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The Economic Effects of Social Networks: Evidence from the Housing Market

Online Appendix*

In this Online Appendix, we expand on the results presented in the main body of the paper by presenting additional summary statistics, robustness checks, supporting evidence, and further data exploration. In Appendix A, we provide further details on the structures of the social networks observed in the Facebook data. Appendix B presents further summary statistics on the regression samples used in the main body of the paper. Appendix C describes additional results on the effects of friends' house price experiences on housing market beliefs and investments.

A Further Exploration of Social Network Structure

Social Networks of U.S. Facebook Users. In Section 1 of the main body of the paper, we analyzed the social graph among U.S.-based Facebook users as of July 1, 2015. In particular, we explored how a number of important characteristics of individuals' social networks varied with individual-level demographics. Table A1 shows that the bivariate patterns that we uncovered in that section also arise in a multivariate analysis, where we jointly control for age, education, and county of residence. For example, the number of friends (degree centrality) declines significantly in age, and is increasing in education levels. After conditioning on education and age, the relative difference in network size between urban and rural networks increases somewhat, with rural networks continuing to be larger. The local clustering coefficient continues to be U-Shaped in age. The difference across education levels in the number of counties that a person is exposed to is larger in the multivariate analysis that also controls for age and urban/rural location than it was in the bivariate analysis.

Social Networks of Change-of-Tenure Sample. We next provide additional analysis of the geographic structure of the social networks of the change-of-tenure sample, which consists of Los Angeles-based Facebook users that we can match across the 2010 and 2012 Acxiom snapshots.

Panel A of Figure A1 shows various percentiles of the sample distribution of the share of friends living at distances spanning up to 1,000 miles. There is substantial heterogeneity in the geographic concentration of different individuals' social networks, consistent with the summary statistics provided in Table 5 in the main body of the paper. Panel A of Table A2 presents measures of the geographic concentration of social networks for various demographic sub-groups. The geographic concentration of social networks is declining in age. While individuals aged between 18 and 24 years have, on average, 75.3% of their friends living in the Los Angeles commuting zone, this number declines to about 54.5% for individuals over 65 years old. Panel B of Figure A1 shows that this pattern is consistent across all distances used to measure geographic concentration. The geographic concentration of social networks is also declining in education levels: while individuals with a high school degree have an average of 69.9% of their friends living within 200 miles, this number falls to 58.8% for

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individuals with a graduate degree (see Panel C of Figure A1).[1] More educated people not only have a lower share of friends living near Los Angeles, they also have friends living in more unique counties. Lastly, it appears that females have slightly more geographically concentrated networks than males, but the differences are small (see Panel D of Figure A1). These patterns for the geographic concentration of the social networks of the change-of-tenure sample are consistent with patterns uncovered for the full U.S. social graph in Table 3 in the main body of the paper.

Exposure to the different U.S. census divisions also differs by age and education. Figure A2 shows that while the share of out-of-commuting zone friends that live in the Pacific and Mountain division is decreasing in age, the share living in most of the other census divisions is increasing in age. The exception is the West South Central division (comprising Arkansas, Louisiana, Oklahoma, and Texas), which has a roughly constant share of friends across age groups. Figure A3 shows the exposure to different census divisions by education level. The share of out-of-commuting zone friends in the Mountain division is decreasing in education, while the share of friends in the Middle Atlantic (New Jersey, New York, and Pennsylvania) and New England (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont) census divisions is increasing in education levels.

While Panel A of Table A2 shows averages of network characteristics across demographic groups, Panel B explores how much of the variation in network characteristics can be explained by variation in these demographics. In particular, each entry reports the adjusted R^2 of an individual-level regression of the network characteristic presented in the column on dummy variables for each of the possible values of the demographic variable reported in the row. The age of the individuals explains about 5% of the variation in the geographic dispersion of social networks, while education levels and gender can explain about 2% and 0.4% of the variation, respectively. Income and occupation, as measured in the Acxiom data, can each explain about 1% of the variation. The Los Angeles zip code in which the individuals live in 2010, which proxies for a variety of demographic characteristics of the individual, can explain about 8% of the variation in the geographic dispersion of social networks. A subset of our sample report their hometown in their Facebook profile. Among those individuals, the identity of the hometown can explain between 30% and 40% of the geographic dispersion of their social networks. This suggests that a non-trivial amount of the variation in where individuals have friends is explained by where they grew up. Overall, these observable characteristics can jointly explain about 40% of the variation in the geographic dispersion of social networks across individuals.

B Additional Summary Statistics on Regression Samples

In this Appendix, we present additional summary statistics on our regression samples. Table A3 presents additional summary statistics on the change-of-tenure sample, which consists of Los Angeles-based Facebook users that we can match across the 2010 and 2012 Acxiom snapshots. In the main body of the paper, we discussed summary statistics on the full sample (see Table 5). Our regressions in Section 3.1 were run separately on the set of 2010 renters and 2010 homeowners in the change-of-

[1] While these numbers are produced for the full Los Angeles sample, the same patterns hold true within each age group. This statistic exploits a measure of the education level of individuals within the Facebook data – it is built, for example, on the fact that most individuals report their high school and college on their Facebook profile. The "Unknown" category comprises people for whom Facebook was unable to assign an education category.

tenure sample. Table A3 therefore analyzes the summary statistics separately for these subgroups. The 2010 renters are somewhat younger and have more friends than the 2010 homeowners. The house price experiences in the social networks of renters and owners are nearly identical: between 2008 and 2010, the average renter had friends who experienced a 4.27% decline in house prices, while the average homeowner had friends who experienced a 4.34% decline in house prices.

Figure A4 shows the full distributions of the number of friends and out-of-commuting zone friends of the individuals in the change-of-tenure sample and the buyers in the transaction sample. The change-of-tenure sample consists of Los Angeles-based Facebook users that we can match across the 2010 and 2012 Acxiom snapshots, while the transaction sample consists of all housing transactions by Facebook users in Los Angeles County between 1993 and 2012 that led to a homeownership spell that was still ongoing as of the 2010 or 2012 Acxiom snapshots. The figure complements the summary statistics on the number of friends that were provided in Tables 5 and 7.

Figure A5 shows the number of transaction per year in the transaction sample, which consists of all housing transactions by Facebook users in Los Angeles County between 1993 and 2012 that led to a homeownership spell that was still ongoing as of the 2010 or 2012 Acxiom snapshots. It highlights that we have at least 15,000 transactions in every year since 1993.

C Additional Empirical Results

In this Appendix, we present a number of additional empirical results and robustness check.

Coefficients on Control Variables. We begin by presenting the coefficients and associated standard errors on the control variables in the baseline specifications in the main body of the paper.

Table A4 explores the effect of the control variables in the specification that corresponds to column 1 of Panel A, Table 6. That specification analyzed the decisions of 2010 renters to purchase a house by 2012. We find that demographic and life-cycle factors have a significant effect on the probability of buying a house. Richer, larger, and more educated households are more likely to transition from renting to owning. Getting married also has a significant effect on a renter's probability of buying a house. In the main body of the paper, we compare the effect of friends' house price experiences on the probability of buying a house to the effect of adding a family member. Table A4 shows that adding a family member increases the probability of buying a house by 5.8 percentage points.

Table A5 explores the effect of the control variables in the specification that corresponds to column 1 of Table 8. That specification analyzed factors that affected the size of the purchased house. Richer, larger, and older households buy bigger homes. In the main body of the paper, we compare the effect of friends' house price experiences on the size of the house to the effect of having higher income. Table A5 shows that those households that in 2010 had an income between \$75,000 and \$99,999 bought 9.7% larger properties than households that had an income between \$50,000 and \$74,999. A one-standard-deviation increase in the house price experiences of an individuals' friends, which is associated with a 1.2% increase in property size, thus has the same effect on the size of the purchased property as a $(1.2/9.7) * \$25,000 \approx \$3,000$ increase in annual household income.

Table A6 explores the effect of the control variables in the specification that corresponds to column 1 of Table 9. That specification analyzed factors that affected the transaction price for a house. Larger

houses and houses bought by richer individuals sell at a higher price. The relationship between transaction price and property age is U-shaped, with newly built and relatively old properties selling for more than properties that are around 50 years old. In the main body of the paper, we compare the effect of friends' house price experiences on the transaction price to the effect of a house being larger. Table A6 shows that a property at the 20th size percentile (1372 square feet) has a 9.7% higher price than a property at the 15th size percentile (1140 square feet average size). In the paper, we showed that a five percentage points higher house price experience a person's social network is associated with a 2.3% higher transaction price. This is the same effect size as moving from a 1140 square feet property to a $1140 + (1372 - 1140) * 2.3/9.7 \approx 1,200$ square feet property.

Robustness Checks. In Section 3.3, we discuss a number of robustness checks to the main analysis. We next provide more details on these robustness checks. First, in Panel A of Table A7, we show that results are extremely similar when we use the house price experiences of out-of-state friends as an instrument, instead of the house price experiences of out-of-commuting zone friends. This alleviates concerns that our results could be driven by friends living just outside of the Los Angeles commuting zone in areas with house prices that are highly correlated with those in Los Angeles.

In our baseline specifications, we consider the effect of friends' house price experiences over the previous 24 months. We next analyze whether the effects change when we consider other time horizons over which we measure friends' house price experiences. Specifically, in Panels B to D of Table A7, we use friends' house price experiences over the prior 12 months, 36 months, and 48 months as explanatory variables. To make the magnitudes comparable across specifications, we scale the house price experiences to correspond to the 24-months equivalents. For example, we transform friends' house price experiences over the past 36 months as follows: $FriendHPExp^{24M}_{i,t-36m,t} = (1 + FriendHPExp_{i,t-36m,t})^{2/3} - 1$. We find that the magnitude of the effect is generally declining as we increase the time window over which we measure friends' house price experiences; the exception to this pattern are the effects on the size bought, which do not seem to vary systematically with the horizon over which friends' house price experiences are measured. Overall, the patterns in the data suggest that the most recent experiences within a person's social network have the largest effects on her behavior.

Sample Splits. In Section 3.3, we also described a number of sample splits to analyze heterogeneity in the effects across individuals and time periods; we next describe those sample splits in more detail.

We first explore whether the effects are stronger or more muted for first-time homebuyers relative to repeat homebuyers who have more experience in the housing market. While we do not observe previous homeownership status for most buyers in the transaction sample, we do observe the age of the individuals at purchase. In Table A8, we thus analyze the effects separately for individuals in different age groups. Columns 1 and 2 show that the effect of friends' house price experiences on the probability of buying a house for renters, or selling a house for owners, are declining in the age of the individuals. Columns 3 and 4, on the other hand, show stable effects across age groups on the size of the property purchased, and the price paid for a given property. Relatedly, in Table A9, we show that there are no systematic differences in the effect size across individuals with different education levels.

We also consider whether the response of individuals' housing investment behavior to their friends' house price experiences is different during periods with booming housing markets relative to periods with more stable or declining housing markets. In Table A10, we split the analysis of the effect of friends' house price experiences on the size bought and the price paid into three periods: the housing boom period between 2001 and 2006, the housing bust period between 2007 and 2009, and the relatively flat period between 2010 and 2012. Since we can only analyze the effect on ownership transition probabilities between 2010 and 2012, this precludes us from an analysis of this outcome across various stages of the housing cycle.[2] The effect on the price paid is nearly identical across these three periods. The effect on size bought is somewhat larger in the boom and flat periods than in the housing bust period. These findings suggest that the social dynamics channel we document in this paper is likely to be active during both housing booms and busts.

Alternative Specification of Survey Analysis. In Section 4.1, we analyzed responses to an expectation survey to explore the relationship between a person's friends' house price experiences, and her own house price expectations. Since the responses to the main question about the attractiveness of housing investments, Question 4, were ordinal, we coded the answers to Question 4 with the numbers 1 to 5, with 5 corresponding to the most optimistic view on property investments. In this section, we follow an alternative approach to dealing with the ordinal nature of the responses to Question 4. In particular, Table A11 presents cumulative odds ratios from an ordered logit model, giving us the effect of a one-percentage-point increase in $FriendHPExp^{All}_{i,2013,2015}$ on the odds of belonging to a certain category or higher versus belonging to one of the lower categories.[3] In this specification, we cannot use an instrumental variables approach, but instead directly include the house price experience of all friends. The statistically significant estimate in column 1 suggests that the odds that an individual perceives buying property in her zip code as at least a somewhat good investment increase by a factor of 1.08 for every percentage point increase in the house price appreciation in her social network. The results in the other columns are also consistent with the findings from Table 10. For example, for individuals who report often talking to their friends about investing in the housing market, a one-percentage-point increase in the house price experience within their social network increases the probability of perceiving buying local property as an at least somewhat good investment by 25%.

Ruling Out Competing Explanations. In the main body of the paper, we argue that the causal effect of friends' house price experiences on their housing investment behavior was driven by their effect

[2] However, note that the house price experiences between 2008 and 2010, when the across-individuals average house price experience of their friends was -7.1%, influenced this probability in a similar way as the house price experiences between 2010 and 2012, when the average person's friends experienced a house price gain of about 4.3%.

[3] An ordered logit model presumes the existence of a latent continuous dependent variable, in our case a measure of how good an investment in a house is, that can only be observed as a set of categories, in our case the five possible responses to Question 4. The model imposes that the slope of the response of the latent dependent variable to a one-unit increase in friends' house price experiences is the same for the entire span of the latent variable. Since no consistent estimator for an ordered logit model explicitly incorporates fixed effects, the literature proposes different estimation strategies. We estimate the ordered logit model using the "Blow Up and Cluster (BUC)" approach of Baetschmann, Staub, and Winkelmann (2015). This approach recodes the original dependent variable with 5 categories into 4 different dichotomizations with 4 different thresholds. Each observation of the original data is then duplicated 4 times, once for each dichotomization. After "blowing up" the data, a conditional logit estimation with clustered standard errors is applied to the whole sample. Riedl and Geishecker (2014) show that this BUC approach delivers the most unbiased and efficient parameter estimates.

on the perceived attractiveness of local housing investments. In Section 4.3, we reviewed evidence against a number of competing alternative explanations for the causal relationship. We next discuss this evidence in more detail.

Bequests: A first alternative explanation is that the house price experiences in a person's social network may have a direct wealth or liquidity effect. In particular, if a person has many friends where her parents live, increases in house prices in that area might affect the value of any property owned by her parents. In that case, if this individual is expecting to inherit a more expensive house, or if her parents have more resources to help her with purchasing a property in Los Angeles, this could influence her purchasing behavior through a channel that is unrelated to social dynamics.

One piece of evidence against this story comes from separately exploiting variation in the overall social network house price experience coming from the following three sub-sets of out-of-commuting zone friends: family members, work colleagues, and college friends. Figure A7 shows that house price experiences across these three sub-networks are relatively uncorrelated.[4] While an individual might expect higher future bequests when her family members experience higher house price growth, this is less likely to be the case for her college or work friends. Yet, Table A12 shows that the influence of the house price experiences in all three sub-networks on investment behavior is very similar, suggesting the bequest channel is relatively unimportant.

As a second piece of evidence against a bequest story, we show that our estimates are similar among individuals whose bequests are less likely to be affected by the house price movements of their U.S.-based out-of-commuting-zone friends. In particular, Table A13, Panel A, shows the effects of friends' house price experiences on housing investments when restricting the sample to individuals whose hometown is Los Angeles, and Panel B shows these effects when restricting the sample to individuals whose hometown is outside of the United States. We find similarly sized effects in both subgroups of the population, even though these individuals are less likely to experience increases in expected bequests when the house prices in their out-of-commuting zone social networks increase.

Consumption Externalities: A second alternative explanation for our findings is the possible presence of consumption externalities across individuals and their friends. For example, an individual might buy a house to "keep up with the Joneses" after her friends purchased a home. However, notice that in the construction of our key explanatory variable in equation 2, we never actually use whether an individual's friends have purchased a house. Indeed, the house price experiences of renters and owners equally affect $FriendHPExp$. However, this does not completely alleviate the potential of consumption externalities to explain at least some of our findings. Since house prices and transaction volumes generally co-move, people are more likely to buy a house on average in regions where house prices go up. $FriendHPExp$ could therefore be picking up the effect of friends' buying behavior on individuals' own investments, even though the actual behavior of an individual's friends is not used to construct this measure. To see whether this is a likely explanation for our findings, Table A13

[4]Facebook allows users to self-identify friends that are family members. College friends or work colleagues are identified as Facebook friends who went to the same college or report the same employer. Since not all individuals identify family members, or report where they work and went to college, sample sizes are somewhat smaller in these specifications. Robustness checks confirm that our baseline effect in these sub-samples is similar to the baseline effect in the full sample.

introduces controls for the change and level of trading volume in the counties where an individual has friends. The estimated effects of friends' house price experiences are nearly identical, suggesting that they are not just picking up a desire to keep up with friends.[5]

Appendix Bibliography

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[5]Trading volume is measured as the annualized share of housing stock that transacts, and is obtained from Zillow. These data are only available since 1998; which reduces the sample sizes for the price paid and size bought regressions. The fact that controlling for changes in trading volume does not significantly affect the effect of price changes on investment behavior is consistent with the observation that, in the cross-section, county-level changes in volume and price over the previous 24 months are nearly uncorrelated (the conditional correlation of the two measures in the Zillow data is 0.02). This, in turn, is largely driven by the well-known fact that trading volume leads house price changes in the time-series by about 18 months.

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Table A1: U.S. Social Network Summary Statistics - Multivariate Analysis

	Norm. Degree Centrality	Local Clustering	Norm. Unique Friends-of-Friends	Number Counties	Own County	Share Friends Within 50 mi
Age						
35-55	-0.469***	-0.017***	-0.503***	-13.28***	-0.039***	-0.018***
	(0.001)	(0.000)	(0.001)	(0.070)	(0.000)	(0.000)
55+	-0.834***	0.013***	-0.907***	-31.12***	-0.076***	-0.074***
	(0.002)	(0.000)	(0.002)	(0.088)	(0.000)	(0.000)
Education						
At Least Some College	0.206***	-0.023***	0.289***	19.43***	-0.078***	-0.088***
	(0.001)	(0.000)	(0.001)	(0.068)	(0.000)	(0.000)
County of Residence						
Urban	-0.075***	-0.016***	0.140***	-7.71***	0.054***	0.016***
	(0.002)	(0.000)	(0.003)	(0.128)	(0.000)	(0.001)
Mean Dep. Variable	1.000	0.106	1.000	70.5	0.347	0.527
R-Squared	0.075	0.033	0.067	0.046	0.038	0.033

Note: Table shows regressions of node-level network characteristics on dummy variables for demographic characteristics of the nodes. The full graph of U.S.-based Facebook users as of July 1, 2015 is used to construct node-level statistics, while the regression is run on a 3% random sample of those nodes for which we observe a full set of demographics. The excluded categories are, for age the group 18-34 years, for education the group "No College", and for county of residence the group "Rural." Standard errors are clustered a the county level and shown in parentheses. Significance Levels: * ($p<0.10$), ** ($p<0.05$), *** ($p<0.01$).

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Table A2: Social Network Characteristics - Change-of-Tenure Sample

		Share Friends Living Within					Share Friends in Age Group (Years)						Share Friends by Highest Education Level			
	Number Counties	LA CZ	CA	200 mi	500 mi	1000 mi	18-24	25-34	35-44	45-54	55-64	65+	Unknown	HS	College	Grad
							PANEL A: Average of Network Characteristic by Individual Characteristics									
Full Sample	55.5	62.9%	70.4%	65.5%	74.7%	79.1%	12.8%	29.2%	23.8%	17.5%	9.9%	6.7%	16.1%	18.9%	53.6%	11.4%
Age																
18-24	57.1	75.3%	81.3%	77.1%	84.8%	87.7%	68.6%	20.9%	5.0%	2.9%	1.3%	1.3%	14.5%	22.9%	58.0%	4.7%
25-34	60.8	65.9%	73.5%	68.4%	77.6%	81.4%	12.5%	60.0%	16.1%	6.1%	2.9%	2.4%	15.1%	18.1%	54.6%	12.2%
35-44	57.0	62.8%	70.2%	65.3%	74.5%	78.8%	6.3%	24.1%	44.8%	15.0%	5.4%	4.4%	17.0%	18.6%	51.7%	12.7%
45-54	55.1	61.1%	68.4%	63.6%	72.9%	77.5%	6.1%	15.2%	22.8%	37.5%	11.7%	6.6%	16.6%	19.6%	52.8%	10.9%
55-64	48.6	57.7%	65.8%	60.6%	70.3%	75.7%	5.2%	14.7%	16.8%	22.5%	29.2%	11.6%	16.2%	18.5%	53.6%	11.6%
65+	45.0	54.5%	63.2%	57.6%	67.7%	73.7%	5.1%	13.8%	18.0%	20.1%	19.3%	23.6%	16.3%	17.4%	53.5%	12.7%
Education																
Unknown	41.0	61.8%	69.2%	64.3%	73.8%	78.3%	10.9%	25.8%	25.3%	19.2%	11.1%	7.7%	20.2%	19.8%	50.4%	9.5%
Highschool	44.6	67.3%	73.7%	69.9%	78.9%	83.1%	15.4%	27.7%	23.2%	18.0%	9.6%	6.1%	17.5%	25.6%	50.5%	6.4%
College	60.8	63.0%	70.6%	65.5%	74.6%	79.0%	13.8%	30.3%	22.9%	16.9%	9.6%	6.5%	14.9%	17.7%	56.2%	11.2%
Graduate School	73.6	56.3%	65.8%	58.8%	68.7%	73.6%	6.3%	31.7%	27.5%	17.4%	9.9%	7.1%	12.7%	10.7%	51.7%	24.9%
Gender																
Female	52.3	64.0%	71.5%	66.6%	75.8%	80.1%	12.2%	28.8%	24.0%	17.7%	10.3%	6.9%	16.2%	19.3%	53.2%	11.3%
Male	59.9	61.4%	69.0%	63.8%	73.2%	77.7%	13.8%	29.6%	23.6%	17.3%	9.4%	6.4%	15.9%	18.4%	54.2%	11.5%
							PANEL B: Predictive Power (R-Squared) of Individual Characteristics for Network Characteristic									
Age	0.5%	6.0%	5.3%	5.3%	4.6%	3.5%	73.5%	68.6%	59.1%	62.1%	61.9%	53.4%	0.3%	1.5%	1.6%	4.5%
Education	2.5%	2.3%	1.3%	2.3%	2.1%	2.0%	1.6%	0.4%	0.8%	0.2%	0.0%	0.2%	2.1%	15.1%	4.3%	25.8%
Gender	0.4%	0.4%	0.3%	0.4%	0.4%	0.4%	0.2%	0.0%	0.0%	0.0%	0.2%	0.1%	0.0%	0.3%	0.2%	0.0%
Zip	6.1%	8.4%	6.7%	8.4%	8.6%	8.3%	6.0%	3.6%	1.3%	4.2%	4.6%	4.3%	2.5%	23.8%	5.4%	20.9%
Hometown	12.0%	35.4%	37.7%	36.3%	40.5%	42.2%	7.6%	5.8%	4.1%	6.1%	9.7%	11.2%	8.8%	25.2%	12.2%	22.9%
Income	0.7%	1.3%	0.6%	1.1%	1.1%	0.8%	2.0%	3.1%	0.6%	3.6%	4.6%	3.8%	1.4%	7.6%	2.5%	7.6%
Occupation	0.5%	1.6%	1.3%	1.4%	1.5%	1.1%	7.1%	8.7%	1.3%	8.7%	10.2%	10.2%	0.4%	3.4%	0.6%	4.2%
All of the Above	16.0%	38.7%	40.0%	39.1%	42.6%	43.9%	76.2%	70.4%	61.1%	64.3%	64.8%	57.4%	10.6%	41.7%	18.8%	48.3%

Note: Table shows summary statistics on the U.S. social networks of the individuals in the change-of-tenure sample, which consists of Facebook users who lived in Los Angeles County in 2010, and whom we can match across the 2010 and 2012 Acxiom snapshots. N = 1,469,359. Panel A shows average values of network characteristics for sub-groups of our sample. Panel B presents adjusted R-squared values from regressions of the network characteristics on dummy variables for each value of the respective individual characteristics.

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Table A3: Summary Statistics - Change-of-Tenure Sample

	Panel A: 2010 Renters							
	Mean	SD	SD | Zip	P10	P25	P50	P75	P90
Number of Friends								
All Friends	348	454	446	55	105	212	413	747
Out-of-Commuting Zone Friends	155	277	270	17	31	68	164	359
Δ Friend County House Prices: 2008-2010								
All Friends	-7.17%	1.93%	1.91%	-9.18%	-7.85%	-6.87%	-6.11%	-5.51%
Out-of-Commuting Zone Friends	-10.48%	3.62%	3.43%	-15.17%	-12.68%	-10.19%	-8.11%	-6.24%
Δ Friend County House Prices: 2010-2012								
All Friends	4.27%	1.55%	1.53%	2.75%	3.85%	4.42%	4.85%	5.50%
Out-of-Commuting Zone Friends	4.46%	2.46%	2.43%	1.63%	3.19%	4.58%	5.79%	7.07%
Income 2010 (K$)	52.00	34.37	27.50	10.0	25.0	45.0	62.5	87.5
Income Change 2010-12 (K$)	2.34	28.08	27.98	-25.0	0.0	0.0	0.0	35.0
Household Size 2010	1.91	1.27	1.29	1.0	1.0	1.0	2.0	4.0
Household Size Change 2010-12	0.20	1.18	1.18	-1.0	0.0	0.0	1.0	1.0
Age 2010	37.23	13.12	13.02	24.0	29.0	36.0	45.0	55.0
Family Structure Development 2010-12								
Stayed Single	0.72	0.45	0.45	0	0	1	1	1
Got Married	0.10	0.30	0.30	0	0	0	0	0
Stayed Married	0.14	0.35	0.36	0	0	0	0	1
Got Divorced	0.04	0.19	0.19	0	0	0	0	0
Education 2010								
Has High School	0.54	0.50	0.48	0	0	1	1	1
Has College Degree	0.35	0.48	0.30	0	0	0	1	1
Has Graduate Degree	0.10	0.30	0.10	0	0	0	0	1
	Panel B: 2010 Owners							
	Mean	SD	SD | Zip	P10	P25	P50	P75	P90
Number of Friends								
All Friends	285	383	379	47	85	172	335	615
Out-of-Commuting Zone Friends	113	216	213	16	26	52	113	242
Δ Friend County House Prices: 2008-2010								
All Friends	-7.05%	1.72%	1.69%	-8.87%	-7.68%	-6.76%	-6.06%	-5.55%
Out-of-Commuting Zone Friends	-10.28%	3.29%	3.15%	-14.48%	-12.21%	-10.02%	-8.16%	-6.49%
Δ Friend County House Prices: 2010-2012								
All Friends	4.34%	1.34%	1.31%	3.07%	3.93%	4.43%	4.86%	5.45%
Out-of-Commuting Zone Friends	4.60%	2.31%	2.28%	1.95%	3.38%	4.68%	5.87%	7.10%
Income 2010 (K$)	77.20	41.89	33.42	25.0	45.0	62.5	112.5	150.0
Income Change 2010-12 (K$)	0.05	20.73	20.68	0.0	0.0	0.0	0.0	0.0
Household Size 2010	3.47	1.70	1.65	1.0	2.0	3.0	5.0	6.0
Household Size Change 2010-12	-0.21	1.27	1.27	-2.0	-1.0	0.0	0.0	1.0
Age 2010	42.62	15.57	15.34	25.0	32.0	43.0	54.0	63.0
Family Structure Development 2010-12								
Stayed Single	0.29	0.45	0.45	0	0	0	1	1
Got Married	0.04	0.21	0.21	0	0	0	0	0
Stayed Married	0.60	0.49	0.48	0	0	1	1	1
Got Divorced	0.07	0.25	0.25	0	0	0	0	0
Education 2010								
Has High School	0.45	0.50	0.49	0	0	0	1	1
Has College Degree	0.38	0.48	0.48	0	0	0	1	1
Has Graduate Degree	0.17	0.38	0.37	0	0	0	0	1

Note: Table shows summary statistics on the change-of-tenure regression sample, which consists of Facebook users who lived in Los Angeles County in 2010, and whom we can match across the 2010 and 2012 Acxiom snapshots. Panel A focuses on individuals who were renting their homes in 2010 (N = 433,836), Panel B on individuals who were owning their homes in 2010 (N = 1,035,523). For each characteristic, we show the mean, standard deviation, within-zip code standard deviation, and the 10th, 25th, 50th, 75th, and 90th percentiles of the distribution.

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Table A4: Control Variables on Purchasing Regression

	Coefficient	Standard Error
Occupation (relative to "unknown")		
Professional/Technical	1.84	0.24
Administration/Managerial	0.67	0.28
Sales/Service	0.13	0.41
Clerical/White Collar	0.10	0.18
Craftsman/Blue Collar	0.75	0.28
Student	2.00	0.47
Homemaker	0.11	0.40
Retired	0.47	0.62
Farmer	1.51	2.86
Self Employed	0.65	0.51
Educator	1.30	1.24
Legal Professional	0.32	0.57
Medical Professional	3.16	0.47
Military	-0.73	1.96
Religious	-2.57	5.58
Household Size (relative to size of 1)		
2	0.41	0.15
3	1.65	0.23
4	3.56	0.29
5	6.32	0.42
6	9.33	0.60
7	10.41	0.89
8	12.38	1.76
Change in Household Size 2010 - 2012	5.82	0.14
Change in Family Structure (rel. to "stayed married")		
Stayed Single	-1.17	0.23
Got Married	20.66	0.39
Got Divorced	8.43	0.45
Income 2010 (relative to "less than $15,000")		
$15,000 - $19,999	0.36	0.23
$20,000 - $29,999	1.12	0.19
$30,000 - $39,999	1.44	0.20
$40,000 - $49,999	2.37	0.22
$50,000 - $74,999	4.52	0.24
$75,000 - $99,999	8.26	0.37
$100,000 - $124,999	9.87	0.45
Greater than $124,999	16.61	0.64
Unknown	-8.40	1.73
Education (relative to "unknown")		
Completed Highschool	0.46	0.15
Completed College	1.41	0.18
Completed Graduate School	3.88	0.32
Change in Income 2010 - 2012 (K$)	0.10	0.00
Number of Friends		
2nd Quintile	0.05	0.19
3rd Quintile	0.34	0.23
4th Quintile	0.54	0.28
5th Quintile	0.17	0.34
Number of Out-Of-Commuting Zone Friends		
2nd Quintile	-0.04	0.24
3rd Quintile	-0.54	0.29
4th Quintile	-0.48	0.32
5th Quintile	-0.98	0.41
Number of Counties with Friends		
2nd Quintile	-0.04	0.24
3rd Quintile	0.19	0.32
4th Quintile	0.35	0.38
5th Quintile	-0.06	0.45
Age (relative to "18-24")		
25-29	1.06	0.22
30-34	3.39	0.24
35-39	4.42	0.27
40-44	4.56	0.26
45-49	4.38	0.26
50-54	4.68	0.29
55-59	5.13	0.37
60-64	4.78	0.39
65+	6.92	0.45
Unknown	3.55	0.36

Note: Table shows coefficients and associated standard errors on the control variables for the specification corresponding to column 1 of Panel A, Table 6 in the main body of the paper.

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Table A5: Control Variables on Property Size Regression

	Coefficient	Standard Error
Occupation in 2010 (relative to "unknown")		
Professional/Technical	3.31	0.19
Administration/Managerial	0.10	0.26
Sales/Service	-0.80	0.45
Clerical/White Collar	-0.83	0.21
Craftsman/Blue Collar	-5.76	0.26
Student	1.99	0.57
Homemaker	3.05	0.40
Retired	2.04	0.57
Farmer	8.62	2.22
Self Employed	4.58	0.50
Educator	-0.95	0.82
Legal Professional	3.01	0.50
Medical Professional	7.85	0.31
Military	-0.51	1.16
Religious	0.48	3.22
Household Size in 2010 (relative to size of 1)		
2	4.05	0.22
3	7.78	0.23
4	10.30	0.26
5	11.94	0.31
6	13.31	0.37
7	13.99	0.47
8	13.44	0.64
Education in 2010 (relative to "unknown")		
Completed Highschool	-2.49	0.19
Completed College	-1.83	0.20
Completed Graduate School	1.64	0.25
Income in 2010 (relative to "less than $15,000")		
$15,000 - $19,999	-0.49	0.51
$20,000 - $29,999	-1.62	0.43
$30,000 - $39,999	-1.30	0.44
$40,000 - $49,999	0.43	0.45
$50,000 - $74,999	3.87	0.44
$75,000 - $99,999	13.59	0.42
$100,000 - $124,999	22.04	0.38
Greater than $124,999	41.02	0.40
Unknown	17.27	2.79
Married in 2010 (relative to "unknown")		
Single	-1.70	0.80
Married	2.47	0.78
Age at Purchase (relative to "18-24")		
25-29	-4.76	0.27
30-34	-1.33	0.24
35-39	3.21	0.27
40-44	6.42	0.25
45-49	7.13	0.28
50-54	6.62	0.32
55-59	6.67	0.40
60-64	7.45	0.53
65+	2.47	0.36
Unknown	2.55	0.26
Number of Friends		
2nd Quintile	-0.15	0.18
3rd Quintile	-0.01	0.22
4th Quintile	-0.42	0.27
5th Quintile	1.53	0.35
Number of Out-Of-Commuting Zone Friends		
2nd Quintile	-0.07	0.20
3rd Quintile	0.61	0.26
4th Quintile	2.64	0.34
5th Quintile	7.16	0.44
Number of Counties with Friends		
2nd Quintile	-0.15	0.19
3rd Quintile	0.37	0.21
4th Quintile	-0.09	0.24
5th Quintile	-2.49	0.30

Note: Table shows coefficients and associated standard errors on the control variables for the specification corresponding to column 1 of Table 8 in the main body of the paper.

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Table A6: Control Variables on Property Price Regression

	Coefficient	Standard Error
Property Type (rel. to "single family residence")		
Condo / Coop	-26.55	1.73
Multi-family (2-4 units)	-10.97	1.15
Multi-family (5+ units)	-22.27	1.69
Property Size (relative to smallest category)		
Category 2	22.56	1.11
Category 3	36.16	1.40
Category 4	45.92	1.54
Category 5	54.28	1.61
Category 6	62.49	1.68
Category 7	72.54	1.73
Category 8	84.59	1.86
Category 9	94.91	2.03
Category 10	103.36	2.22
Category 11	115.37	2.76
Category 12	126.31	2.98
Category 13	128.76	4.41
Category 14	123.96	4.58
Unknown	80.01	3.03
Lot Size (relative to smallest category)		
Category 2	5.28	0.70
Category 3	10.88	0.70
Category 4	16.12	0.90
Category 5	16.03	1.08
Category 6	12.52	1.42
Category 7	8.32	1.44
Category 8	5.32	1.55
Category 9	-0.27	1.91
Unknown	7.70	0.70
Has Pool	4.30	0.30
Property Age (relative to less than 5 years old)		
5-9	0.19	0.82
10-14	-0.45	1.03
15-19	-5.00	1.09
20-24	-8.81	1.14
30-34	-12.94	1.11
35-39	-14.36	1.12
40-44	-15.10	1.17
45-49	-13.16	1.28
50-54	-12.26	1.30
55-59	-10.95	1.38
60-64	-9.24	1.42
65-79	-7.14	1.44
70-74	-7.11	1.46
75-80	-6.60	1.54
80+	-7.38	1.54
Unknown	-9.76	1.49
Number of Friends		
2nd Quintile	-0.19	0.16
3rd Quintile	-0.64	0.19
4th Quintile	-1.33	0.22
5th Quintile	-2.15	0.28
Number of Out-Of-Commuting Zone Friends		
2nd Quintile	0.43	0.17
3rd Quintile	0.92	0.21
4th Quintile	1.97	0.23
5th Quintile	3.91	0.31
Number of Counties with Friends		
2nd Quintile	0.40	0.15
3rd Quintile	0.61	0.19
4th Quintile	0.81	0.25
5th Quintile	0.87	0.28
Occupation in 2010 (relative to "unknown")		
Professional/Technical	1.58	0.17
Administration/Managerial	-0.42	0.23
Sales/Service	-0.79	0.32
Clerical/White Collar	-1.16	0.18
Craftsman/Blue Collar	-2.47	0.21
Student	0.12	0.37
Homemaker	0.08	0.32
Retired	0.04	0.52
Farmer	-2.88	1.85
Self Employed	-0.78	0.43
Educator	-0.78	0.71
Legal Professional	1.28	0.40
Medical Professional	1.71	0.25
Military	0.44	1.00
Religious	-1.61	2.13
Household Size in 2010 (relative to size of 1)		
2	0.53	0.16
3	0.04	0.17
4	-1.04	0.23
5	-1.59	0.26
6	-2.52	0.31
7	-2.44	0.37
8	-3.03	0.62
Education in 2010 (relative to "unknown")		
Completed Highschool	-0.33	0.14
Completed College	0.39	0.14
Completed Graduate School	2.19	0.19
Married in 2010 (relative to "unknown")		
Single	2.16	0.30
Married	3.13	0.33
Income in 2010 (relative to "less than $15,000")		
$15,000 - $19,999	1.06	0.45
$20,000 - $29,999	1.35	0.44
$30,000 - $39,999	1.82	0.50
$40,000 - $49,999	2.80	0.51
$50,000 - $74,999	4.86	0.55
$75,000 - $99,999	7.95	0.60
$100,000 - $124,999	10.67	0.65
Greater than $124,999	15.20	0.70
Unknown	10.25	1.50
Age at Purchase (relative to "18-24")		
25-29	0.64	0.19
30-34	1.98	0.22
35-39	2.69	0.22
40-44	2.64	0.25
45-49	2.30	0.25
50-54	2.55	0.35
55-59	2.49	0.41
60-64	3.53	0.56
65+	2.41	0.37
Unknown	0.95	0.24

Note: Table shows coefficients and associated standard errors on the control variables for the specification corresponding to column 1 of Table 9 in the main body of the paper.

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Table A7: Robustness Checks to Main Results

	Panel A: Friends from Different State			
	P(Own in 2012)		100 x Log(Size)	100 x Log(Price)
	(1)	(2)	(3)	(4)
Δ Friend County House Prices	0.525***	0.161***	0.356***	0.547***
Different State Past 24 Months (%)	(0.045)	(0.018)	(0.067)	(0.018)
Controls as in	Table 6, Col1 2010 Renters	Table 6, Col1 2010 Owners	Table 8, Col1	Table 9, Col1
R-Squared	0.434	0.564	0.194	0.808
N	433,757	1,035,523	526,423	523,129
	Panel B: Past 12 Month			
	P(Own in 2012)		100 x Log(Size)	100 x Log(Price)
	(1)	(2)	(3)	(4)
Δ Friend County House Prices	0.720***	0.213***	0.191***	0.501***
Past 12M, 24M Equivalent (%)	(0.050)	(0.018)	(0.042)	(0.020)
Controls as in	Table 6, Col1 2010 Renters	Table 6, Col1 2010 Owners	Table 8, Col1	Table 9, Col1
R-Squared	0.434	0.564	0.194	0.807
N	433,836	1,035,523	526,423	523,129
	Panel C: Past 36 Month			
	P(Own in 2012)		100 x Log(Size)	100 x Log(Price)
	(1)	(2)	(3)	(4)
Δ Friend County House Prices	0.314***	0.100***	0.357***	0.349***
Past 36M, 24M Equivalent (%)	(0.042)	(0.009)	(0.053)	(0.013)
Controls as in	Table 6, Col1 2010 Renters	Table 6, Col1 2010 Owners	Table 8, Col1	Table 9, Col1
R-Squared	0.434	0.564	0.191	0.812
N	433,836	1,035,523	526,423	523,129
	Panel D: Past 48 Month			
	P(Own in 2012)		100 x Log(Size)	100 x Log(Price)
	(1)	(2)	(3)	(4)
Δ Friend County House Prices	0.241***	0.076***	0.421***	0.304***
Past 48M, 24M Equivalent (%)	(0.020)	(0.007)	(0.054)	(0.011)
Controls as in	Table 6, Col1 2010 Renters	Table 6, Col1 2010 Owners	Table 8, Col1	Table 9, Col1
R-Squared	0.434	0.564	0.191	0.812
N	433,836	1,035,523	526,423	523,129

Note: Table shows robustness of the results from the main instrumental variables regressions in Tables 6, 8, and 9 in the main body of the paper. Panel A uses the house price experiences over the past 24 months of individuals' out-of-state friends to instrument for the house price experiences of all friends. Panels B to D show our standard instrumental variables estimates where we measure friends' house price experiences over the previous 12 months, 36 months, and 48 months. To make magnitudes comparable, these house price experiences are scaled to represent the 24-months equivalents. Specifications and standard errors are as described in the original tables. Significance Levels: * (p<0.10), ** (p<0.05), *** (p<0.01).

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Table A8: Differential Effects by Age

	P(Own in 2012)		100 x Log(Size)	100 x Log(Price)
	(1)	(2)	(3)	(4)
Δ Friend County House Prices Past 24 Months (%)				
Age < 30 Years	0.607***	0.353***	0.320***	0.462***
	(0.080)	(0.042)	(0.054)	(0.015)
30 Years < Age < 50 Years	0.713***	0.255***	0.289***	0.443***
	(0.061)	(0.029)	(0.051)	(0.015)
Age > 50 Years	0.314***	0.061***	0.345***	0.454***
	(0.091)	(0.018)	(0.054)	(0.017)
Controls	Table 6 Column 1 2010 Renters	Table 6 Column 1 2010 Owners	Table 8 Column 1	Table 9 Column 1
P-Value (High Age == Low Age)	0.017	0.000	0.141	0.371
R-Squared	0.434	0.564	0.194	0.808
N	433,836	1,035,523	526,544	523,249

Note: Table shows results from the main instrumental variables regressions in Tables 6, 8, and 9 in the main body of the paper, where we analyze the effect of friends' house price experiences separately by the age of individuals. Specifications and standard errors are as described in the original tables. Significance Levels: * (p<0.10), ** (p<0.05), *** (p<0.01).

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Table A9: Differential Effects by Education Level

	P(Own in 2012)		100 x Log(Size)	100 x Log(Price)
	(1)	(2)	(3)	(4)
Δ Friend County House Prices Past 24 Months (%)				
Highschool	0.514***	0.171***	0.294***	0.448***
	(0.079)	(0.027)	(0.054)	(0.015)
College	0.520***	0.149***	0.274***	0.443***
	(0.094)	(0.027)	(0.053)	(0.015)
Graduate School	0.473***	0.105***	0.286***	0.436***
	(0.185)	(0.035)	(0.055)	(0.017)
Controls	Table 6 Column 1 2010 Renters	Table 6 Column 1 2010 Owners	Table 8 Column 1	Table 9 Column 1
P-Value (Highschool == Graduate School)	0.845	0.145	0.527	0.113
R-Squared	0.434	0.564	0.194	0.808
N	433,836	1,035,523	526,594	523,299

Note: Table shows results from the main instrumental variables regressions in Tables 6, 8, and 9 in the main body of the paper, where we analyze the effect of friends' house price experiences separately by the education level of individuals in 2010. Specifications and standard errors are as described in the original tables. Significance Levels: * (p<0.10), ** (p<0.05), *** (p<0.01).

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Table A10: Differential Effects by Time Period

	100 x Log(Size)			100 x Log(Price)		
	(1)	(2)	(3)	(4)	(5)	(6)
Δ Friend County House Prices Past 24 Months (%)	0.364***	0.108**	0.525***	0.404***	0.487**	0.468***
	(0.073)	(0.042)	(0.144)	(0.023)	(0.018)	(0.023)
Controls as in	Table 8, Column 1	Table 8, Column 1	Table 8, Column 1	Table 9, Column 1	Table 9, Column 1	Table 9, Column 1
Time Period	2001-2006 Boom	2007-2009 Bust	2010-2012 Flat	2001 - 2006 Boom	2007-2009 Bust	2010-2012 Flat
R-Squared	0.208	0.164	0.135	0.774	0.796	0.842
N	186,747	81,480	95,552	185,066	80,173	95,202

Note: Table shows results from the main instrumental variables regressions in Tables 8 and 9 in the main body of the paper, separately for three different time periods: 2001-2006, a period where Los Angeles house prices were going up; 2007-2009, a period when Los Angeles house prices were going down; and 2010-2012, a period when Los Angeles house prices were relatively flat. Specifications and standard errors are as described in the original tables. Significance Levels: * ($p<0.10$), ** ($p<0.05$), *** ($p<0.01$).

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Table A11: Expectation Whether Buying Property is a Good Investment

	Dependent Variable: Local Housing a Good Investment? (Question 4)				
	(1)	(2)	(3)	(4)	(5)
Δ Friend County House Prices 2013-2015 (%)	1.075**	1.067**			
	(0.032)	(0.038)			
Δ Friend County House Prices 2013-2015 (%) x Ordering of Question					
Expectation Question Last			1.069**		
			(0.032)		
Expectation Question First			1.091**		
			(0.034)		
Δ Friend County House Prices 2013-2015 (%) x Knowledge of HP where Friends Live					
Not at all informed				1.008	
				(0.061)	
Somewhat informed				1.086	
				(0.056)	
Well informed				1.099*	
				(0.078)	
Very well informed				1.216*	
				(0.173)	
Δ Friend County House Prices 2013-2015 (%) x Talk with Friends about Housing Investment					
Never					0.959
					(0.057)
Rarely					1.013
					(0.048)
Sometimes					1.130***
					(0.053)
Often					1.253**
					(0.144)
Demographic Controls	Y	Y	Y	Y	Y
Zip Code Fixed Effects	Y	Y	Y	Y	Y
Sample		LA in 2012			
N	1,242	1,110	1,242	1,242	1,242

Note: Table shows results from a conditional ordered logit estimation of regression 8 in the main body of the paper. The dependent variable is the answer to survey Question 4: "If someone had a large sum of money that they wanted to invest, would you say that relative to other possible financial investments, buying property in your zip code today is: (1) A very bad investment, (2) A somewhat bad investment, (3) Neither good nor bad as an investment, (4) A somewhat good investment, or (5) A very good investment. Column 1 shows the baseline estimates. Column 2 restricts the sample to respondents who lived in Los Angeles in 2012. The last three columns estimate differential effects by the ordering of the questions (column 3), by how informed respondents claimed to be about their friends' house price experiences (column 4), and by how often respondents report talking to their friends about whether buying property is a good investment (column 5). The specifications in columns 3, 4, and 5, also include non-interacted indicator variables for the question ordering, and the possible responses to Questions 2 and 3, respectively; in the interest of space, the corresponding coefficients are not reported. All columns also control for respondent age and gender. Standard errors are in parentheses. Significance Levels: * (p<0.10), ** (p<0.05), *** (p<0.01).

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Table A12: Differential Effects by Type of Social Network

	Panel A: Family Network			
	P(Own in 2012)		100 x Log(Size)	100 x Log(Price)
	(1)	(2)	(3)	(4)
Δ Friend County House Prices Past 24 Months (%)	0.627***	0.243***	0.355***	0.430***
	(0.120)	(0.048)	(0.075)	(0.035)
Controls as in	Table 6 Column 1 2010 Renters	Table 6 Column 1 2010 Owners	Table 8 Column 1	Table 9 Column 1
R-Squared	0.470	0.602	0.197	0.809
N	266,882	597,903	320,777	319,059
	Panel B: Same College Network			
	P(Own in 2012)		100 x Log(Size)	100 x Log(Price)
	(1)	(2)	(3)	(4)
Δ Friend County House Prices Past 24 Months (%)	0.645***	0.266***	0.515***	0.429***
	(0.151)	(0.062)	(0.101)	(0.046)
Controls as in	Table 6 Column 1 2010 Renters	Table 6 Column 1 2010 Owners	Table 8 Column 1	Table 9 Column 1
R-Squared	0.513	0.652	0.213	0.816
N	131,371	303,393	161,788	160,423
	Panel C: Same Employer Network			
	P(Own in 2012)		100 x Log(Size)	100 x Log(Price)
	(1)	(2)	(3)	(4)
Δ Friend County House Prices Past 24 Months (%)	0.940***	0.428***	0.311***	0.383***
	(0.261)	(0.115)	(0.137)	(0.062)
Controls as in	Table 6 Column 1 2010 Renters	Table 6 Column 1 2010 Owners	Table 8 Column 1	Table 9 Column 1
R-Squared	0.560	0.711	0.207	0.822
N	83,041	177,207	122,755	121,918

Note: Table shows robustness of the results from the main instrumental variables regressions in Tables 6, 8, and 9 in the main body of the paper, when we instrument for the overall house price experiences within individuals' social networks with the experience of three subsets of their out-of-commuting zone friends: members of their family (Panel A), individuals who went to the same college (Panel B), and individuals who have the same employer (Panel C). Not all individuals link their family members, or report their college and employer, so the sample sizes are smaller than in the baseline regressions. Specifications and standard errors are as described in the original tables. Significance Levels: * ($p<0.10$), ** ($p<0.05$), *** ($p<0.01$).

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Table A13: Robustness Checks with Sample Restrictions on Hometown

	Panel A - Hometown Los Angeles			
	P(Own in 2012)		100 x Log(Size)	100 x Log(Price)
	(1)	(2)	(3)	(4)
Δ Friend County House Prices Past 24 Months (%)	1.195***	0.285***	0.407***	0.543***
	(0.106)	(0.033)	(0.100)	(0.028)
Controls as in	Table 6 Column 1 2010 Renters	Table 6 Column 1 2010 Owners	Table 8 Column 1	Table 9 Column 1
R-Squared	0.435	0.610	0.185	0.803
N	143,768	374,733	166,118	165,469
	Panel B - Hometown Outside U.S.			
	P(Own in 2012)		100 x Log(Size)	100 x Log(Price)
	(1)	(2)	(3)	(4)
Δ Friend County House Prices Past 24 Months (%)	0.424***	0.178***	0.484***	0.498***
	(0.094)	(0.038)	(0.081)	(0.033)
Controls as in	Table 6 Column 1 2010 Renters	Table 6 Column 1 2010 Owners	Table 8 Column 1	Table 9 Column 1
R-Squared	0.481	0.622	0.178	0.841
N	63,998	122,115	74,300	74,006

Note: Table shows robustness of the results from the main instrumental variables regressions in Tables 6, 8, and 9 in the main body of the paper, when we restrict the sample to individuals whose hometown is Los Angeles (Panel A), and when we restrict the sample to individuals whose hometown is outside the United States (Panel B). Specifications and standard errors are as described in the original tables. Significance Levels: * (p<0.10), ** (p<0.05), *** (p<0.01).

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Table A14: Robustness Checks with Trading Volume Controls

	Panel A: Control for Change of Trading Volume			
	P(Own in 2012)		100 x Log(Size)	100 x Log(Price)
	(1)	(2)	(3)	(4)
Δ Friend County House Prices Past 24 Months (%)	0.621***	0.199***	0.267***	0.460***
	(0.043)	(0.015)	(0.049)	(0.016)
Friend County Housing Trading Volume				
Δ Last 24 Months (%)	0.002	-0.000	-0.008**	0.009***
	(0.002)	(0.001)	(0.003)	(0.001)
Controls as in	Table 6 Column 1 2010 Renters	Table 6 Column 1 2010 Owners	Table 8 Column 1	Table 9 Column 1
R-Squared	0.434	0.564	0.176	0.800
N	433,813	1,035,495	389,504	386,238
	Panel B: Control for Change and Level of Trading Volume			
	P(Own in 2012)		100 x Log(Size)	100 x Log(Price)
	(1)	(2)	(3)	(4)
Δ Friend County House Prices Past 24 Months (%)	0.519***	0.177***	0.267***	0.464***
	(0.047)	(0.017)	(0.049)	(0.015)
Friend County Housing Trading Volume				
Δ Last 24 Months (%)	0.010***	0.001*	-0.008**	0.020***
	(0.002)	(0.001)	(0.003)	(0.002)
Level	-0.011***	-0.002***	0.002**	-0.021***
	(0.001)	(0.001)	(0.002)	(0.002)
Controls as in	Table 6 Column 1 2010 Renters	Table 6 Column 1 2010 Owners	Table 8 Column 1	Table 9 Column 1
R-Squared	0.434	0.564	0.176	0.801
N	433,813	1,035,495	389,504	386,238

Note: Table shows robustness of the results from the main instrumental variables regressions in Tables 6, 8, and 9 in the main body of the paper, when we also include average county trading volume and its changes over the past 24 months for all members of individuals' social networks as control variables. This trading volume is measured as the fraction of the housing stock that transacts every year. Specifications and standard errors are as described in the original tables. Significance Levels: * (p<0.10), ** (p<0.05), *** (p<0.01).

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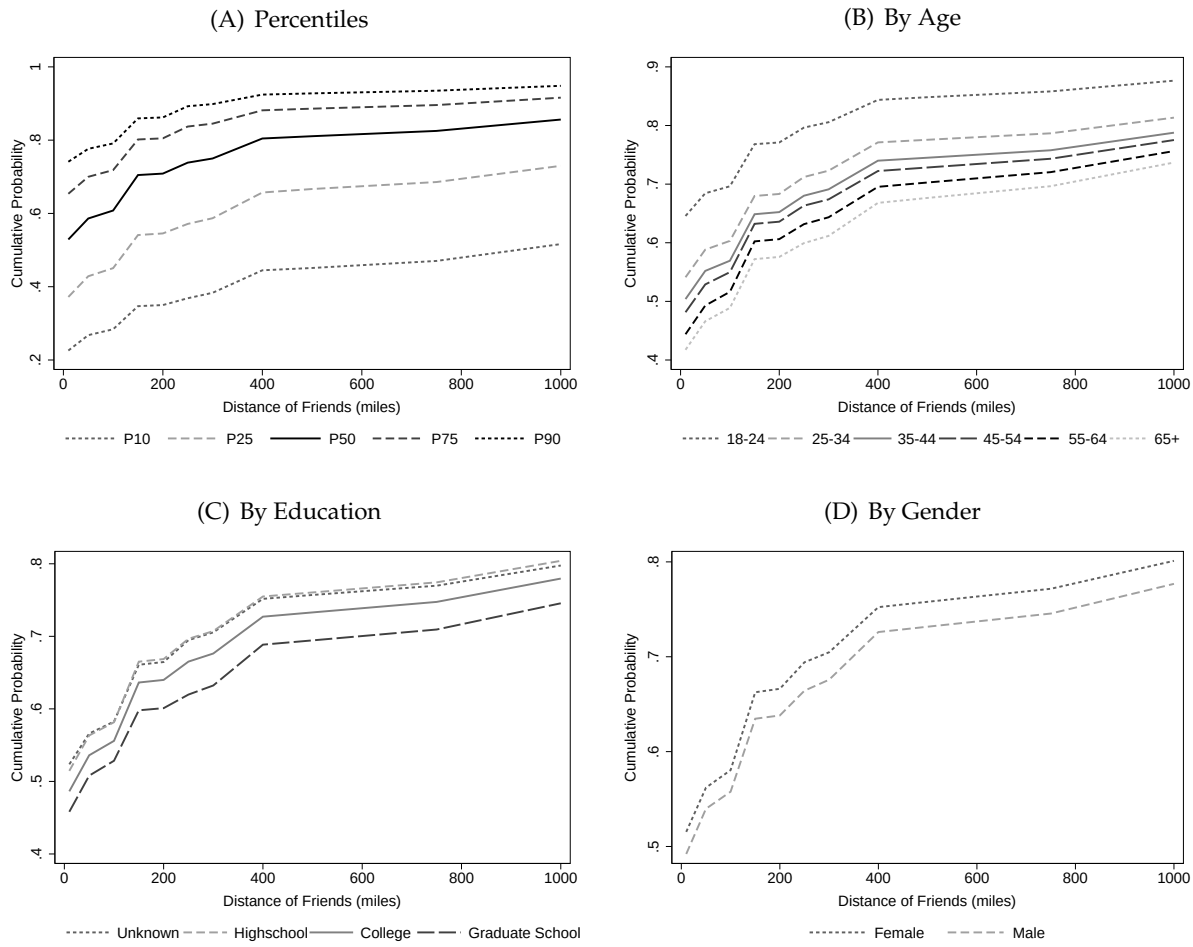
Figure A1: Geographic Spread of Social Network: Change-of-Tenure Sample



Note: Figure shows the share of U.S.-based friends of individuals in our change-of-tenure sample that live within a certain distance of Los Angeles county. The change-of-tenure sample consists of Facebook users who lived in Los Angeles County in 2010, and whom we can match across the 2010 and 2012 Acxiom snapshots. Panel A shows, for each distance, percentiles of the distribution across the sample population. Panels B, C, and D show averages for population groups split by age, education level, and gender, respectively.

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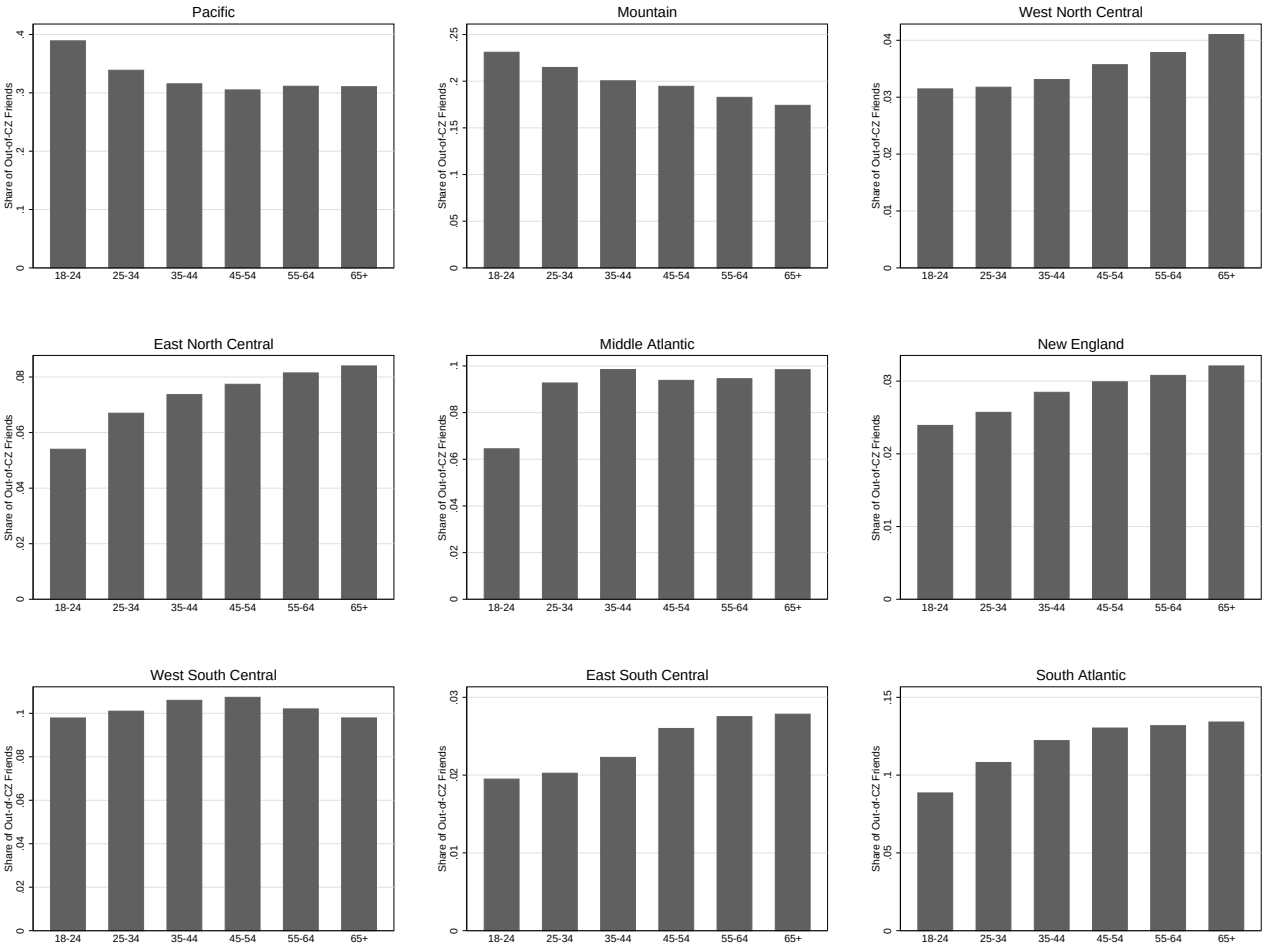
Figure A2: Census Division of Out-of-Commuting Zone Friends By Age



Note: Figure shows the share of the U.S.-based out-of-commuting zone friends of individuals in the change-of-tenure sample that live in each of the nine census divisions, separately by the age of the individual. The change-of-tenure sample consists of Facebook users who lived in Los Angeles County in 2010, and whom we can match across the 2010 and 2012 Acxiom snapshots.

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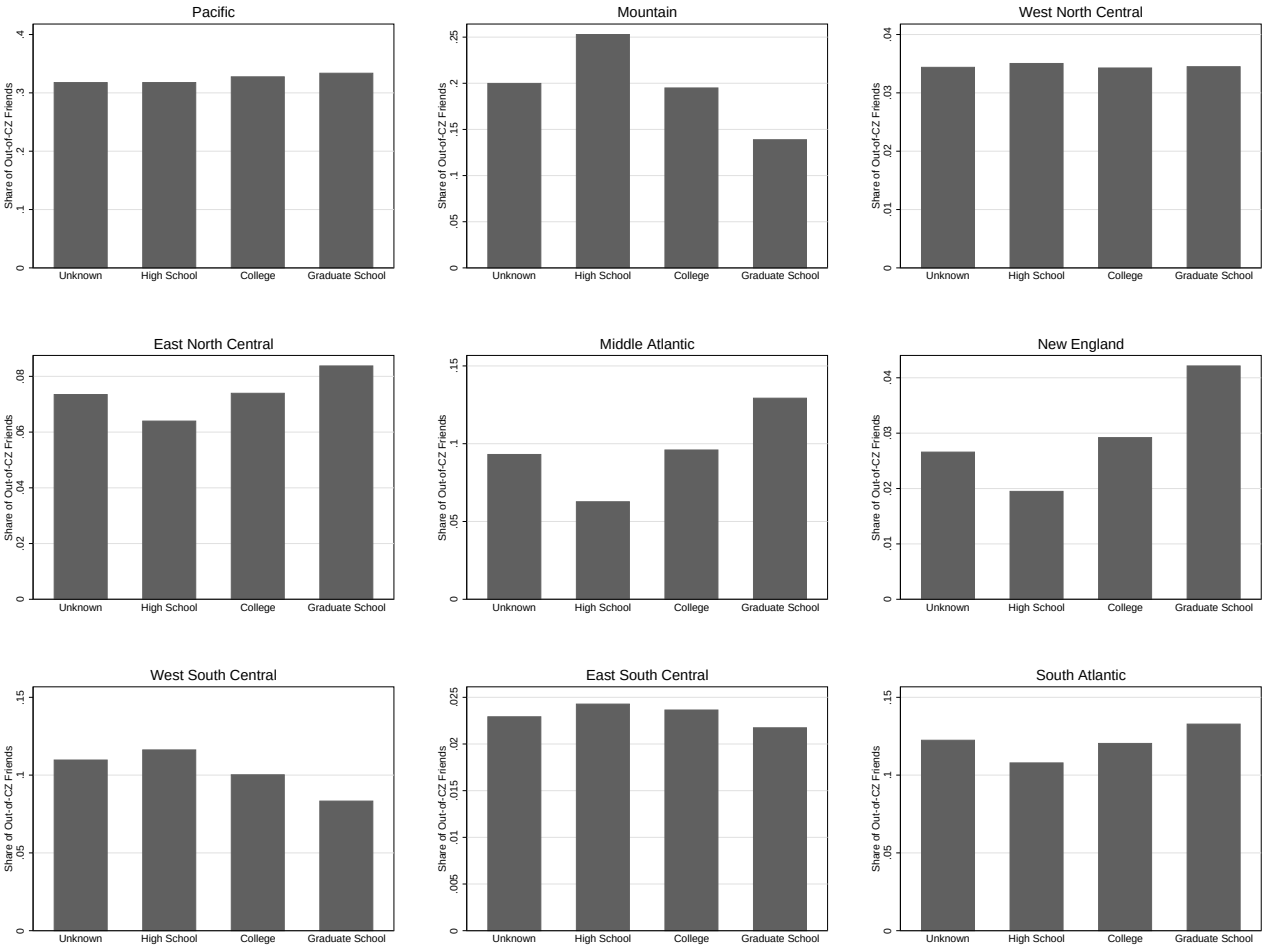
Figure A3: Census Division of Out-of-Commuting Zone Friends By Education



Note: Figure shows the share of the U.S.-based out-of-commuting zone friends of individuals in the change-of-tenure sample that live in each of the nine census divisions, separately by the education level of the individual. The change-of-tenure sample consists of Facebook users who lived in Los Angeles County in 2010, and whom we can match across the 2010 and 2012 Acxiom snapshots.

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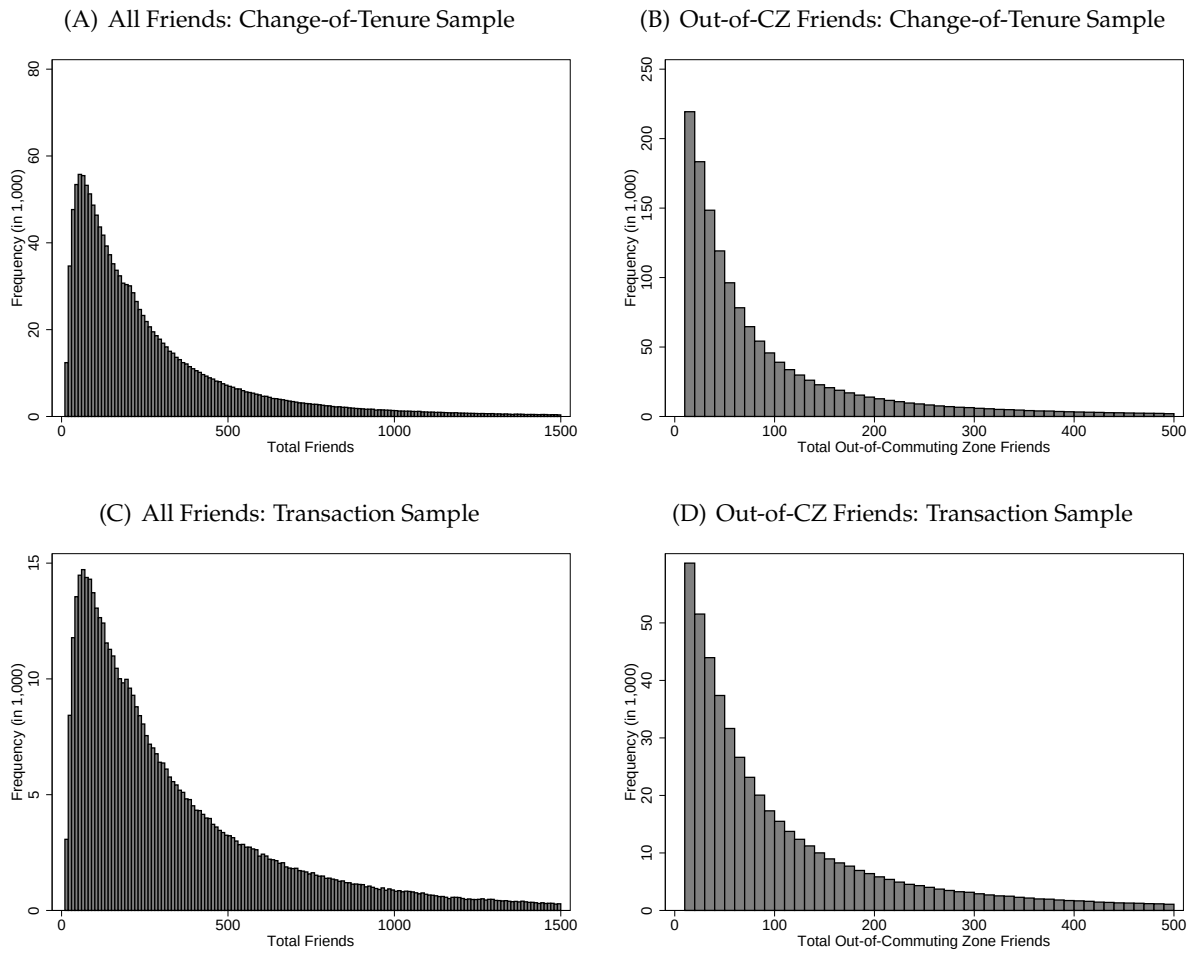
Figure A4: Distribution of Number of Friends



Note: Figure plots the distribution of the total number of friends (left column) and the total number of out-of-commuting zone friends (right column) for the individuals in the change-of-tenure sample (top row) and the buyers in the transaction sample (bottom row). The change-of-tenure sample consists of Facebook users who lived in Los Angeles County in 2010, and whom we can match across the 2010 and 2012 Acxiom snapshots. The transaction sample consists of all housing transactions by Facebook users in Los Angeles County between 1993 and 2012 that led to a homeownership spell that was still ongoing as of the 2010 or 2012 Acxiom snapshots. The bucket size in all Panels is 10 friends.

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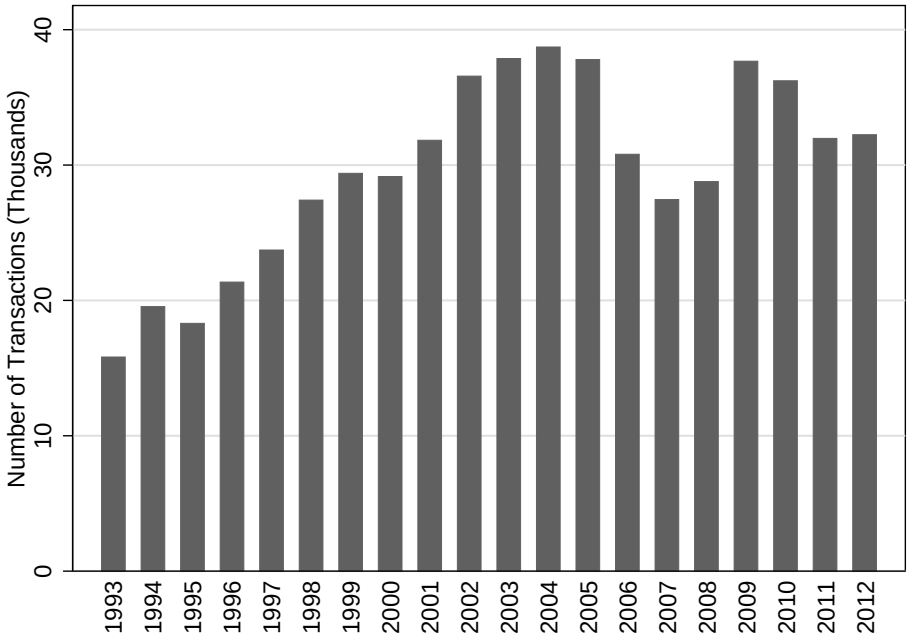
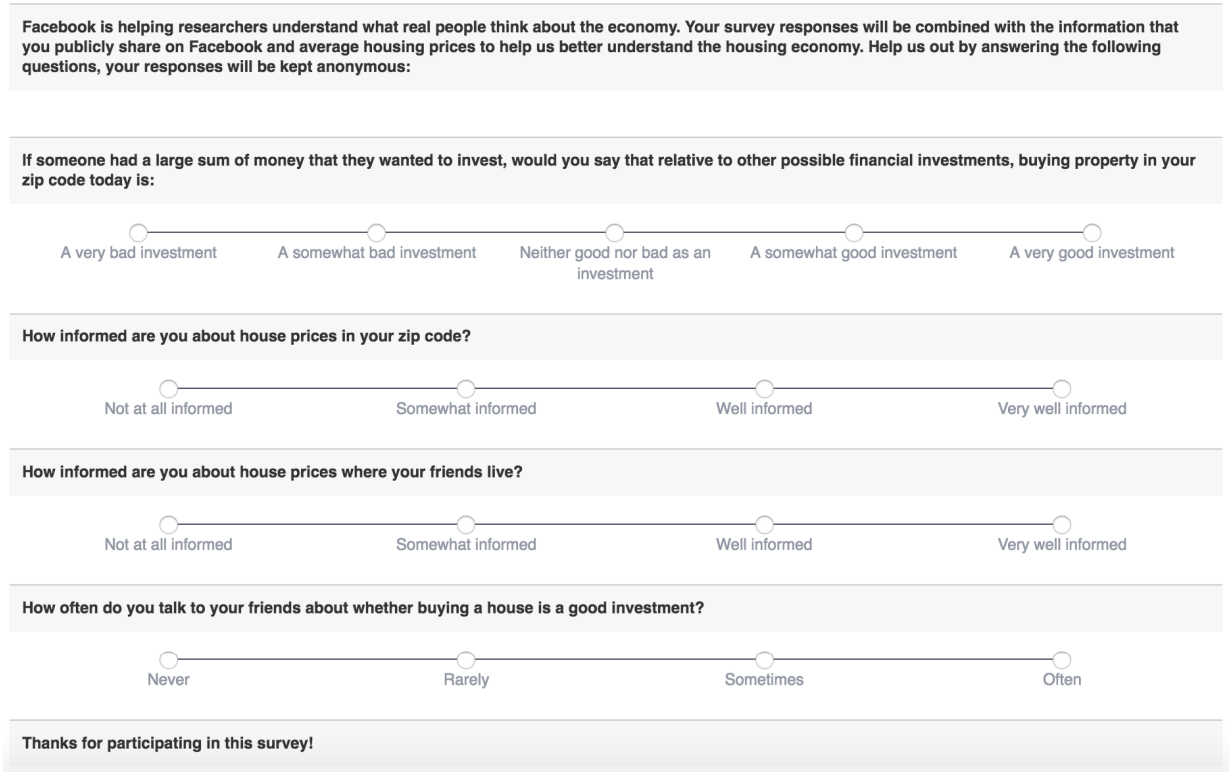
Figure A5: Number of Transactions by Year



Note: Figure shows the distribution of transactions across years in the transaction sample. The transaction sample consists of all housing transactions by Facebook users in Los Angeles County between 1993 and 2012 that led to a homeownership spell that was still ongoing as of the 2010 or 2012 Acxiom snapshots.

Figure A6: Interface of Expectations Survey



Note: Figure shows the graphical interface of the survey conducted by Facebook. We analyze the results of this survey in Section 4.1.

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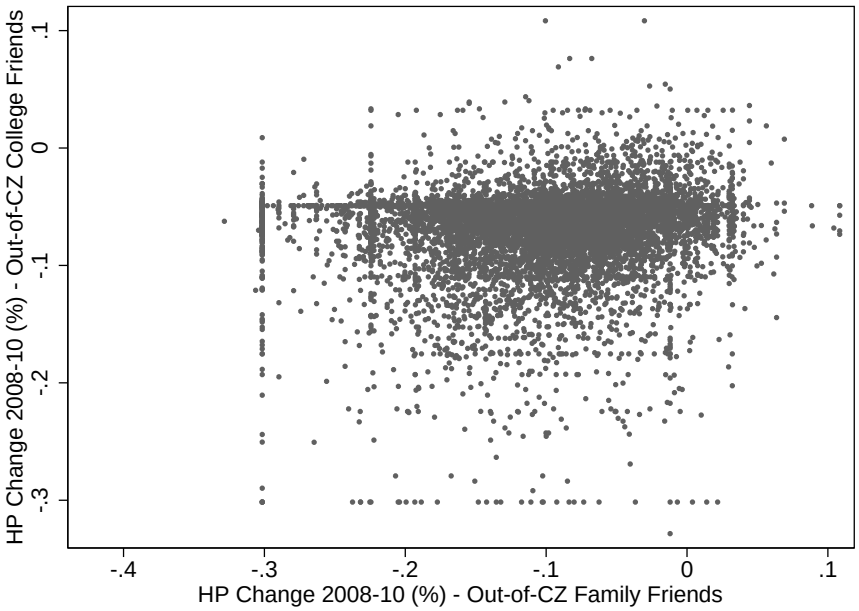
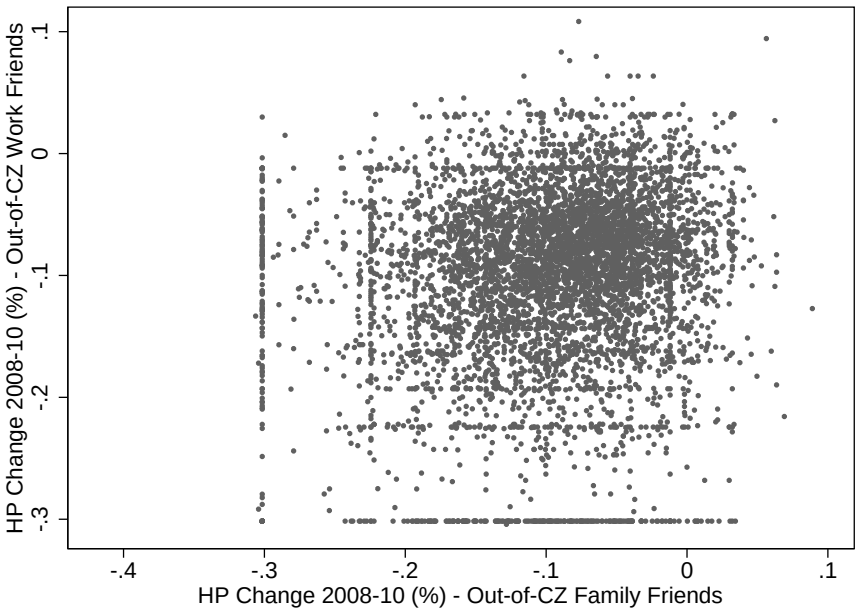
Figure A7: Correlation Between Experiences in Different Networks

(A) Family Friends vs. College Friends



(B) Family Friends vs. Work Friends



Note: Figure shows the correlation in the change-of-tenure sample between the 2008-2010 house price experiences of out-of-commuting zone family members and out-of-commuting zone college friends (Panel A), and between the 2008-2010 house price experiences of out-of-commuting zone family members and out-of-commuting zone work friends (Panel B). The change-of-tenure sample consists of Facebook users who lived in Los Angeles County in 2010, and whom we can match across the 2010 and 2012 Acxiom snapshots.