Appendix

We evaluated alternative models to test the robustness of our results. First, we tested a model of changes in the ratio of cars to adults in the family (rather than the change in the number of cars that we use in our preferred model). In these models, the most notable differences are the variables for coupling and de-coupling. Forming a couple has a large effect on both increasing and decreasing the ratio of cars to adults because the outcome variable is affected by the number of adults in the family. For carless families, breaking up may lead to an increase in the ratio of cars to adults if the number of adults decreases from two to one and the number of cars remains the same. In the model of increasing car ownership, de-coupling is associated with increases in car ownership.

      We also evaluated models that included age and excluded moving as predictors. In both cases, the main results remain mostly unchanged. When we include age, the effect of retiring on the likelihood of increasing car ownership flips from a small negative effect in our preferred model to a small positive effect. When we exclude moving, our variables remain essentially unchanged, supporting our finding that the act of moving from one residence to another influences car ownership independent of the effect of changes in the built environment.

Table 1: Population-averaged logit models of increasing and decreasing the ratio of cars to adults among families, PSID 2003–2013

	Increased ratio of cars to adults (A)	Decreased ratio of cars to adults (B)
Family moved since last wave	-0.143 ***	0.157 ***
Change in built environment		
Transit access (regional z-score)	-0.067 ***	0.070 ***
Residential density (1,000s per sq. mi.), census tract	-0.001 **	0.011 ***
Living where Walk Score > 65+ (-1, 0, +1)	0.060 ***	-0.035 *
Living in New York City (-1, 0, +1)	-0.681 ***	0.850 ***
Change in family members		
Number of adult family (other than head / spouse)	-0.174 ***	0.238 ***
Number of driving-age kids (top coded at 3)	0.098 ***	-0.112 ***
Change in income, in thousands, for…		
…bottom 20% of earners	0.003 ***	-0.003 ***
…second 20% of earners	0.0005 ***	-0.003 ***
…third 20% of earners	0.0003 *	-0.0003 **
…fourth 20% of earners	-0.0010 ***	-0.0002
…top 20% of earners	-0.0001	0.00001
Change in wealth (logged)	0.158 ***	-0.100 ***
Car ownership last wave		
Zero cars	0.720 ***	
Sharing cars	1.668 ***	-0.727 ***
At least one car per adult (ref. category)		
Life events		
Coupling	-0.025	1.165 ***
interacted with zero cars last wave	1.498 ***	
De-coupling (breakup / death of partner)	1.216 ***	-0.124 ***
interacted with zero cars last wave	-0.915 ***	
Empty nest	0.102 ***	1.337 ***
interacted with zero cars last wave	0.044	
New child (birth or adoption)	0.014	-0.028
interacted with zero cars last wave	0.801 ***	
Family member graduated from college	0.187 ***	0.196 ***
interacted with zero cars last wave	1.072 ***	
Family member became employed	0.279 ***	0.528 ***
interacted with zero cars last wave	0.569 ***	
Family member lost job	0.042 ***	0.450 ***
interacted with zero cars last wave	0.446 ***	
Family member retired	-0.175 ***	0.151 ***
interacted with zero cars last wave	-0.165 ***	
Family member developed health issues	-0.147 ***	0.271 ***
interacted with zero cars last wave	-0.080 ***	
Family member developed difficulty walking	-0.101 ***	0.132 ***
interacted with zero cars last wave	0.170 ***	
Year		
2003 to 2005 (reference year)		
2005 to 2007	0.257 ***	-0.187 ***
2007 to 2009	0.135 ***	-0.090 ***
2009 to 2011	0.021 **	-0.003
2011 to 2013	0.010	-0.036 ***
Constant	-2.203 ***	-1.609 ***
Observations (persons)	9,542	7,831
Observation (person-years)	38,277	30,879
Pseudo-R Squared	0.37	0.26

*Note: Stars indicate statistical significance: *** p<0.01, ** p<0.05, * p<0.1*