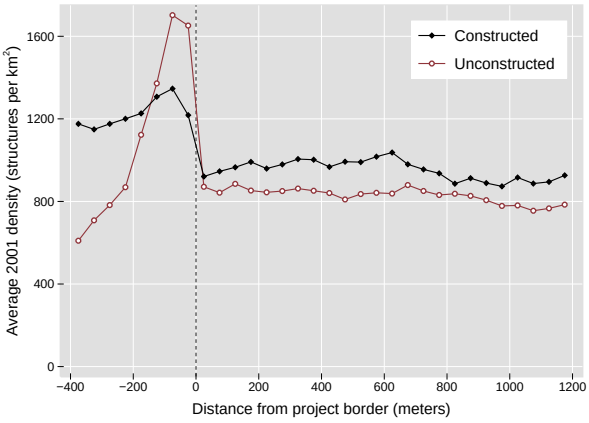
	Constructed	Unconstructed	All Small Areas
Flush Toilet	0.53	0.39	0.78
Piped Water in Home	0.12	0.21	0.41
Electricity for Cooking	0.32	0.34	0.70
Electricity for Heating	0.30	0.33	0.67
Electricity for Lighting	0.55	0.43	0.79
Number of Rooms	2.87	2.45	3.57
Household Size	3.51	2.96	3.47
N	1,308	546	8,356

"Constructed" and "Unconstructed" include census small-areas with over 30% area overlap with constructed and unconstructed projects respectively.
"All" includes all small areas.

Figure 1. Pre-Period Housing Densities in Constructed and Unconstructed projects

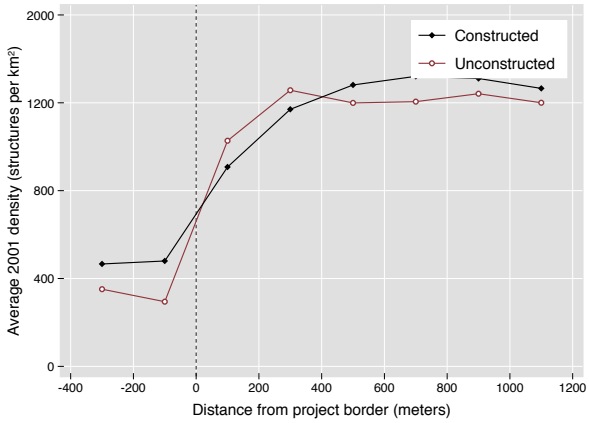


(a) pre-period formal housing density

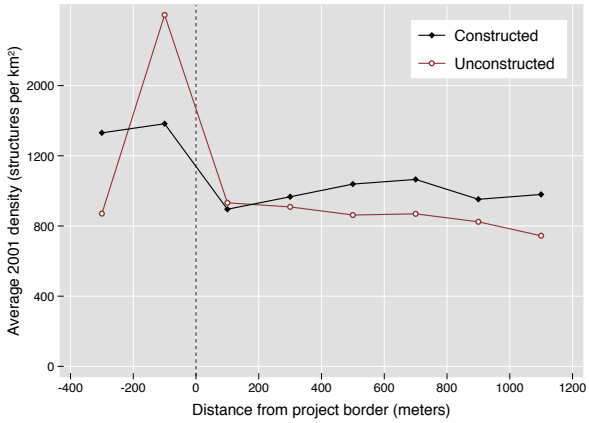


(b) pre-period informal housing density

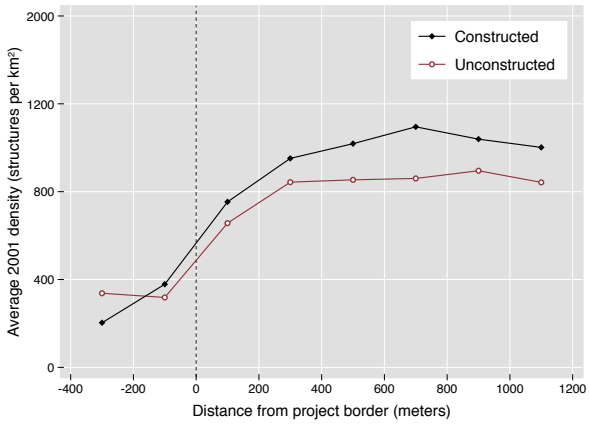
Figure 2. Pre-Period Housing Densities in Constructed and Unconstructed Projects: City versus Suburb



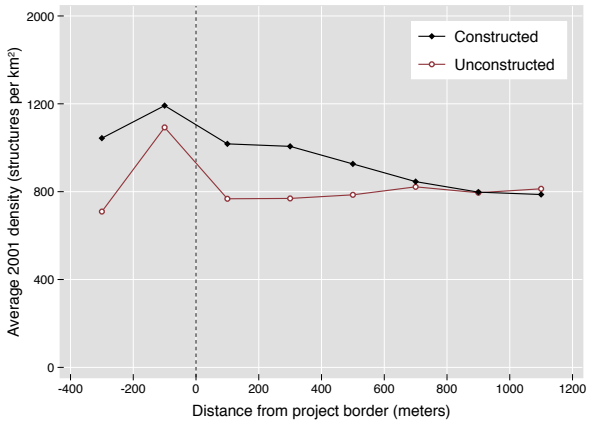
(a) City: formal density



(b) City: informal density



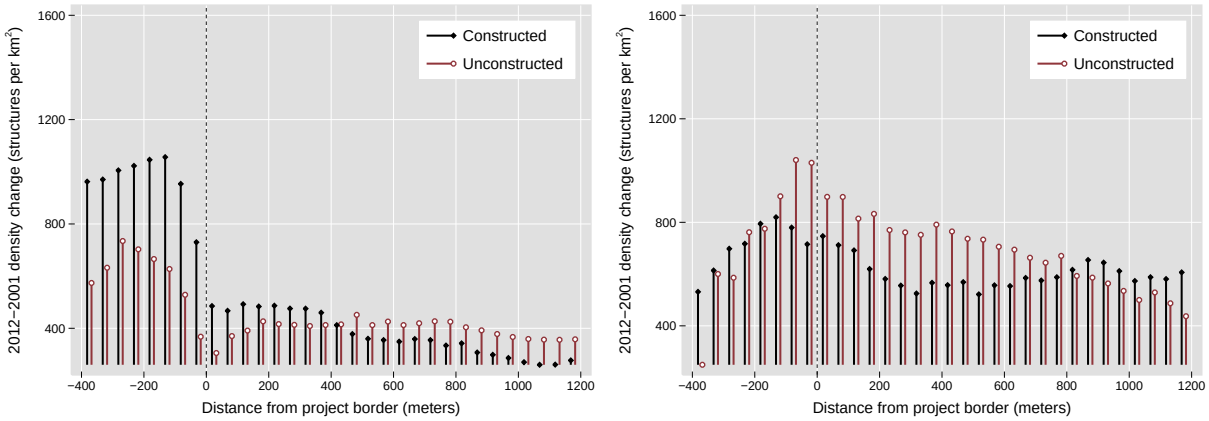
(c) Suburb: formal density



(d) Suburb: informal density

City includes areas within 30.4 km of a CBD and Suburb includes areas over 30.4 km away from a CBD.

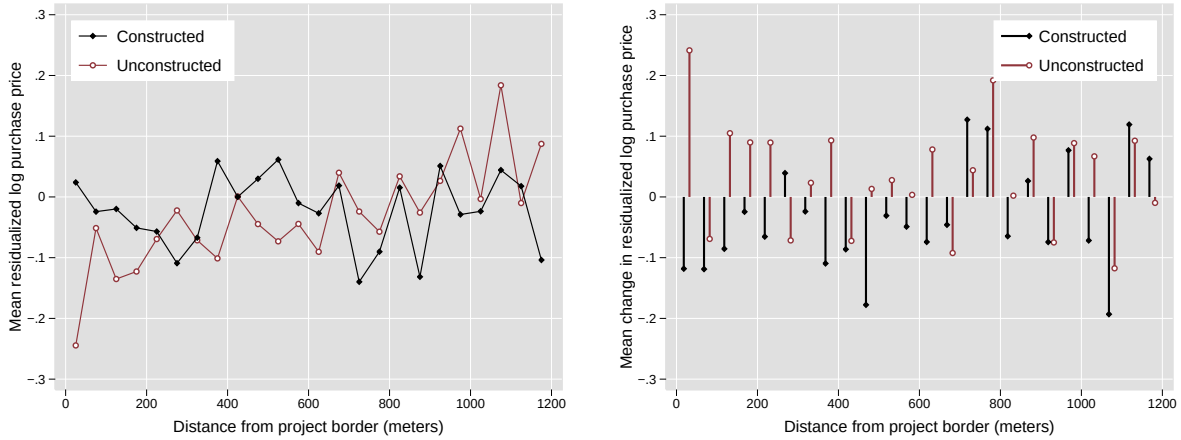
Figure 3. Housing Densities in Constructed and Unconstructed projects



(a) formal housing density change

(b) informal housing density change

Figure 4. House Prices outside Constructed and Unconstructed projects



(a) pre-period log-purchase prices

(b) change in log-purchase prices

Table 3. Effect of Housing Projects on Socio-demographics

	(1) Age	(2) P.O.B. not Gauteng	(3) Unemployed	(4) Years of Education	(5) Monthly Income
project × post × constr	0.190	-0.010	-0.012	0.188	-446.340
	(0.232)	(0.053)	(0.018)	(0.136)	(319.828)
project × post	0.532[a]	-0.067[a]	-0.100[a]	1.068[a]	50.409
	(0.186)	(0.023)	(0.011)	(0.095)	(206.902)
project × constr	-0.307	-0.119[a]	0.010	-0.410[b]	-245.452
	(0.409)	(0.044)	(0.017)	(0.160)	(413.115)
project	-1.571[a]	0.264[a]	0.116[a]	-1.017[a]	-1269.013[a]
	(0.228)	(0.025)	(0.010)	(0.092)	(208.173)
spillover × post × constr	0.769[a]	-0.028[c]	-0.061[a]	0.383[a]	-38.188
	(0.154)	(0.015)	(0.011)	(0.079)	(347.419)
spillover × post	0.764[a]	0.042[a]	-0.068[a]	0.896[a]	2072.268[a]
	(0.121)	(0.009)	(0.009)	(0.061)	(249.342)
spillover × constr	-0.720[b]	-0.009	0.064[a]	-0.453[a]	-732.421[a]
	(0.282)	(0.022)	(0.011)	(0.077)	(262.537)
p-val, h_0: project=spill.	0.014	0.689	0.000	0.101	0.210
Mean Outcome 2001	27.24	0.40	0.46	8.25	2,462.52
Mean Outcome 2011	28.33	0.43	0.33	9.69	4,595.41
R^2	0.467	0.555	0.353	0.549	0.455
# projects	380	380	380	380	380
N project areas	5,618	5,618	5,617	5,617	5,616
N spillover areas	10,768	10,762	10,761	10,763	10,758
N	16,386	16,380	16,378	16,380	16,374

Standard errors clustered at the project level in parenthesis. [c] p<0.10, [b] p<0.05, [a] p<0.01
P.O.B. means "place of birth." Monthly income is in Rands.

Table 4. Census Household-level Post × Constructed Coefficients: City Versus Suburb

	(1) Age	(2) P.O.B. not Gauteng	(3) Unemployed	(4) Years of Education	(5) Monthly Income
City × proj	0.251	0.056[b]	-0.025	0.251	-28.423
	(0.263)	(0.024)	(0.025)	(0.170)	(459.743)
City × spill	0.608[a]	-0.004	-0.049[a]	0.285[b]	-65.102
	(0.175)	(0.014)	(0.015)	(0.111)	(503.613)
Suburb × proj	0.149	-0.082	-0.001	0.175	-704.188[a]
	(0.413)	(0.099)	(0.023)	(0.183)	(266.141)
Suburb × spill	1.072[a]	-0.068[b]	-0.083[a]	0.574[a]	149.858
	(0.293)	(0.032)	(0.015)	(0.100)	(310.152)
p-val, h_0 City: proj = spill	0.182	0.007	0.171	0.831	0.945
p-val, h_0 Suburb: proj = spill	0.022	0.849	0.000	0.010	0.002
R^2	0.468	0.566	0.354	0.552	0.458
N City proj areas	3,122	3,122	3,121	3,121	3,120
N City spill areas	7,188	7,182	7,182	7,183	7,180
N Suburb proj areas	2,496	2,496	2,496	2,496	2,496
N Suburb spill areas	3,580	3,580	3,579	3,580	3,578

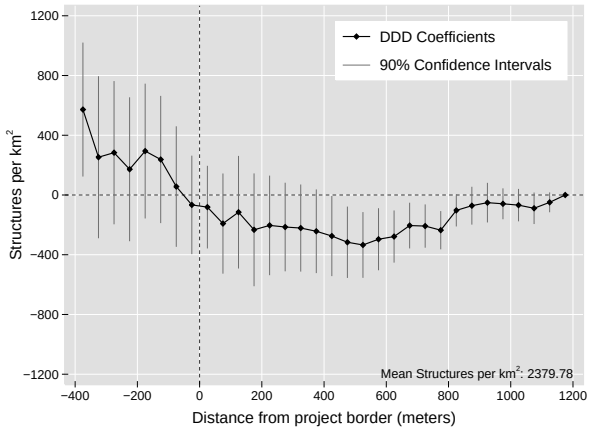
All difference-in-differences controls are included in the specification while only the interaction terms for Post × Constructed are shown. Standard errors clustered at the project level in parenthesis.
[c] p<0.10, [b] p<0.05, [a] p<0.01. P.O.B. means "place of birth." Monthly income is in Rands.

Table 5. Triple Difference Estimates

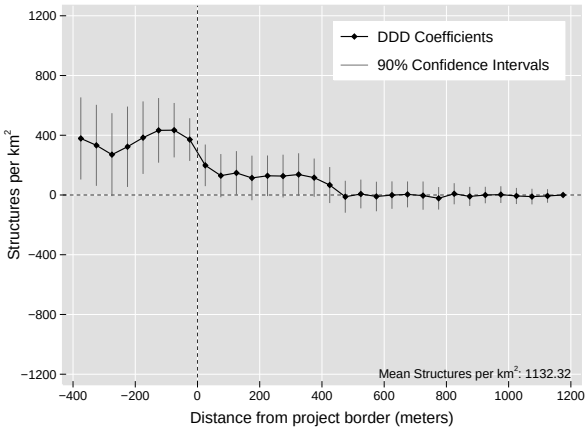
	(1) Total Housing	(2) Formal Housing	(3) Informal Housing	(4) Backyard Housing	(5) Non-Bkyrd Housing
-400m to 0m	304.65	410.31[a]	-105.66	557.86[a]	-663.53[a]
	(208.18)	(118.32)	(211.34)	(152.65)	(198.89)
0m to 400m	-21.76	119.63[b]	-141.38	-51.15	-90.24
	(142.70)	(57.52)	(142.68)	(103.21)	(89.56)
Mean dep. var.	2,379.78	1,132.32	1,247.46	636.53	610.94
# Projects	383	383	383	383	383
R^2	0.079	0.112	0.065	0.087	0.080
N	539,622	539,622	539,622	539,622	539,622

Standard errors clustered at the project level in parenthesis. [c] p<0.10,[b] p<0.05,[a] p<0.01

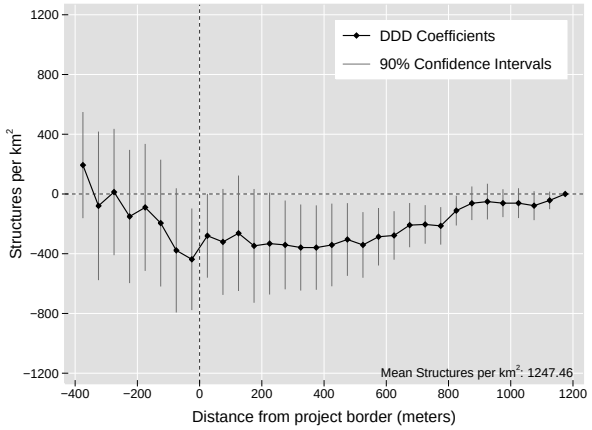
(a) Total Houses



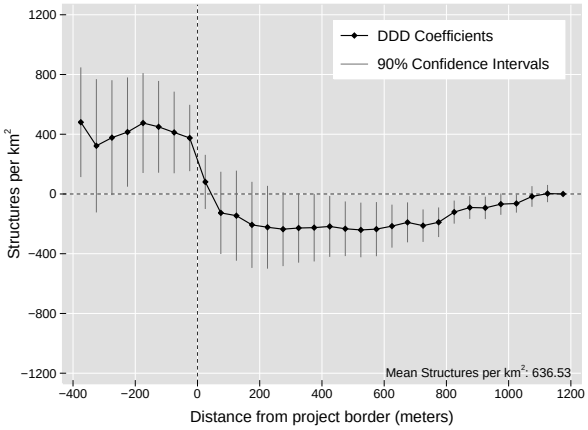
(b) Formal Houses



(c) Informal Houses



(d) Backyard Informal Houses



(e) Non-Backyard Informal Houses

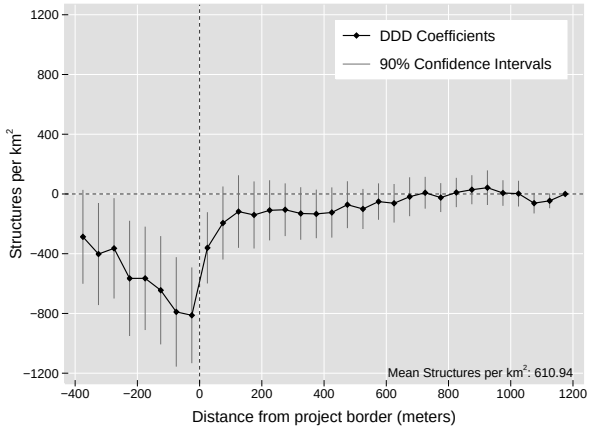
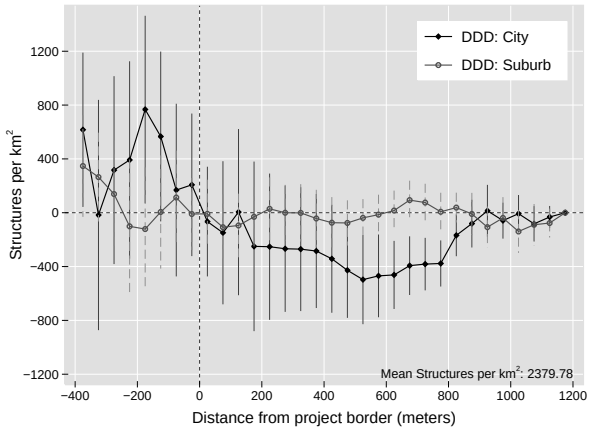
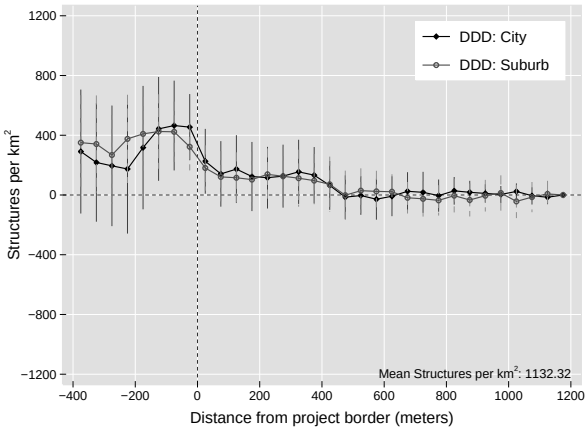


Figure 5. DDD coefficients (equation **??**) for fives types of housing densities.

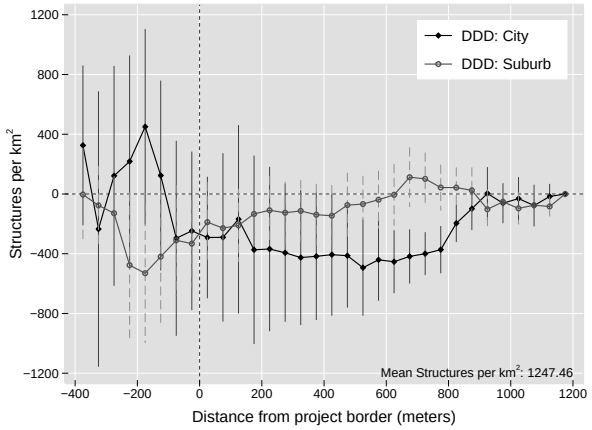
(a) Total Houses



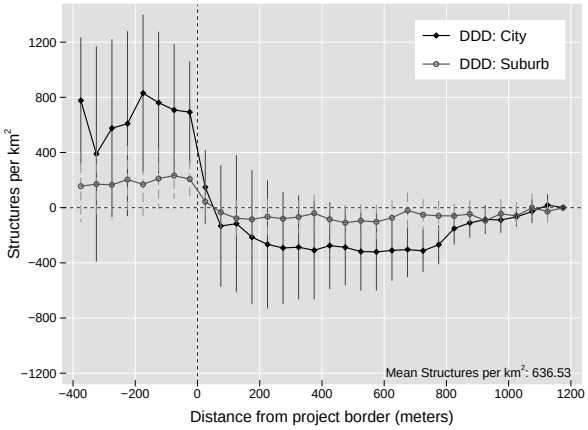
(b) Formal Houses



(c) Informal Houses



(d) Backyard Informal Houses



(e) Non-Backyard Informal Houses

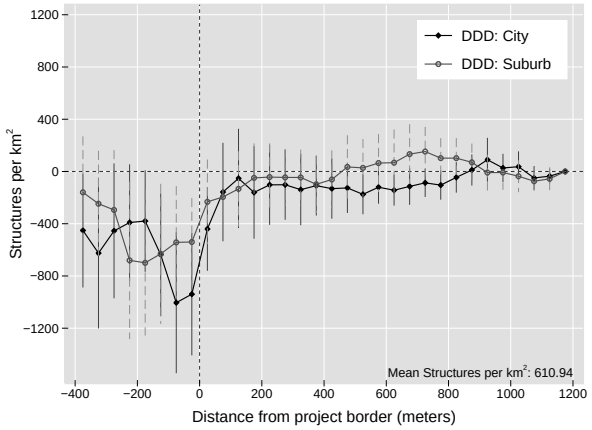


Figure 6. DDD coefficients (equation **??**) for fives types of housing densities.

Table 6. Triple Difference Estimates

	(1) Total Housing	(2) Formal Housing	(3) Informal Housing	(4) Backyard Housing	(5) Non-Bkyrd Housing
City -400m to 0m	605.90[b]	453.37[b]	152.53	926.18[a]	-773.65[a]
	(296.36)	(183.43)	(304.51)	(240.80)	(256.22)
City 0m to 400m	53.50	132.18	-78.68	-20.50	-58.18
	(226.32)	(90.12)	(228.23)	(167.21)	(141.41)
Suburb -400m to 0m	47.66	370.68[b]	-323.02	244.50[c]	-567.52[c]
	(194.60)	(146.09)	(233.97)	(124.51)	(294.95)
Suburb 0m to 400m	-20.83	93.19	-114.02	-26.17	-87.85
	(111.96)	(71.08)	(97.97)	(59.90)	(106.95)
Mean dep. var.	2,379.78	1,132.32	1,247.46	636.53	610.94
# Projects City	246	246	246	246	246
# Projects Suburb	159	159	159	159	159
R^2	0.119	0.127	0.098	0.118	0.093
N	539,622	539,622	539,622	539,622	539,622

"Near" is within 32 km from the CBD and "Far" is greater than 32km from the CBD.
Standard errors clustered at the project level in parenthesis. [c] p<0.10,[b] p<0.05,[a] p<0.01

Figure 7. Price Estimates over Distance from Project

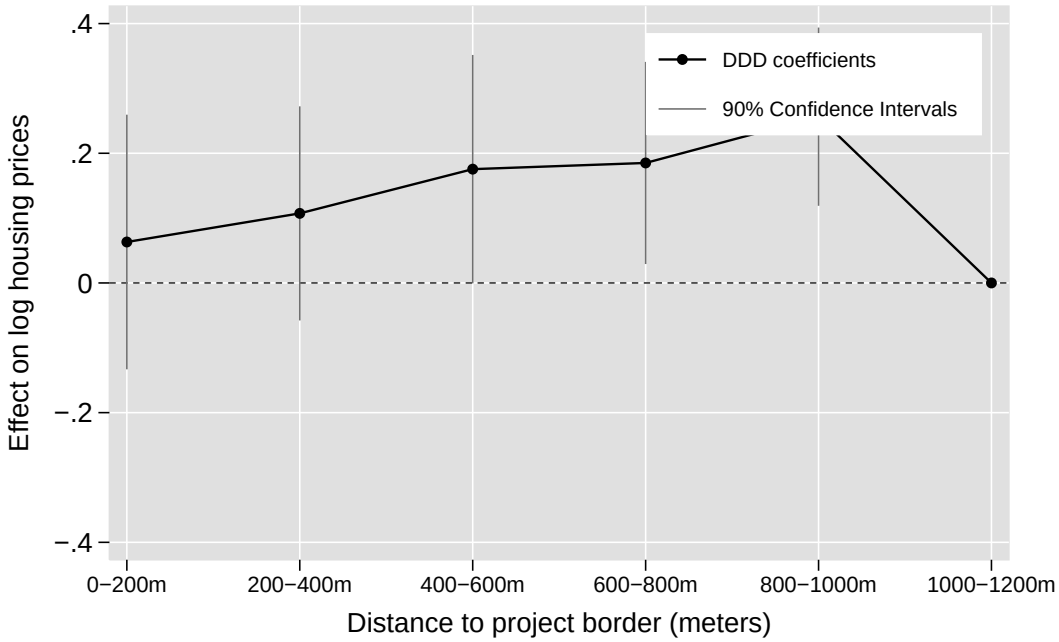


Figure 8. Price Estimates over Distance from Project Het

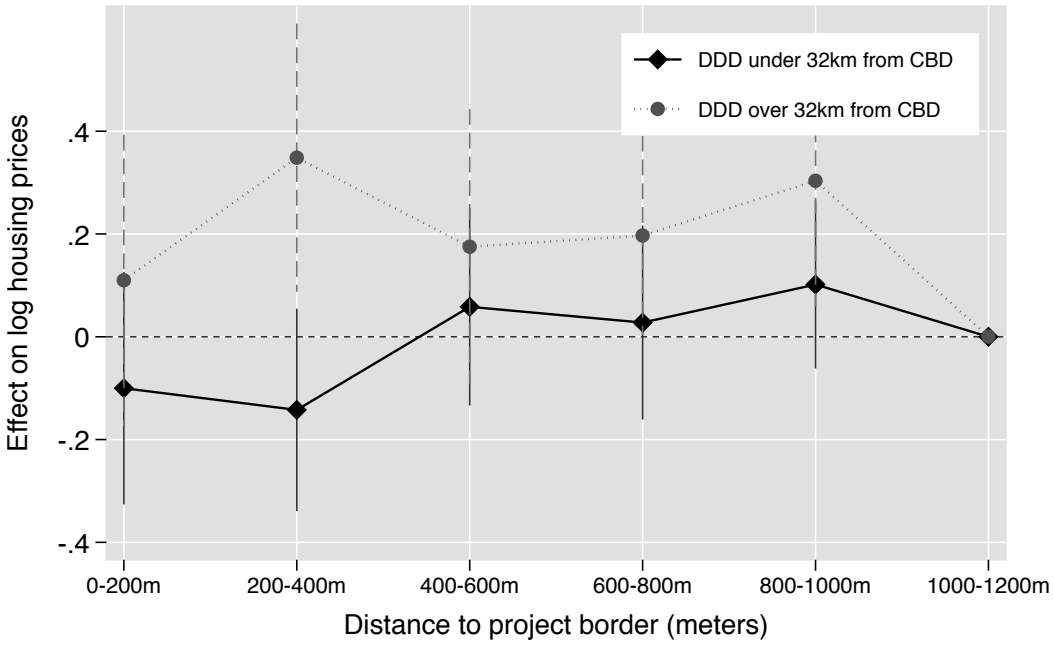


Table 7. Census Household-level Estimates

	(1) Flush Toilet	(2) Water Indoors	(3) Electricity Cooking	(4) Electricity Heating	(5) Electricity Lighting	(6) Number of Rooms	(7) Household Size	(8) Population Density
project × post × constr	0.111[b]	0.129[a]	0.245[a]	0.177[a]	0.087	-0.086	-0.266[a]	1217.345
	(0.052)	(0.035)	(0.057)	(0.048)	(0.059)	(0.128)	(0.085)	(854.664)
project × post	0.072[b]	0.042	0.157[a]	0.128[a]	0.123[a]	0.399[a]	0.071	1054.276[b]
	(0.030)	(0.027)	(0.040)	(0.036)	(0.041)	(0.083)	(0.045)	(499.205)
project × constr	0.137[c]	-0.098[c]	-0.006	0.001	0.106	0.415[b]	0.634[a]	-1711.880[c]
	(0.076)	(0.058)	(0.067)	(0.062)	(0.076)	(0.179)	(0.112)	(996.969)
project	-0.397[a]	-0.204[a]	-0.428[a]	-0.390[a]	-0.412[a]	-1.281[a]	-0.662[a]	2265.603[a]
	(0.047)	(0.038)	(0.039)	(0.039)	(0.049)	(0.095)	(0.075)	(696.914)
spillover × post × constr	0.065[a]	0.082[a]	0.096[a]	0.061[a]	0.025	0.153[a]	-0.132[a]	330.456
	(0.020)	(0.022)	(0.021)	(0.021)	(0.016)	(0.057)	(0.030)	(254.366)
spillover × post	-0.009	0.111[a]	0.035[b]	0.007	0.016	0.129[a]	-0.195[a]	649.224[a]
	(0.015)	(0.018)	(0.015)	(0.013)	(0.014)	(0.045)	(0.024)	(200.981)
spillover × constr	-0.030	-0.085[a]	-0.070[b]	-0.050[c]	-0.025	-0.161	0.186[a]	533.449
	(0.038)	(0.028)	(0.029)	(0.026)	(0.028)	(0.100)	(0.057)	(606.343)
p-val, h_0: project=spill.	0.403	0.221	0.004	0.012	0.265	0.059	0.100	0.296
Mean Outcome 2001	0.75	0.35	0.65	0.62	0.77	3.42	3.57	7,540.22
Mean Outcome 2011	0.80	0.53	0.81	0.71	0.83	3.66	3.22	8,927.99
R^2	0.452	0.392	0.448	0.400	0.399	0.442	0.488	0.404
# projects	380	380	380	380	380	380	380	380
N project areas	5,484	5,484	5,484	5,484	5,484	5,470	5,484	5,484
N spillover areas	10,906	10,906	10,906	10,906	10,906	10,890	10,905	10,909
N	16,390	16,390	16,390	16,390	16,390	16,360	16,389	16,393

All regressions include project Fixed-Effects. Standard errors clustered at the project level in parenthesis. [c] p<0.10,[b] p<0.05,[a] p<0.01

Table 8. Census Household-level Post × Constructed Coefficients: City Versus Suburb

	(1) Flush Toilet	(2) Water Indoors	(3) Electricity Cooking	(4) Electricity Heating	(5) Electricity Lighting	(6) Number of Rooms	(7) Household Size	(8) Population Density
City × proj	0.152[c]	0.095	0.340[a]	0.255[a]	0.185[b]	0.146	0.032	-510.659
	(0.083)	(0.065)	(0.085)	(0.072)	(0.085)	(0.214)	(0.164)	(2399.651)
City × spill	0.012	0.059	0.043	0.001	0.006	0.033	-0.165[a]	922.733[b]
	(0.031)	(0.036)	(0.031)	(0.029)	(0.027)	(0.079)	(0.039)	(457.035)
Suburb × proj	0.069	0.299[a]	0.115	0.043	-0.105	0.085	-0.237[a]	-64.835
	(0.089)	(0.060)	(0.135)	(0.122)	(0.137)	(0.166)	(0.085)	(859.985)
Suburb × spill	0.057	0.161[a]	0.168[b]	0.129[b]	0.029	0.142	-0.173[a]	-214.798
	(0.040)	(0.039)	(0.072)	(0.060)	(0.053)	(0.121)	(0.051)	(336.969)
p-val, City: proj = spill	0.136	0.601	0.001	0.001	0.044	0.646	0.228	0.569
p-val, Suburb: proj = spill	0.894	0.018	0.670	0.434	0.305	0.725	0.454	0.869
R^2	0.331	0.348	0.410	0.397	0.350	0.400	0.448	0.385
N City proj areas	2,303	2,303	2,303	2,303	2,303	2,299	2,303	2,303
N City spill areas	5,822	5,822	5,822	5,822	5,822	5,806	5,819	5,823
N Suburb proj areas	1,669	1,669	1,669	1,669	1,669	1,667	1,669	1,669
N Suburb spill areas	2,994	2,994	2,994	2,994	2,994	2,993	2,995	2,995

All difference-in-differences controls are included in the specification while only the interaction terms for Post × Constructed are shown.
All regressions include project Fixed-Effects. Standard errors clustered at the project level in parenthesis. [c] p<0.10,[b] p<0.05,[a] p<0.01

Table 9. Census Household-level Post × Constructed Coefficients: City Versus Suburb and Informal Versus Formal Housing

	Flush Toilet	Water Indoors	Electricity Cooking	Electricity Heating	Electricity Lighting	Number of Rooms	Household Size	Population Density
				Formal Houses				
City × proj	0.173[b]	0.180[b]	0.304[a]	0.212[a]	0.135	-0.082	-0.226	426.084
	(0.086)	(0.086)	(0.085)	(0.081)	(0.087)	(0.251)	(0.157)	(2128.344)
City × spill	0.051	0.084	-0.014	-0.092[a]	-0.055	0.133	-0.103[c]	934.966
	(0.036)	(0.058)	(0.044)	(0.035)	(0.037)	(0.101)	(0.056)	(621.831)
Suburb × proj	0.115	0.193[a]	0.204[b]	0.152[c]	0.014	-0.186	-0.185	-388.271
	(0.078)	(0.049)	(0.099)	(0.087)	(0.128)	(0.212)	(0.115)	(439.675)
Suburb × spill	0.024	0.110[b]	0.137[a]	0.095[a]	0.032	-0.006	-0.155[b]	-144.158
	(0.048)	(0.044)	(0.041)	(0.035)	(0.037)	(0.079)	(0.067)	(294.379)
				Informal Houses				
City × proj	0.164[b]	0.066	0.342[a]	0.236[a]	0.162[b]	-0.543[a]	-0.512[a]	377.278
	(0.069)	(0.055)	(0.081)	(0.062)	(0.072)	(0.146)	(0.106)	(2101.788)
City × spill	0.044	0.010	-0.016	-0.101[b]	-0.058	-0.111	-0.137[c]	1129.663[c]
	(0.042)	(0.036)	(0.055)	(0.040)	(0.046)	(0.110)	(0.077)	(620.636)
Suburb × proj	-0.044	0.139[a]	0.110	0.067	-0.100	-0.362[a]	-0.303[a]	-388.353
	(0.083)	(0.037)	(0.085)	(0.078)	(0.117)	(0.133)	(0.099)	(462.648)
Suburb × spill	0.020	0.095[a]	0.143[a]	0.118[a]	0.043	-0.025	-0.155[c]	-258.794
	(0.041)	(0.029)	(0.041)	(0.044)	(0.044)	(0.095)	(0.088)	(309.492)

All difference-in-differences controls are included in the specification while only the interaction terms for Post × Constructed are shown. All regressions include project Fixed-Effects. Standard errors clustered at the project level in parenthesis. [c] $p<0.10$,[b] $p<0.05$,[a] $p<0.01$