New Method 3

Table 1. Housing Project Areas Description

	All		City		Suburb	
	Const.	Unconst.	Const.	Unconst.	Const.	Unconst.
Number of Projects	123	96	67	62	56	34
Area (km2)	2.04	1.40	1.99	1.26	2.09	1.66
Median Construction Yr.	2006	2007	2005	2007	2006	2007
Delivered Houses	406	0	518	0	271	0
House Price in 1 km (R[†])	199,858	250,088	205,508	274,823	193,284	207,165
Distance to CBD[‡] (km)	31.6	27.9	22.6	19.9	42.2	42.6

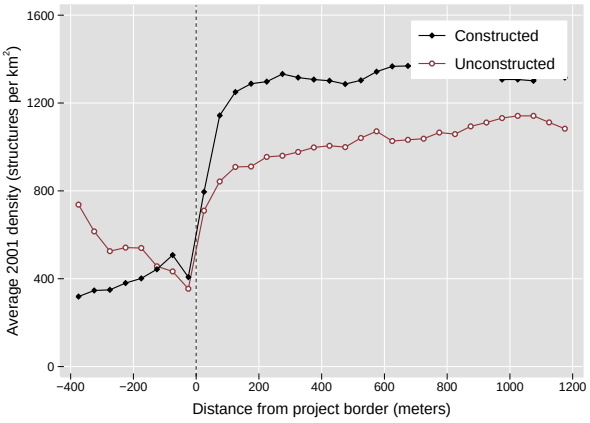
Const. refers to constructed projects and unconst. refers to unconstructed projects.
*Calculated from *expected* completion dates using Gauteng National Treasury budget reports.
† The USD averaged to about 7.70 Rands during the 2001-2011 period.
‡Measured as the average minimum distance with respect 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

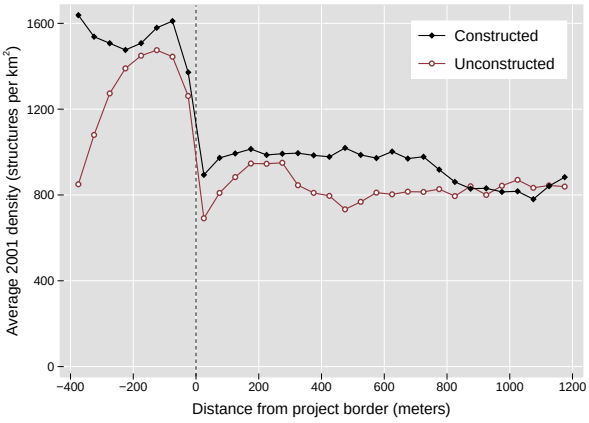
	Constructed	Unconstructed	All Small Areas
Flush Toilet	0.62	0.40	0.82
Piped Water in Home	0.14	0.19	0.42
Electricity for Cooking	0.32	0.41	0.71
Electricity for Heating	0.28	0.38	0.68
Electricity for Lighting	0.54	0.50	0.80
Number of Rooms	2.60	2.72	3.47
Household Size	3.35	3.27	3.40
N	1,171	219	6,806

"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

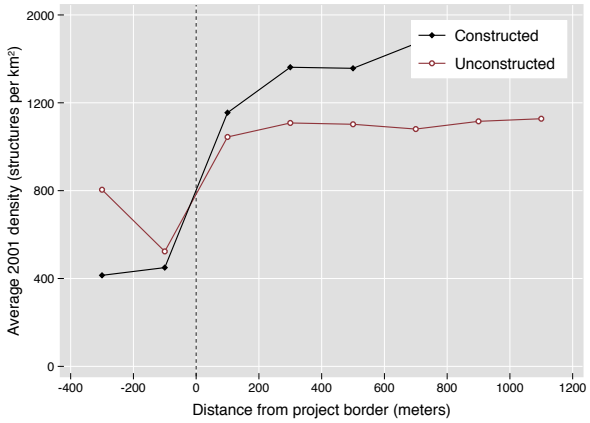


(a) pre-period formal housing density

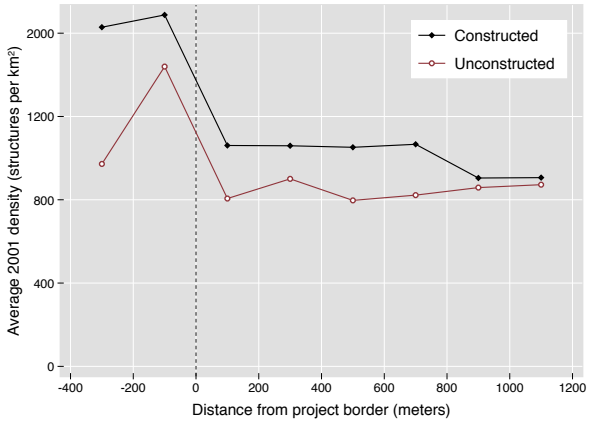


(b) pre-period informal housing density

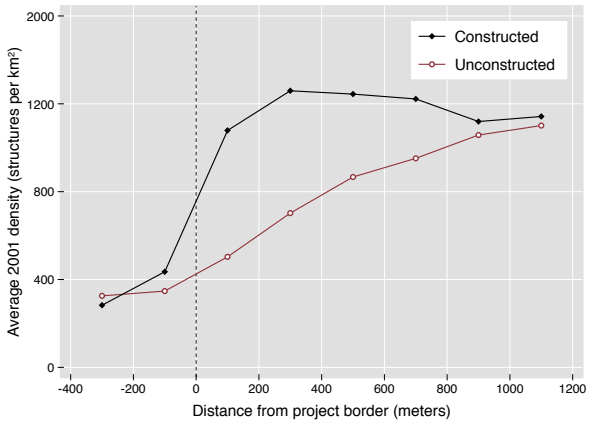
Figure 2. Pre-Period Housing Densities in Constructed and Unconstructed Projects: City versus Suburb



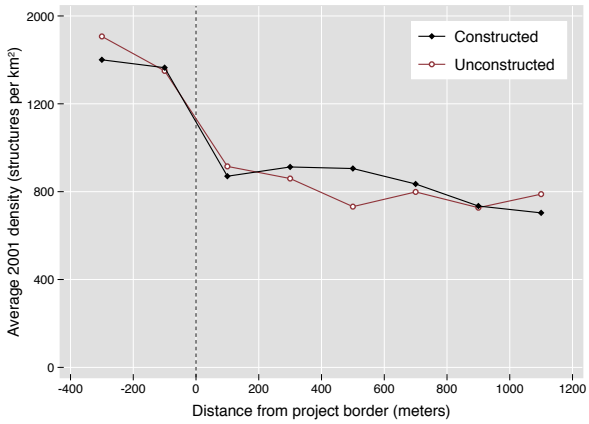
(a) City: formal density



(b) City: informal density



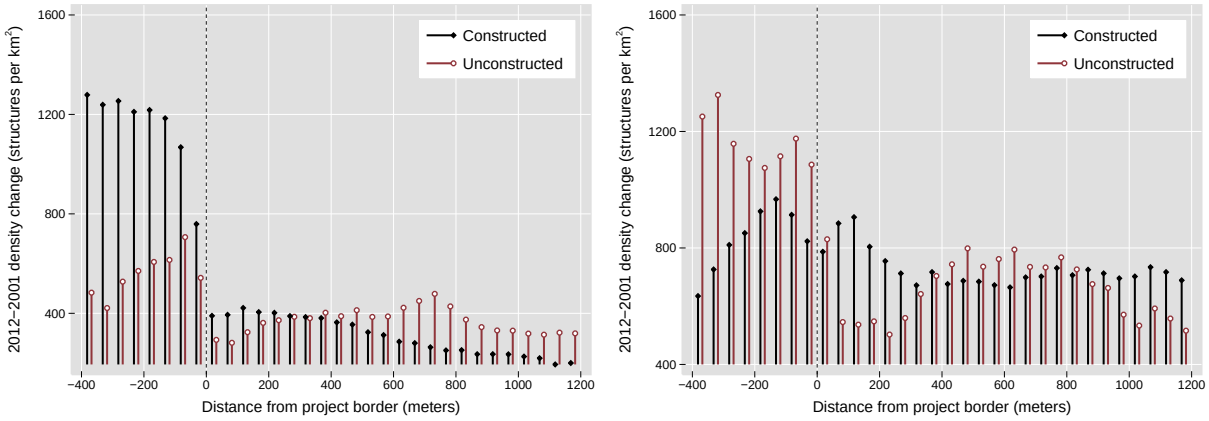
(c) Suburb: formal density



(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

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	0.434[c]	-0.003	-0.077[a]	0.512[a]	-372.986
	(0.261)	(0.017)	(0.024)	(0.161)	(414.629)
project × post	0.365[c]	0.013	-0.072[a]	0.913[a]	221.036
	(0.218)	(0.015)	(0.020)	(0.134)	(321.387)
project × constr	-1.445[a]	0.067[c]	0.047[c]	-0.626[a]	-292.902
	(0.377)	(0.036)	(0.026)	(0.197)	(565.014)
project	-1.084[b]	0.098[a]	0.094[a]	-0.845[a]	-1195.191[a]
	(0.453)	(0.036)	(0.019)	(0.190)	(376.227)
spillover × post × constr	0.614[a]	0.009	-0.084[a]	0.456[a]	-509.214
	(0.178)	(0.009)	(0.014)	(0.109)	(482.932)
spillover × post	0.678[a]	0.037[a]	-0.052[a]	0.879[a]	2494.807[a]
	(0.160)	(0.009)	(0.012)	(0.094)	(413.284)
spillover × constr	-0.753[c]	0.003	0.070[a]	-0.482[a]	-625.500
	(0.394)	(0.014)	(0.018)	(0.122)	(389.858)
p-val, h_0: project=spill.	0.482	0.519	0.714	0.712	0.732
Mean Outcome 2001	27.32	0.37	0.47	8.26	2,476.78
Mean Outcome 2011	28.28	0.43	0.33	9.68	4,512.88
R^2	0.432	0.588	0.349	0.535	0.385
# projects	225	225	225	225	225
N project areas	3,972	3,972	3,972	3,972	3,972
N spillover areas	8,815	8,809	8,805	8,809	8,807
N	12,787	12,781	12,777	12,781	12,779

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	0.091	0.050	-0.051	0.674[a]	849.026
	(0.299)	(0.035)	(0.033)	(0.213)	(706.540)
City × spill	0.482[c]	0.014	-0.060[a]	0.466[a]	312.213
	(0.263)	(0.021)	(0.020)	(0.130)	(526.047)
Suburb × proj	0.067	-0.060	0.005	0.230	-578.037[b]
	(0.405)	(0.101)	(0.021)	(0.184)	(222.902)
Suburb × spill	0.764[b]	-0.040	-0.083[a]	0.429[a]	111.417
	(0.311)	(0.038)	(0.017)	(0.121)	(354.339)
p-val, h_0 City: proj = spill	0.315	0.226	0.708	0.343	0.465
p-val, h_0 Suburb: proj = spill	0.118	0.794	0.000	0.318	0.039
R^2	0.408	0.531	0.300	0.526	0.356
N City proj areas	2,546	2,545	2,544	2,544	2,544
N City spill areas	4,739	4,735	4,734	4,736	4,735
N Suburb proj areas	2,356	2,356	2,356	2,356	2,356
N Suburb spill areas	3,274	3,274	3,271	3,273	3,272

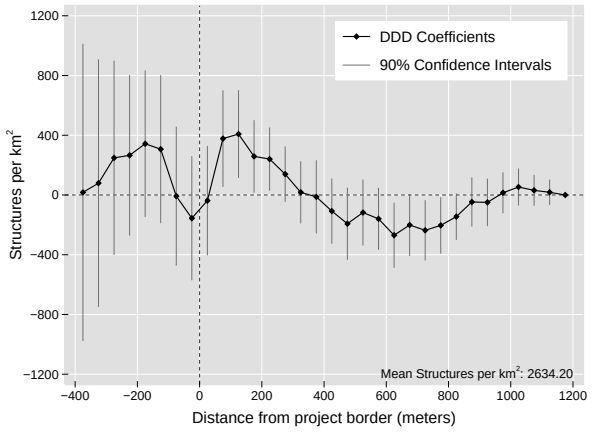
All difference-in-differences controls are included in the specification while only the interaction terms for Post × Constructed are shown. Standard errors clustered at the project level in parenthesis.
[c] p<0.10, [b] p<0.05, [a] p<0.01. P.O.B. means "place of birth." Monthly income is in Rands.

Table 5. Triple Difference Estimates

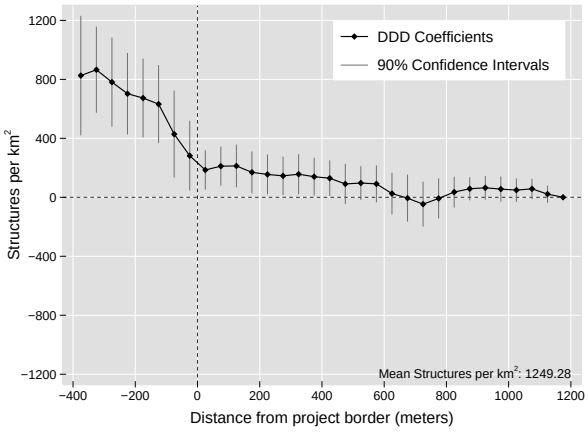
	(1) Total Housing	(2) Formal Housing	(3) Informal Housing	(4) Backyard Housing	(5) Non-Bkyrd Housing
-400m to 0m	201.81	515.70[a]	-313.89	535.96[b]	-849.85[a]
	(295.80)	(134.81)	(281.17)	(217.46)	(202.64)
0m to 400m	268.21[b]	145.80[b]	122.41	186.59[c]	-64.18
	(116.87)	(58.87)	(126.70)	(103.52)	(76.33)
Mean dep. var.	2,634.20	1,249.28	1,384.92	748.36	636.56
# Projects	226	226	226	226	226
R^2	0.086	0.109	0.067	0.095	0.067
N	378,338	378,338	378,338	378,338	378,338

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

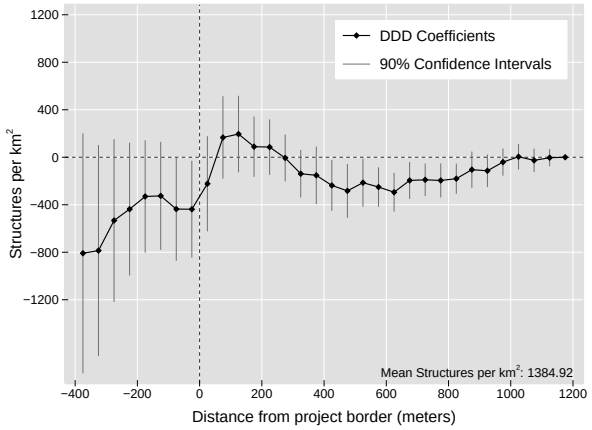
(a) Total Houses



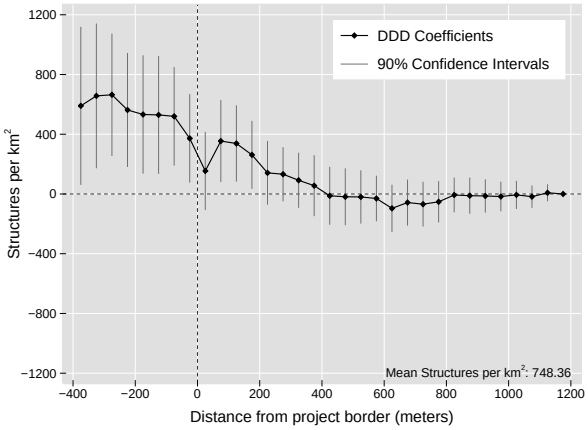
(b) Formal Houses



(c) Informal Houses



(d) Backyard Informal Houses



(e) Non-Backyard Informal Houses

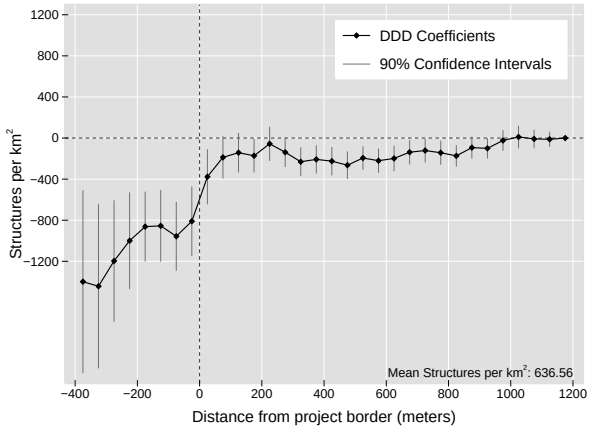
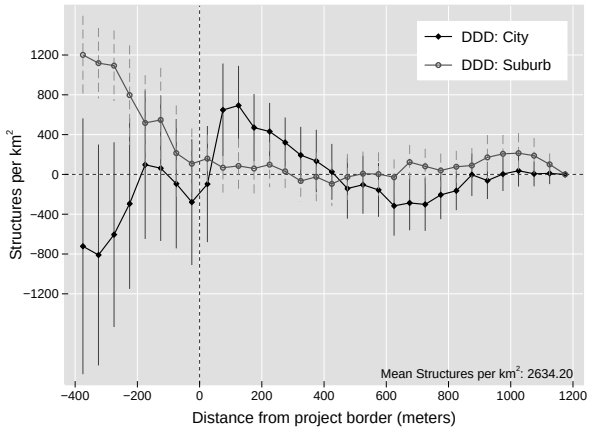
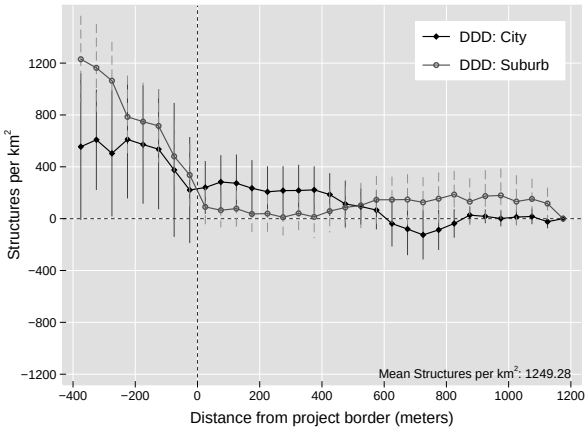


Figure 4. DDD coefficients (equation **??**) for fives types of housing densities.

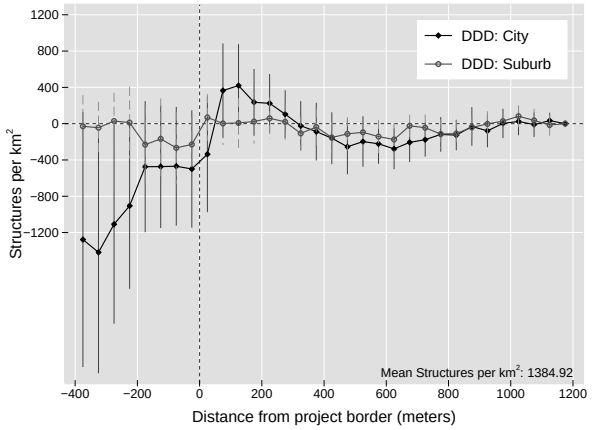
(a) Total Houses



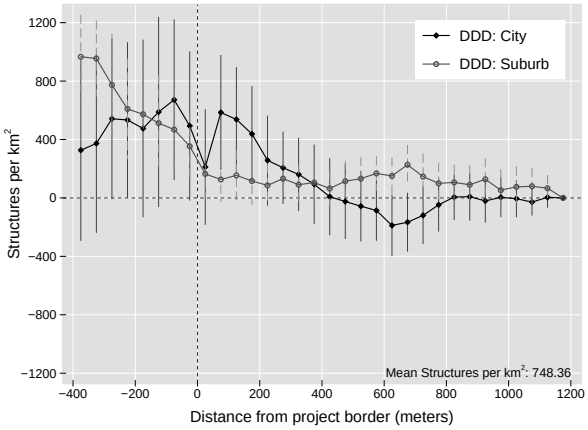
(b) Formal Houses



(c) Informal Houses



(d) Backyard Informal Houses



(e) Non-Backyard Informal Houses

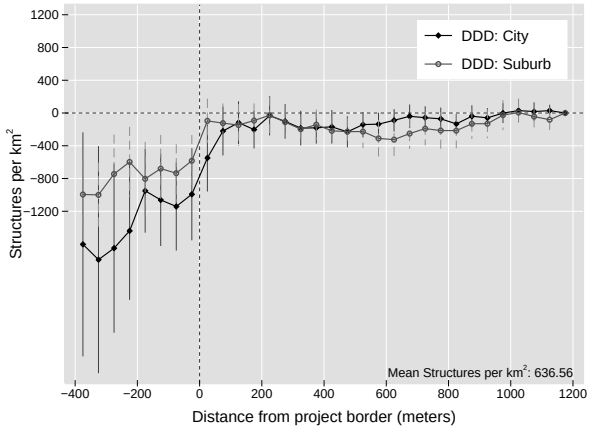


Figure 5. DDD coefficients (equation **??**) for fives types of housing densities.

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	-139.83	447.15[c]	-586.99	571.36[c]	-1158.35[a]
	(445.22)	(229.92)	(444.62)	(338.55)	(357.01)
City 0m to 400m	401.32[b]	207.53[b]	193.79	289.07[c]	-95.28
	(168.55)	(87.81)	(185.88)	(149.78)	(98.53)
Suburb -400m to 0m	423.88[c]	544.17[a]	-120.29	437.92[a]	-558.21[a]
	(222.26)	(138.94)	(187.80)	(163.42)	(187.38)
Suburb 0m to 400m	59.42	9.57	49.85	59.70	-9.85
	(100.47)	(81.15)	(106.93)	(78.37)	(122.75)
Mean dep. var.	2,634.20	1,249.28	1,384.92	748.36	636.56
# Projects City	137	137	137	137	137
# Projects Suburb	96	96	96	96	96
R^2	0.115	0.118	0.093	0.122	0.072
N	378,338	378,338	378,338	378,338	378,338

"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 6. Price Estimates over Distance from Project

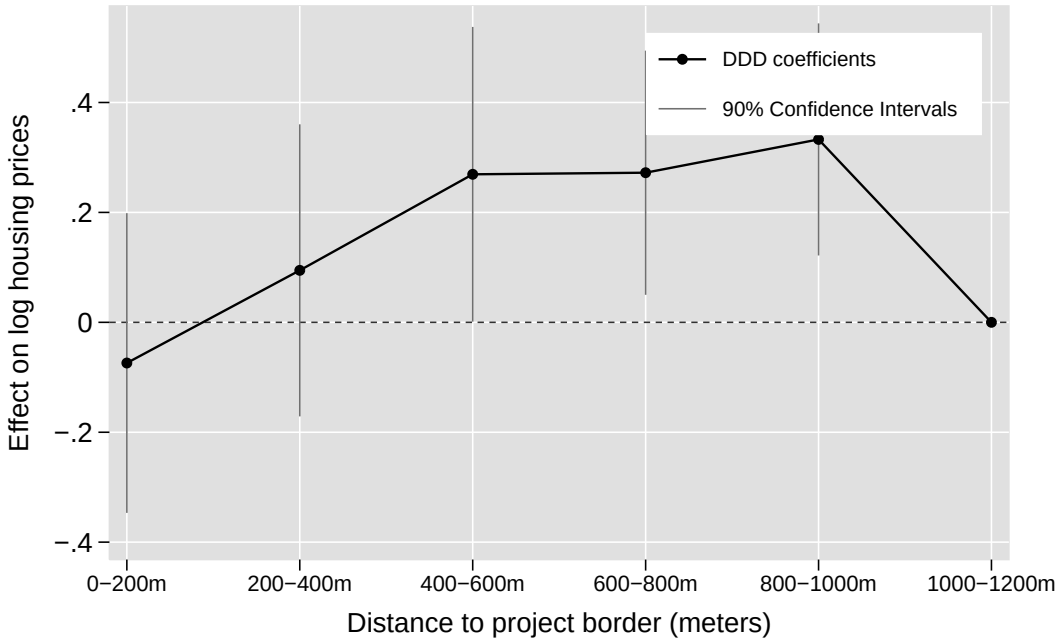


Figure 7. Price Estimates over Distance from Project Het

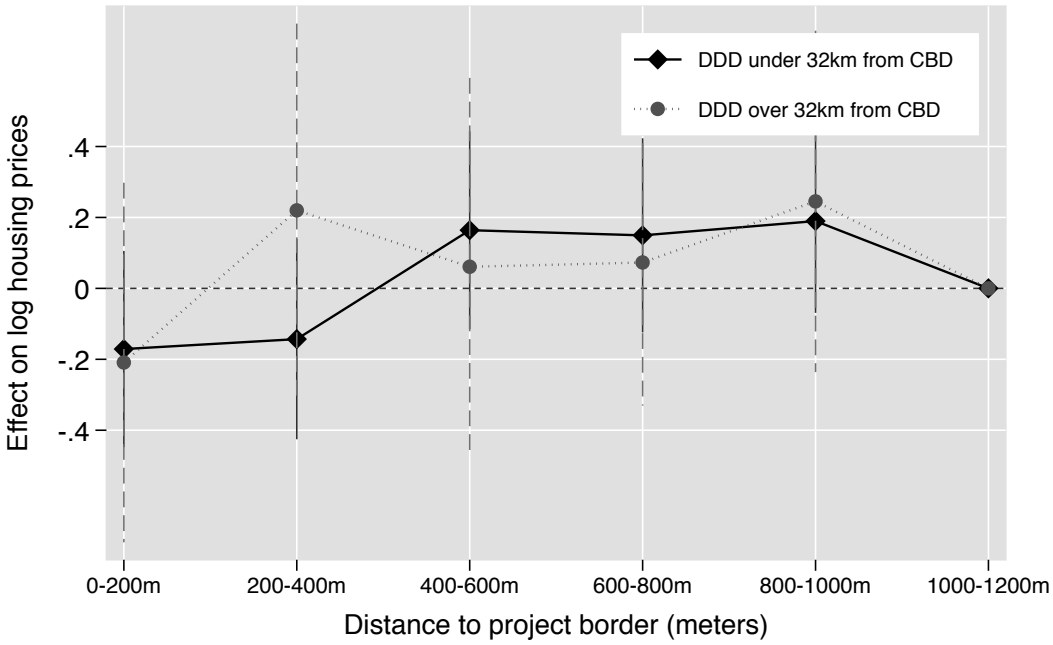


Table 7. Census Household-level Estimates

	(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	0.114[c]	0.179[a]	0.239[a]	0.158[b]	0.062	0.117	-0.081	-293.219
	(0.064)	(0.050)	(0.083)	(0.075)	(0.081)	(0.143)	(0.119)	(1555.768)
project × post	0.050	0.029	0.145[c]	0.145[b]	0.121	0.276[a]	-0.107	2860.972[b]
	(0.043)	(0.041)	(0.075)	(0.069)	(0.075)	(0.092)	(0.086)	(1417.957)
project × constr	-0.022	-0.167[a]	-0.223[b]	-0.169[b]	-0.108	-0.391[c]	-0.023	-432.188
	(0.089)	(0.059)	(0.090)	(0.081)	(0.098)	(0.224)	(0.136)	(1426.588)
project	-0.288[a]	-0.187[a]	-0.303[a]	-0.312[a]	-0.273[a]	-0.851[a]	-0.232[b]	4.775
	(0.083)	(0.050)	(0.083)	(0.080)	(0.089)	(0.205)	(0.104)	(813.167)
spillover × post × constr	0.031	0.093[a]	0.088[a]	0.050[c]	0.009	0.079	-0.159[a]	382.276
	(0.026)	(0.029)	(0.033)	(0.029)	(0.025)	(0.067)	(0.033)	(340.193)
spillover × post	0.001	0.094[a]	0.024	0.013	0.033	0.173[a]	-0.163[a]	493.333
	(0.025)	(0.027)	(0.027)	(0.024)	(0.025)	(0.067)	(0.028)	(345.794)
spillover × constr	-0.067	-0.102[a]	-0.099[a]	-0.074[b]	-0.049	-0.283[c]	0.073	-702.105
	(0.041)	(0.035)	(0.036)	(0.035)	(0.036)	(0.168)	(0.054)	(1513.399)
p-val, h_0: project=spill.	0.253	0.102	0.067	0.154	0.507	0.819	0.512	0.681
Mean Outcome 2001	0.79	0.35	0.66	0.62	0.77	3.30	3.51	8,563.48
Mean Outcome 2011	0.83	0.54	0.81	0.72	0.82	3.56	3.17	9,817.97
R^2	0.330	0.346	0.405	0.391	0.346	0.399	0.444	0.381
# projects	225	225	225	225	225	225	225	225
N project areas	3,972	3,972	3,972	3,972	3,972	3,966	3,972	3,972
N spillover areas	8,816	8,816	8,816	8,816	8,816	8,799	8,814	8,818
N	12,788	12,788	12,788	12,788	12,788	12,765	12,786	12,790

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 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	0.171[b]	0.131[c]	0.318[a]	0.247[a]	0.181[b]	0.134	0.040	-810.758
	(0.078)	(0.077)	(0.083)	(0.070)	(0.080)	(0.214)	(0.191)	(2440.743)
City × spill	0.015	0.089[b]	0.038	-0.003	0.002	0.021	-0.120[b]	986.527[b]
	(0.028)	(0.043)	(0.027)	(0.028)	(0.024)	(0.093)	(0.055)	(448.335)
Suburb × proj	0.077	0.309[a]	0.131	0.060	-0.089	-0.082	-0.373[a]	-81.627
	(0.113)	(0.082)	(0.121)	(0.108)	(0.113)	(0.199)	(0.119)	(826.688)
Suburb × spill	0.069[c]	0.174[a]	0.166[b]	0.126[b]	0.025	0.065	-0.204[a]	-224.081
	(0.041)	(0.041)	(0.070)	(0.057)	(0.051)	(0.119)	(0.062)	(337.934)
				Informal Houses				
City × proj	0.170[b]	0.081	0.365[a]	0.260[a]	0.201[b]	-0.222	-0.348[a]	-724.842
	(0.079)	(0.056)	(0.089)	(0.078)	(0.086)	(0.138)	(0.110)	(2449.411)
City × spill	0.028	0.065[a]	0.063[c]	0.016	0.030	-0.059	-0.036	865.832[c]
	(0.032)	(0.025)	(0.036)	(0.031)	(0.031)	(0.086)	(0.058)	(458.338)
Suburb × proj	0.057	0.167[a]	0.056	-0.018	-0.145	-0.375[c]	-0.549[a]	-37.264
	(0.083)	(0.042)	(0.130)	(0.117)	(0.134)	(0.223)	(0.134)	(858.903)
Suburb × spill	0.042	0.077[b]	0.189[b]	0.147[b]	0.064	-0.066	-0.177[a]	-243.566
	(0.044)	(0.037)	(0.075)	(0.060)	(0.059)	(0.095)	(0.059)	(355.820)

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