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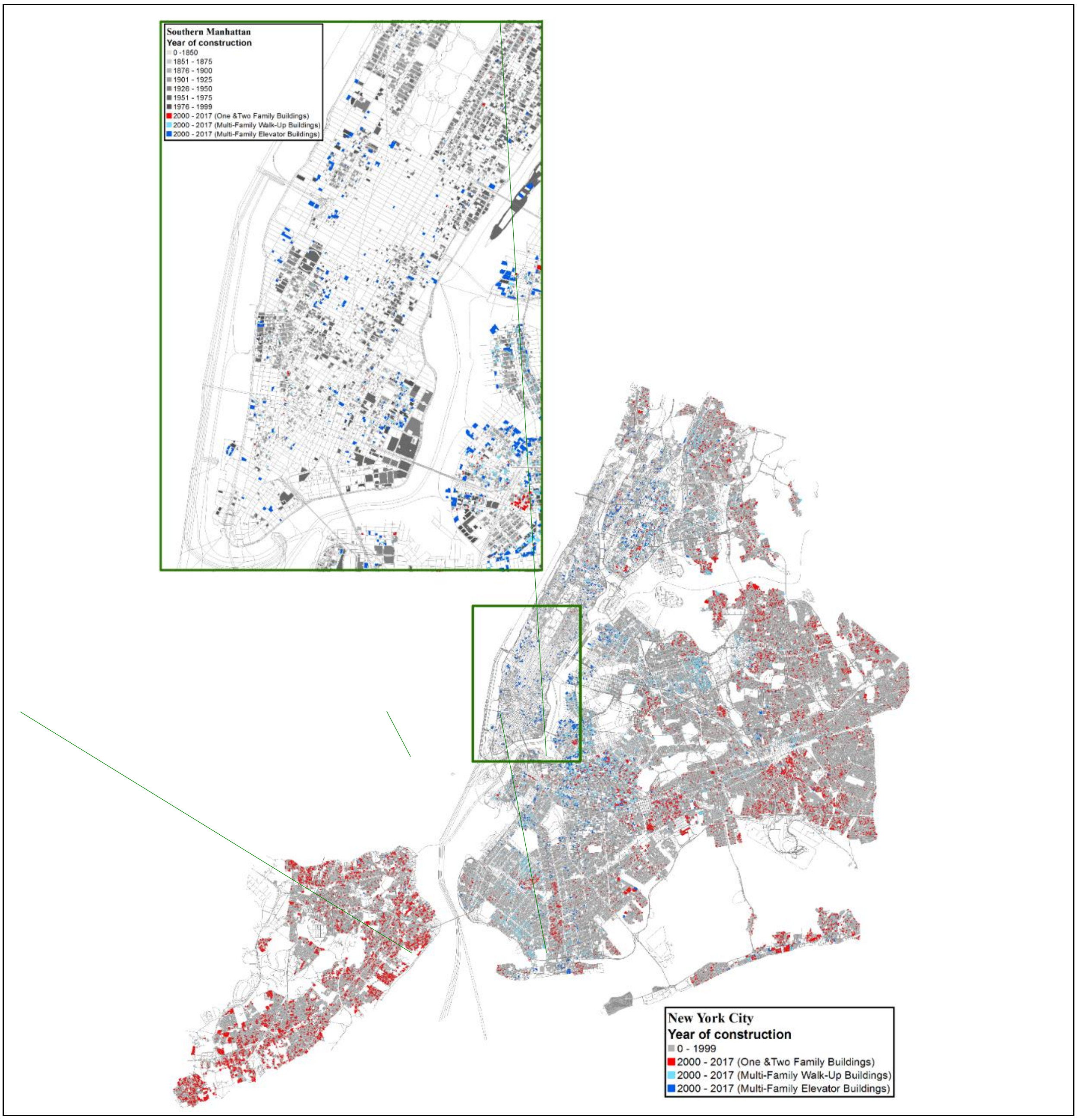
SUPPLEMENTARY MATERIAL: WEB-APPENDICES

Web-Appendix A: Appendix Figure

Figure A1
Residential Development in New York City by Year of Construction



Note: The map is derived from the NYC Department of City Planning's publicly available MapPLUTO data set. It illustrates residential development patterns (by year built) for New York City, ignoring all non-housing and mixed-use construction. The data can be accessed via: https://www1.nyc.gov/site/planning/data-maps/open-data/bytes-archive.page (select MapPLUTO and year 2017; last accessed: July 24, 2018).

Web-Appendix B: A model with an arbitrary number of dwelling types

This Appendix introduces an extended version of the model developed in the main text that has an arbitrary number of housing types. That is, we distinguish houses with $F_1, F_2, F_3, ..., F_J$ floors, with $F_1 < F_2 < F_3 < ... < F_J$. Houses of type 1 are *sf*, all other types are *mf*. The model of the main text may be interpreted as referring to a situation in which J = 2 and both types of dwellings are present in the city. Alternatively (and more realistically), it may be interpreted as referring to a condensed version of the present model with an arbitrary number of housing types in which type 1 housing is *sf* housing and types 2 – J are aggregated into one single *mf* housing sector. It may also be argued that this interpretation fits our empirical analysis best, in which we are unable to distinguish between different types of *mf* housing.

In the two-type model discussed in the main text we have assumed that floor space in *mf* housing is inferior to floor space in *sf* housing. In this extension, we also assume that this is the case, however, we further assume that preferences for floor space *within* the *mf* sector do not depend on the number of floors in the building, i.e. individuals are indifferent with respect to the height of *mf* housing. (This is consistent with e.g. the proposition that households dislike noise from their neighbors below, above, and next door. Whether a household lives in say the 4th floor or the 10th floor arguably does not much alter the noise perception.) This implies that bid rent functions for floor space $\Psi(u, x, y, mf)$ are identical for all types of *mf* housing. Since floor sizes are chosen to optimize this bid rent function (see equation (1)), optimal floor sizes increase monotonously with distance to the CBD.

Developers switch from F_i to F_{i+1} if:

$$F_{i+1}\Psi(u,x,y,mf) - C_{i+1} > F_i\Psi(u,x,y,mf) - C_i\,, \qquad \text{(A1)}$$

where i refers to the number of floors. The number of floors of *mf* housing will be a decreasing step function of the distance to the CBD, if we make the additional assumption that the construction cost per unit of land is convex in the number of floors, i.e. $C_{i+1} - C_i$ is increasing in i. This assumption seems realistic as higher buildings require more investment in foundations, solid construction materials, or elevators.

The number of housing types available in a city is endogenously determined by bid rents for floor space and construction costs. In larger cities, these bid rents will generally be higher in central areas, so that there is more high-rise construction. As a consequence, it may happen that a new type of housing will be introduced after a positive income shock, or that an existing type will disappear after a negative income shock. For $i > 1$, we let $x_i*(y)$ denote the boundary between type i and type i – 1 housing when income equals y. For $i = 1$ it refers to the boundary of the city. Let $J(y) \leq J$ denote the number of housing types present in the city when income equals y. Then the boundaries $x_i*(y)$ are defined for dwelling types 1, ..., $J(y)$.

Finally, the conversion rate in the part of the city where type i dwellings are optimal is $\alpha_i(y)$, and we make the proportionality assumption: $\alpha_i(y) = k_i \alpha_1(y)$ for i=2, …, J. In practice we expect that 1 > k_2, ... , > k_J, i.e., a higher share of land is converted closer to the urban fringe.

Web-Appendix C: Proofs of Predictions 1 and 2

This Appendix proves Predictions 1 and 2 in the more general context of a model with an arbitrary number of floors. Suppose two housing types *i* and *j*, $i > j$ are the optimal types for new construction in some sectors of the city when income is y^*. A sufficient condition for **Prediction 1** to hold in this more general model is that when $y > y^*$, we have:

$$\frac{N_i(y)-N_i(y^*)}{N_i(y^*)} > \frac{N_j(y)-N_j(y^*)}{N_j(y^*)}, \tag{A2}$$

which says that the additional growth in new type *i* units caused by a more than average increase in local income exceeds the additional growth in new type *j* units. If this inequality holds for all $i > 1$, i.e. the additional growth in any type *i* units caused by a more than average increase in local income exceeds the additional growth in new *sf* (type 1) units, then any weighted average of these growth rates also exceeds the additional growth in new *sf* units. Hence, prediction 1 continues to hold when we aggregate types 2 – *J* into one single category of *mf* housing, as in the model in the main text.

In order to show that (A2) is valid, we first consider the case where $i < J(y^*)$, i.e. a type of housing that will not be constructed in the city center when $y = y^*$. If income in the city equals y^*, the number of new type *i* units is given by:

$$N_i(y^*) = \alpha_i(y^*) \int_{x^*_{i+1}(y^*)}^{x^*_i(y^*)} g_i(x, y^*) 2\pi x dx \tag{A3}$$

Where $g_i(x, y^*)$ is the density of type *i* units, i.e. the number of housing units per unit of land. If income rises to *y*, this number equals:

$$N_i(y) = \alpha_i(y) \int_{x^*_{i+1}(y)}^{x^*_i(y)} g_i(x, y) 2\pi x dx\,. \tag{A4}$$

Denoting $\Delta y = y - y^*$, expression (A4) may be rewritten by using the properties $x_i^*(y^*+\Delta y) = x_i^*(y^*) + \Delta y/t$ and $g_i(x, y^*+\Delta y) = g_i(x-\Delta y/t, y^*)$, which both follow from the fact that income growth shifts the bid rent curve outwards in an open city (see expression (6)). This yields:

$$N_i(y) = \alpha_i(y) \int_{x^*_{i+1}(y^*)+\Delta y/t}^{x^*_i(y^*)+\Delta y/t} g_i(x-\Delta y/t, y^*) 2\pi x dx\,, \tag{A5}$$

Hence, after some manipulation we obtain:

$$N_i(y) = \frac{\alpha_i(y)}{\alpha_i(y^*)} N_i(y^*) + \alpha_i(y) \frac{\Delta y}{t} \int_{x^*_{i+1}(y^*)}^{x^*_i(y^*)} g_i(x, y^*) 2\pi dx\,. \tag{A6}$$

The growth in new type *i* units, triggered by a rise in income from y^* to *y*, then follows as:

$$\frac{N_i(y)-N_i(y^*)}{N_i(y^*)}=\frac{\alpha_i(y)-\alpha_i(y^*)}{\alpha_i(y^*)}+\frac{\alpha_i(y)}{\alpha_i(y^*)}\frac{\Delta y}{t}\frac{1}{\hat{x}_i}, \tag{A7}$$

where:

$$\hat{x}_i \equiv \int_{x^*_{i+1}(y^*)}^{x^*_i(y^*)} x g_i(x,y^*)\,dx \Bigg/ \int_{x^*_{i+1}(y^*)}^{x^*_i(y^*)} g_i(x,y^*)\,dx\,. \tag{A8}$$

The value $\hat{x}_i$ may be interpreted as the weighted mean of x over the interval $\left[x_{i+1}^*(y^*), x_i^*(y^*)\right]$, where the weighting function is given by $g_i(x,y^*)$.

In a similar way, we may derive an expression for the relative increase in construction of type *j* units if income rises from *y** to *y*:

$$\frac{N_j(y)-N_j(y^*)}{N_j(y^*)}=\frac{\alpha_j(y)-\alpha_j(y^*)}{\alpha_j(y^*)}+\frac{\alpha_j(y)}{\alpha_j(y^*)}\frac{\Delta y}{t}\frac{1}{\hat{x}_j}\,. \tag{A9}$$

The first term on the right-hand side of equations (A7) and (A9) is the same for both types, because of the proportionality assumption. However, as units of type *i* are closer to the CBD than units of type *j*, we must have $\hat{x}_i < \hat{x}_j$. Thus the validity of inequality (A2) follows.

If $i = J(y^*)$ and type *i* dwellings start in the CBD, then the additional growth in new type *i* units caused by a more than average increase in local income can only increase relative to equation (A7), because the inner boundary of the sector where this type is constructed does not have to shift out – it is possible that type *i* will be constructed in the CBD also if income rises to *y*. Hence, inequality (A2) holds *a fortiori*.

In order to proof **Prediction 2** for the generalized model, we first show that $\bar{s}_i(y) > \bar{s}_i(y^*)$ for $y^* > y$, which is equivalent to:

$$\frac{N_i(y)-N_i(y^*)}{N_i(y^*)} > \frac{A_i(y)-A_i(y^*)}{A_i(y^*)}\,. \tag{A10}$$

If the number of new units of type *i* grows more strongly than the amount of land on which it is built, it must be the case that the average amount of floor space per unit falls.

Again, we start by considering the case $i < J(y^*)$. By definition we have:

$$A_i(y^*) = \alpha_i(y^*)\left[\pi\left(x^*_i(y^*)\right)^2 - \pi\left(x^*_{i+1}(y^*)\right)^2\right], \tag{A11}$$

and:

$$A_i(y) = \alpha_i(y)\left[\pi\left(x^*_i(y^*)+\frac{\Delta y}{t}\right)^2 - \pi\left(x^*_{i+1}(y^*)+\frac{\Delta y}{t}\right)^2\right], \tag{A12}$$

where in (A12) we have again made use of the equality $x^*_i(y) = x^*_i(y^*) + \Delta y/t$.

We may rewrite this equation as:

$$A_i(y) = \alpha_i(y)\left[\frac{A_i(y^*)}{\alpha_i(y^*)} + 2\pi\left(x^*_i(y^*) - x^*_{i+1}(y^*)\right)\frac{\Delta y}{t}\right]. \tag{A13}$$

With some manipulation, it follows that:

$$\frac{A_i(y) - A_i(y^*)}{A_i(y^*)} = \frac{\alpha_i(y) - \alpha_i(y^*)}{\alpha_i(y^*)} + \frac{\alpha_i(y)}{\alpha_i(y^*)}\frac{\Delta y}{t}\frac{2}{x^*_{i+1}(y^*) + x^*_i(y^*)}. \tag{A14}$$

Hence, making use of equation (A7), we obtain:

$$\frac{N_i(y) - N_i(y^*)}{N_i(y^*)} - \frac{A_i(y) - A_i(y^*)}{A_i(y^*)} = \frac{\alpha_i(y)}{\alpha_i(y^*)}\frac{\Delta y}{t}\left(\frac{1}{\hat{x}_i} - \frac{2}{x^*_{i+1}(y^*) + x^*_i(y^*)}\right). \tag{A15}$$

Inequality (A10) follows because we have:

$$\hat{x}_i < \frac{1}{2}\left(x^*_{i+1}(y^*) + x^*_i(y^*)\right). \tag{A16}$$

Recall that $\hat{x}_i$ may be interpreted as the weighted mean of x over the interval $\left[x_{i+1}*(y^*), x_i*(y^*)\right]$, where the weighting function is given by $g_i(x, y^*)$. If this weighting function were flat, that is the population density would not depend on the distance to the CBD, we would have $\hat{x}_i = \left(x_{i+1}*(y^*) + x_i*(y^*)\right)/2$. However, it follows from the convexity of the bid rent curve that the housing density function $g_i(x, y^*)$ is downward sloping, so that inequality (A16) must hold.

If $i = J(y^*)$ and type i dwellings start in the CBD, then the additional growth in new type i units occurs at a density that is higher than the average for this sector. The area that would have been used for construction of a type with larger building height for types $i < J(y^*)$ consists of the most central locations in the city. Hence, density in this area is higher than anywhere else in this sector. The newly constructed units here can only raise the average density of new construction and inequality (A10) must hold *a fortiori*.

For prediction 2 to be valid for the aggregate *mf* sector, we have to show that:

$$\sum_{i=2}^{J(y^*)} w_i(y^*)\bar{s}_i(y^*) < \sum_{i=2}^{J(y)} w_i(y)\bar{s}_i(y), \tag{A17}$$

where $w_i(y)$ is the construction weight of type i in total *mf* construction:

$$w_i(y) = N_i(y) \Big/ \sum_{j=2}^{J(y)} N_j(y). \tag{A18}$$

Inequality (A17) may be rewritten as:

$$\sum_{i=2}^{J(y^*)} w_i\left(y^*\right)\left(\bar{s}_i\left(y^*\right)-\bar{s}_i\left(y\right)\right)-\sum_{i=2}^{J(y)}\left(w_i\left(y\right)-w_i\left(y^*\right)\right)\bar{s}_i\left(y\right)<0\,. \tag{A19}$$

We have shown above that $\bar{s}_i\left(y^*\right)<\bar{s}_i\left(y\right)$ for all *i*: the average size of apartments of all types decreases. The first term is therefore negative. The second term is also negative since Prediction 1 implies that the *mf* housing types closest to the CBD (which are also the types with the smallest floor size because of our assumption that households are indifferent to building height) will increase their share in total housing production in response to a positive income shock. The apartment types for which the weight increases are thus smaller than those for which the weight decreases. Since the weights must always add up to one, the changes in the weights must add up to zero and the second term must be negative.

Web-Appendix D: Appendix Tables

Table A1
AHS-survey years and included metropolitan statistical areas (MSAs)

	Survey Year															*Times*
MSA	84	85	86	87	88	89	90	91	92	93	95	96	98	02	04	*surveyed*
Anaheim-Santa Ana, CA			x				x					x		x		4
Atlanta, GA				x				x				x			x	4
Baltimore, MD				x				x					x			3
Birmingham, AL	x				x				x				x			4
Boston, MA		x				x				x			x			4
Buffalo, NY	x				x							x		x		4
Charlotte, NC											x			x		2
Chicago, IL				x				x								2
Cincinnati, OH-KY-IN			x				x						x			3
Cleveland, OH	x				x				x			x			x	5
Columbus, OH				x				x			x			x		4
Dallas, TX		x				x						x		x		4
Denver, CO			x				x				x				x	4
Detroit, MI		x				x				x						3
Fort Worth-Arlington, TX		x				x						x		x		4
Hartford, CT				x				x				x			x	4
Houston, TX				x				x					x			3
Indianapolis, IN	x				x				x			x			x	5
Kansas City, MO-KS			x				x				x			x		4
Los Angeles-Long Beach, CA		x				x										2
Memphis, TN-AR-MS	x				x				x			x			x	5
Miami-Hialeah, FL			x				x				x			x		4
Milwaukee, WI	x				x							x		x		4
Minneapolis-Saint Paul		x				x				x			x			4
New Orleans, LA			x				x				x				x	4
New York City, NY				x				x								2
Newark, NJ				x				x								2
Norfolk-Newport News	x				x				x				x			4
Oakland, CA													x			1
Oklahoma City, OK	x				x				x			x			x	5
Philadelphia, PA-NJ		x				x										2
Phoenix, AZ		x				x						x		x		4
Pittsburgh, PA			x				x				x				x	4
Portland, OR			x				x				x			x		4
Providence, RI	x				x				x				x			4
Riverside-San Bernard			x									x		x		3
Rochester, NY			x				x						x			3
Sacramento, CA												x			x	2
Saint Louis, MO-IL				x				x				x			x	4
Salt Lake City-Ogden,	x				x				x				x			4
San Antonio, TX			x				x				x				x	4
San Diego, CA				x				x				x		x		4
San Francisco, CA		x				x				x			x			4
San Jose, CA	x				x					x			x			4
Seattle, WA				x								x			x	3
Tampa-Saint Petersburg		x				x				x			x			4
Washington, DC-MD-VA		x								x			x			3
Total	11	11	11	11	11	10	10	10	8	7	9	17	15	13	13	167

Table A2
Base Specifications, Year-Built Dummy Variables

	(1)	(2)	(3)
	Share *mf*	Log (sq.f., *sf*)	Log (sq.f., *mf*)
Built 1980	-0.0611***	0.0129	-0.128***
	(0.0156)	(0.0202)	(0.0425)
Built 1981	-0.0849***	0.0855***	-0.0270
	(0.0177)	(0.0242)	(0.0548)
Built 1982	-0.0999***	0.0275	-0.0978
	(0.0231)	(0.0282)	(0.0627)
Built 1983	-0.144***	-0.0123	-0.0630
	(0.0244)	(0.0292)	(0.0715)
Built 1984	-0.102***	0.0116	-0.0570
	(0.0253)	(0.0312)	(0.0715)
Built 1985	-0.108***	0.0913**	0.0288
	(0.0278)	(0.0404)	(0.0979)
Built 1986	-0.156***	0.144***	0.109
	(0.0322)	(0.0450)	(0.107)
Built 1987	-0.214***	0.164***	0.0947
	(0.0325)	(0.0463)	(0.127)
Built 1988	-0.226***	0.222***	0.186
	(0.0345)	(0.0509)	(0.126)
Built 1989	-0.271***	0.227***	0.205
	(0.0368)	(0.0551)	(0.141)
Built 1990	-0.282***	0.217***	0.274
	(0.0412)	(0.0646)	(0.171)
Built 1991	-0.327***	0.253***	0.226
	(0.0412)	(0.0686)	(0.175)
Built 1992	-0.380***	0.210***	0.223
	(0.0426)	(0.0721)	(0.185)
Built 1993	-0.416***	0.202***	0.116
	(0.0452)	(0.0749)	(0.193)
Built 1994	-0.394***	0.223***	0.277
	(0.0436)	(0.0773)	(0.189)
Built 1995	-0.376***	0.257***	0.251
	(0.0430)	(0.0780)	(0.199)
Built 1996	-0.418***	0.271***	0.351
	(0.0478)	(0.0872)	(0.217)
Built 1997	-0.397***	0.284***	0.418*
	(0.0509)	(0.0915)	(0.233)
Built 1998	-0.408***	0.298***	0.429*
	(0.0535)	(0.0970)	(0.254)
Built 1999	-0.444***	0.355***	0.578**
	(0.0544)	(0.106)	(0.263)
Built 2000	-0.450***	0.408***	0.598**
	(0.0566)	(0.110)	(0.273)
Built 2001	-0.504***	0.416***	0.633**
	(0.0609)	(0.120)	(0.295)
Built 2002	-0.500***	0.433***	0.555*
	(0.0610)	(0.117)	(0.287)
Built 2003	-0.506***	0.433***	0.794***
	(0.0622)	(0.121)	(0.290)
Built 2004	-0.487***	0.486***	0.407
	(0.0699)	(0.121)	(0.297)

Notes: Robust standard errors in parentheses. *** Significant at 1%; ** significant at 5%; * significant at 10%.

Table A3
Base specification but with counts of *mf*- and *sf*-units as dependent variable rather than the share of *mf*-units

	(1)	(2)	(3)	(4)	(5)
VARIABLES	Count of new *mf* units	Count of new *sf* units	Log (count *mf* units)	Log (count *sf* units)	Log (ratio count *mf*/ count *sf*)
Log (Personal income per capita), 1-year lagged	215.2***	208.7***	8.640***	4.409***	3.816***
	(46.29)	(33.34)	(1.121)	(0.745)	(0.737)
Log (Construction sector annual wage per employee), 1-yr lagged	-50.48*	-10.68	-1.182	-0.232	-0.789
	(29.59)	(19.55)	(0.869)	(0.458)	(0.638)
Metro area × AHS-year fixed effects	Yes	Yes	Yes	Yes	Yes
Year built-fixed effects	Yes	Yes	Yes	Yes	Yes
Constant	-1,518***	-1,863***	-68.99***	-36.84***	-29.68***
	(261.0)	(215.2)	(7.095)	(4.890)	(5.877)
Observations	1,659	1,694	1,659	1,694	1659
Number of AHS-yr. × MSA comb.	152	152	152	152	152
R-squared within	0.345	0.378	0.421	0.421	0.269
between	0.016	0.035	0.029	0.028	0.301
overall	0.107	0.014	0.098	0.009	0.235

Notes: Robust standard errors in parentheses. *** Significant at 1%; ** significant at 5%; * significant at 10%.

Table A4

Base Specifications but with Contemporaneous / 2-Year Lagged Explanatory Variables

Dependent variables: Characteristics of newly built housing stock

		(1)	(2)	(3)
		Share *mf* units	Log (unit sq. foot, *sf*)	Log (unit sq. foot, *mf*)
Panel A: **Contemporaneous** explanatory variables				
Log (Personal income per capita), contemporaneous		0.659***	-0.541**	-1.724***
		(0.147)	(0.263)	(0.612)
Log (Construction sector annual wage per employee), contemporaneous		-0.137	0.0557	-0.0731
		(0.0988)	(0.115)	(0.325)
Metro area × AHS-year fixed effects		Yes	Yes	Yes
Year built-fixed effects		Yes	Yes	Yes
Constant		-4.678***	12.47***	25.58***
		(1.101)	(2.182)	(4.769)
Observations		1829	1548	1513
Number of AHS-year x metro area combinations		167	167	167
R-squared	within	0.243	0.178	0.071
	between	0.295	0.043	0.000
	overall	0.227	0.040	0.003
Panel B: **2-year lagged** explanatory variables				
Log (Personal income per capita), 2-year lagged		0.536***	-0.407**	-1.251**
		(0.141)	(0.192)	(0.511)
Log (Construction sector annual wage per employee), 2-year lagged		-0.103	-0.0227	0.394
		(0.124)	(0.105)	(0.295)
Metro area × AHS-year fixed effects		Yes	Yes	Yes
Year built-fixed effects		Yes	Yes	Yes
Constant		-3.788***	11.94***	15.82***
		(1.044)	(1.683)	(4.751)
Observations		1829	1548	1513
Number of AHS-year x metro area combinations		167	167	167
R-squared	within	0.235	0.174	0.053
	between	0.346	0.061	0.002
	overall	0.253	0.052	0.003

Notes: Robust standard errors in parentheses. *** Significant at 1%; ** significant at 5%; * significant at 10%.

Table A5
Base Specifications but with 3-Year and 4-Year Lagged Explanatory Variables
Dependent variables: Characteristics of newly built housing stock

	(1)	(2)	(3)
	Share *mf* units	Log (unit sq. foot, *sf*)	Log (unit sq. foot, *mf*)
Panel A: **3-year lagged** explanatory variables			
Log (Personal income per capita), 3-year lagged	0.387**	-0.331*	-0.492
	(0.159)	(0.184)	(0.561)
Log (Construction sector annual wage per employee), 3-year lagged	-0.0781	-0.0400	0.532*
	(0.140)	(0.110)	(0.305)
Panel B: **4-year lagged** explanatory variables			
Log (Personal income per capita), 4-year lagged	0.193	-0.0954	0.153
	(0.177)	(0.198)	(0.707)
Log (Construction sector annual wage per employee), 4-year lagged	-0.0108	-0.131	0.535
	(0.130)	(0.111)	(0.353)
Panel C: **1-year and 2-year lagged** explanatory variables			
Log (Personal income per capita),	0.786**	-0.524*	-2.697***
1-year lagged	(0.335)	(0.315)	(0.908)
Log (Construction sector annual wage per employee),	-0.0641	0.00975	-0.345
1-year lagged	(0.120)	(0.130)	(0.427)
Log (Personal income per capita),	-0.168	0.0517	1.253
2-year lagged	(0.352)	(0.238)	(0.808)
Log (Constr. sector ann. wage per employee),	-0.0578	-0.0293	0.624
2-year lagged	(0.152)	(0.111)	(0.385)
Panel D: **1-year**, **2-year and 3-year lagged** explanatory variables			
Log (Personal income per capita),	0.724**	-0.587*	-2.009**
1-year lagged	(0.285)	(0.325)	(0.894)
Log (Construction sector annual wage per employee),	-0.0810	-0.00903	-0.0749
1-year lagged	(0.112)	(0.131)	(0.411)
Log (Personal income per capita),	0.0135	0.233	-0.760
2-year lagged	(0.309)	(0.360)	(0.978)
Log (Constr. sector ann. wage per employee),	-0.0101	0.0343	-0.128
2-year lagged	(0.121)	(0.127)	(0.482)
Log (Personal income per capita),	-0.143	-0.142	1.687**
3-year lagged	(0.272)	(0.311)	(0.855)
Log (Constr. sector ann. wage per employee),	-0.0354	-0.0570	0.589
3-year lagged	(0.141)	(0.121)	(0.427)

Notes: Robust standard errors in parentheses. *** Significant at 1%; ** significant at 5%; * significant at 10%.

Table A6
Base Specifications but with Shorter Window
Dependent variables: Characteristics of newly built housing stock

	(1)	(2)	(3)	(4)
	Share *mf* units		Log (unit sq. foot, *sf*)	Log (unit sq. foot, *mf*)
	10 year window	5 year window	5 year window	5 year window
Log (Personal income per capita), 1-year lagged	0.643***	0.433*	-0.450**	-1.853***
	(0.146)	(0.234)	(0.220)	(0.686)
Log (Construction sector annual wage per employee), 1-year lagged	-0.0759	0.0561	-0.0110	-0.215
	(0.109)	(0.157)	(0.129)	(0.423)
Metro area × AHS-year FEs	Yes	Yes	Yes	Yes
Year built-fixed effects	Yes	Yes	Yes	Yes
Constant	-5.182***	-4.535**	12.29***	28.29***
	(1.229)	(2.156)	(1.941)	(6.792)
Observations	1548	973	973	949
Number of AHS-year x metro area combinations	167	167	167	167
R-squared within	0.204	0.159	0.165	0.067
between	0.160	0.101	0.038	0.000
overall	0.272	0.209	0.052	0.004

Notes: Robust standard errors in parentheses. *** Significant at 1%; ** significant at 5%; * significant at 10%.