

## Project Report

# The Role of Transport in How We Choose Where to Live: A Qualitative Investigation of Residential Location Choice in the Phoenix, AZ Region

Prepared for Teaching Old Models New Tricks (TOMNET) Transportation Center



By,

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## **ABSTRACT**

In the literature on the relationship between transportation and land use, one of the key questions is that of residential self selection. How much does the transportation environment affect households' choices about where to live? Here, we add to this literature with an interview-based study of the residential choices made by 46 recent homebuyers in the Phoenix, AZ metropolitan region. The study's main goals were (1) to understand how households make home buying decisions, and (2) to investigate the role of transportation-related factors in these decisions. Overall, we found remarkable diversity in the home buying decision processes and outcomes among households in our sample, even when those households were demographically similar. Focusing on the role of transport, we find that many homebuyers consider proximity to key destinations when choosing their home, but only a small minority prioritize access to modes of transport other than the private car. It may be that the prevailing culture of car dependence in the Phoenix region limits both homebuyers' actual options as well as their capacity to even imagine multimodal living.

## **INTRODUCTION**

Think back to when you chose where you live now. Did you prioritize features of the home itself, such as size, layout, your dream kitchen, a certain style of architecture, or the landscaping? Did you prioritize features of the neighborhood like walkable streets, proximity to shops and services, good local schools, or low neighborhood crime rates? How important was it to you that your home location was close to work, close to your kids' school, close to public transit, or close to family or friends?

There is a large literature that focuses on how households make residential location choices, finding that factors such as those listed above are important. Statistical models of survey data dominate the literature on how people choose where to live (e.g. Bayoh, Irwin, & Haab, 2006; Bhat, 2015; Liao, Farber, & Ewing, 2015; Lu, Southworth, Crittenden, & Dunhum-Jones, 2015). Assumptions about information availability and "rational" choice behavior are often embedded in these statistical models. These assumptions may be approximately valid across a population for simpler choices such as the transport mode for a particular trip, or even aspects of the residential choice such as whether to rent or buy a home. However, we argue that the homebuyer's choice is an especially complex one made in diverse ways by different households, and this diversity is difficult to capture in a quantitative modeling context.

There is a related large literature on the role of neighborhood "self selection" in models of transport choices (e.g. Ettema & Nieuwenhuis, 2017; Gehrke, Currans, & Clifton, 2018; Salon, 2009; Schwanen & Mokhtarian, 2005). Scholars here generally simplify the home choice to be only a choice of neighborhood – or even the choice of a type of neighborhood – and focus on the question of the extent to which people's transport preferences play a role in their choice of where to live. Again, survey data-based quantitative models of neighborhood choice – often joint with transport choices – dominate this literature. A consensus of sorts has been reached which points to some degree of neighborhood "self-selection", but which also suggests that a sizable fraction of households end up choosing to live in neighborhoods that are not "consonant" with their transport preferences.

We posit that understanding why this might be true requires taking a qualitative approach, delving into the complete home choice stories of recent homebuyers. The literature includes relatively few studies of the home choice process that use in-depth interviews as evidence. Those that are available are often focused on the social constructs within which these choices are made (Levy & Lee, 2011; Winstanley, Thorns, & Perkins, 2002), a racial minority or low-income

subpopulation (Pfeiffer, 2012; Reid, 2013), or methodological contributions to the literature (Khoo-Lattimore, Thyne, & Robertson, 2009). Few focused on the role of the transportation context in the residential choice. Chatman (2009) explored this role in more depth than others for the San Francisco Bay Area context, and Senior, Webster, & Blank (2004) explored it in the U.K. context.

We contribute to both the residential choice and the self-selection literatures with a qualitative exploration of how households make choices about where to live in the Phoenix metropolitan area, with a focus on the role of the transportation context in that choice. Specifically, we use rich, in-depth interview data as evidence to discuss why households move, which home and neighborhood factors are most important in the home buying choice, constraints on the choice process that lead to particular outcomes, and take a deeper dive into the role of transport-related factors in the home choice.

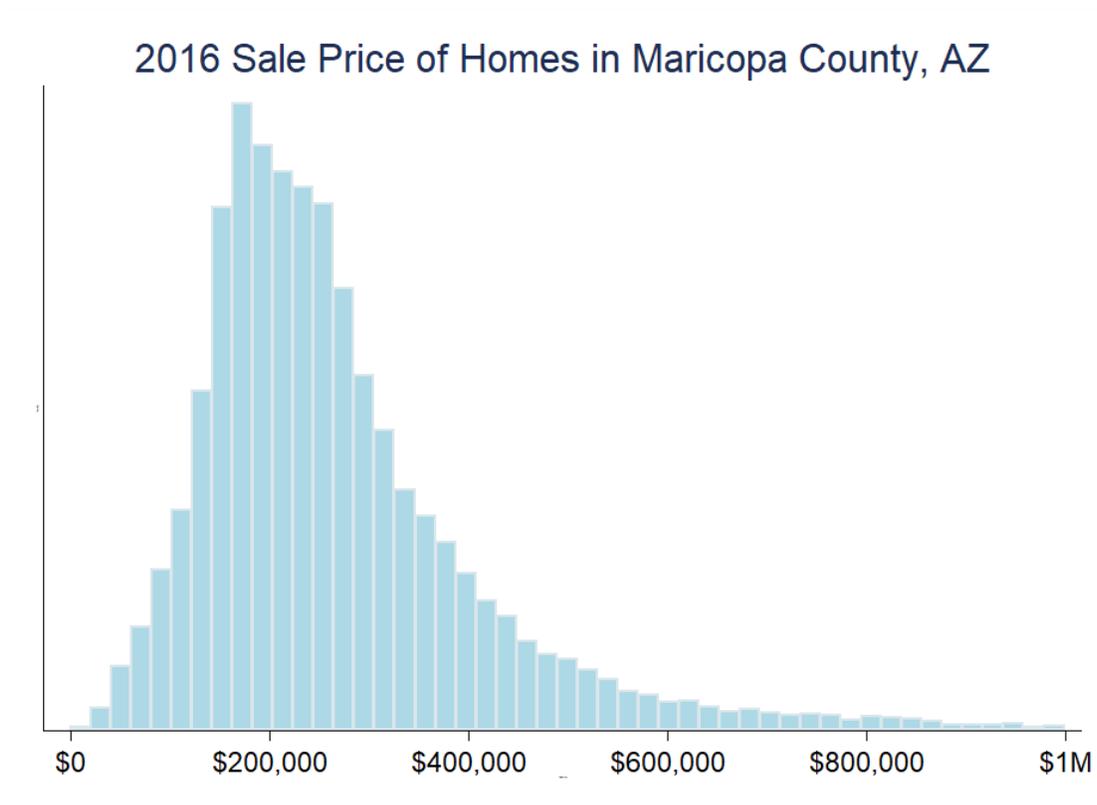
## **REAL ESTATE MARKET AND TRANSPORTATION SYSTEM CONTEXT FOR PHOENIX, ARIZONA**

The Phoenix, Arizona metropolitan area has a population of nearly 5 million across more than 14,500 square miles of desert. Like many cities in the U.S. Southwest region, Phoenix is one of the fastest growing urban areas in the country, averaging annual population growth of 2.0% for the past 5 years. Dubbed the “Valley of the Sun” for its hot and sunny climate, the topography is largely flat, with a few rocky outcroppings and small mountains dotting the landscape. 67% of the homes in Maricopa County, which encompasses nearly all of the Phoenix metropolitan area, are single-family detached homes. For reference, this is substantially higher than the US urban area average, which is 59% (United States Census Bureau, 2017). Many observers characterize the region as a large suburb with multiple small and mid-sized job centers.

In the Phoenix real estate market, there are a lot of homes available at prices that are affordable to many of the region’s households. In 2016, the median annual income of Phoenix area homebuyers was just over \$70,000 (*Home Mortgage Disclosure Act Loan Application Register Data*, 2016), which is only 11% higher than the Phoenix MSA’s median family income for that year (\$62,900). The median sale price of homes sold in 2016 was \$239,022, and Figure 1 illustrates the full price distribution. The median square footage of homes sold in 2016 was 1,781 (Maricopa County Assessor, 2017).

Another feature of the Phoenix MSA real estate market is that a remarkably large fraction of homes sold are newly constructed. Specifically, more than 11% of the homes sold in the county in 2016 were built in either 2015 or 2016 (Maricopa County Assessor, 2017). Much of this new development is happening on the fringes of the metropolitan area in sizable new single family home neighborhoods.

Residential neighborhoods are largely car-oriented with pockets of transit accessibility, walkability, and bikeability. Traffic is congested during peak commuting hours, but mean commute times remain at the national average of approximately 26 minutes between 2013 and 2017 (United States Census Bureau, 2017). 88% of commuters in the Phoenix Metropolitan Statistical Area (MSA) drive to work, and 94% of households have at least one vehicle available (United States Census Bureau, 2017).



**Figure 1: Distribution of Sale Prices of Maricopa County Homes, 2016 (Maricopa County Assessor, 2017)**

The region is changing as it grows. The downtowns of the region’s major cities are becoming denser and taller, transforming with the help of local zoning changes. Phoenix is making a large investment in a new light rail system, which opened its first line in 2008 traversing three of the region’s major cities: Phoenix, Tempe, and Mesa. Extensions and new lines are currently under construction. Bicycle infrastructure connects some of the region’s neighborhoods with employment and commercial centers, but major gaps in the bicycle network remain.

## **METHODS AND DATA**

This study employs semi-structured interviews to learn about the residential choice processes of recent homebuyers in the Phoenix, AZ metropolitan area. The interview protocol (see Appendix) was reviewed and approved by the Arizona State University Institutional Review Board.

In-depth, semi-structured interviews were conducted with 12 recent homebuyer households at their homes between March 2018 and March 2019. The study participants were recruited by email using the authors’ personal connections, so all participants were within two “degrees of separation” from one of the study’s authors. Each of these interviews lasted approximately one hour, and participant households were offered a \$50 gift card to the online retailer of their choice for their participation in the study. Interviews were audio-recorded and later transcribed with the assistance of the online transcription service Trint.

The interviews included five sets of questions that covered the following topics, in this order.

1. Why did you move?
2. What was your previous home and neighborhood like?
3. Tell us about your home choice process.

4. What were the key features you looked for in a home and neighborhood?
5. What was the role of the transportation context in your home choice?

Importantly, we purposefully did not ask about the transportation context until near the end of the interview, so that our special interest in this aspect of their choice process would not influence the rest of the conversation.

We concluded each interview with a visual preference segment, asking interviewees to react to sets of photographs of homes and neighborhoods in the region. Figures 2 through 5 are the image sets that we asked interviewees to comment on, each including photos of the outside of a home, a local park, a local shopping center, and a local streetscape. All of these images depict real places in the Phoenix metropolitan area. This visual preference segment allowed us to elicit interviewee preferences about a wider variety of home and neighborhood contexts than they would naturally mention in the context of a conversation about their actual home choice - which generally focused on how they chose between somewhat similar options.

Most notably, our image sets included both apartments and townhomes, as well as urban neighborhood features. Since none of our interviewees had actually chosen to live in one of the region's downtowns, discussion of these image sets gave us additional information about interviewee preferences about urban living.

In addition to the in-depth household interviews, a local realtor shared the home buying choice processes for 34 of her recent clients based on an abbreviated version of our interview protocol. Our full sample, then, includes 46 households that purchased homes in the Phoenix region within 2 years of the interview date.

Our sample included a variety of homebuyer ages and household structures (see Figure 6). Most of the homebuyers in our sample were in their 20's and 30's, and nearly all of these were first-time homebuyers. This is consistent with national trends indicating that the median first-time homebuyer age was 34 in 2017 (Rieger, Spader, & Veal, 2019). The household structure across our sample was quite evenly distributed between single individuals, couples, and households with parents and children. We did not ask interviewees to share their personal financial status, but the prices of the homes they purchased provide one indication of this (see Figure 8).



**Figure 2: Visual preference bundle 1**



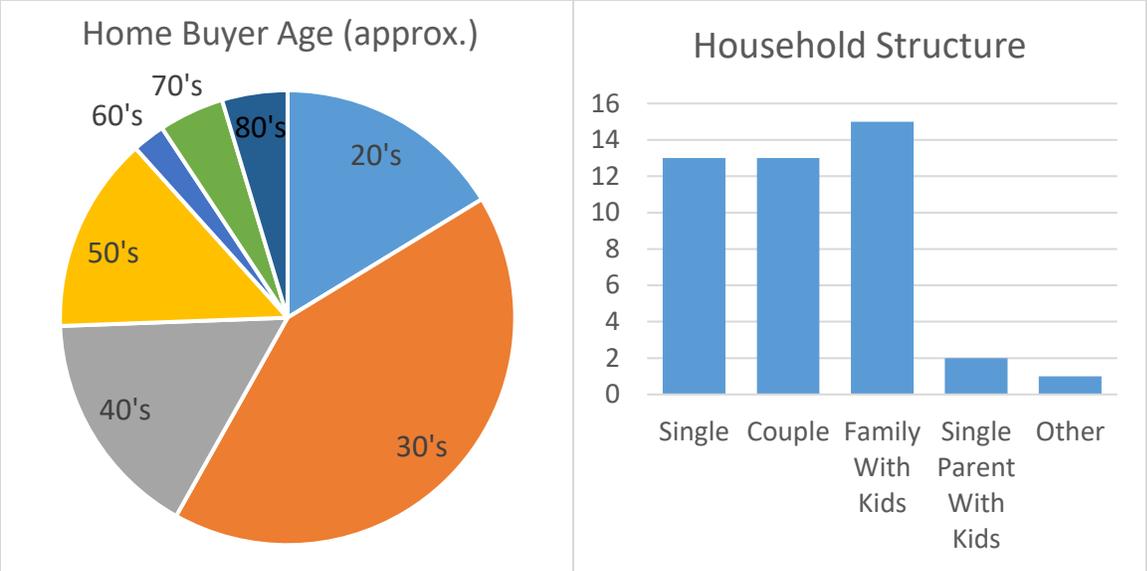
**Figure 3: Visual preference bundle 2**



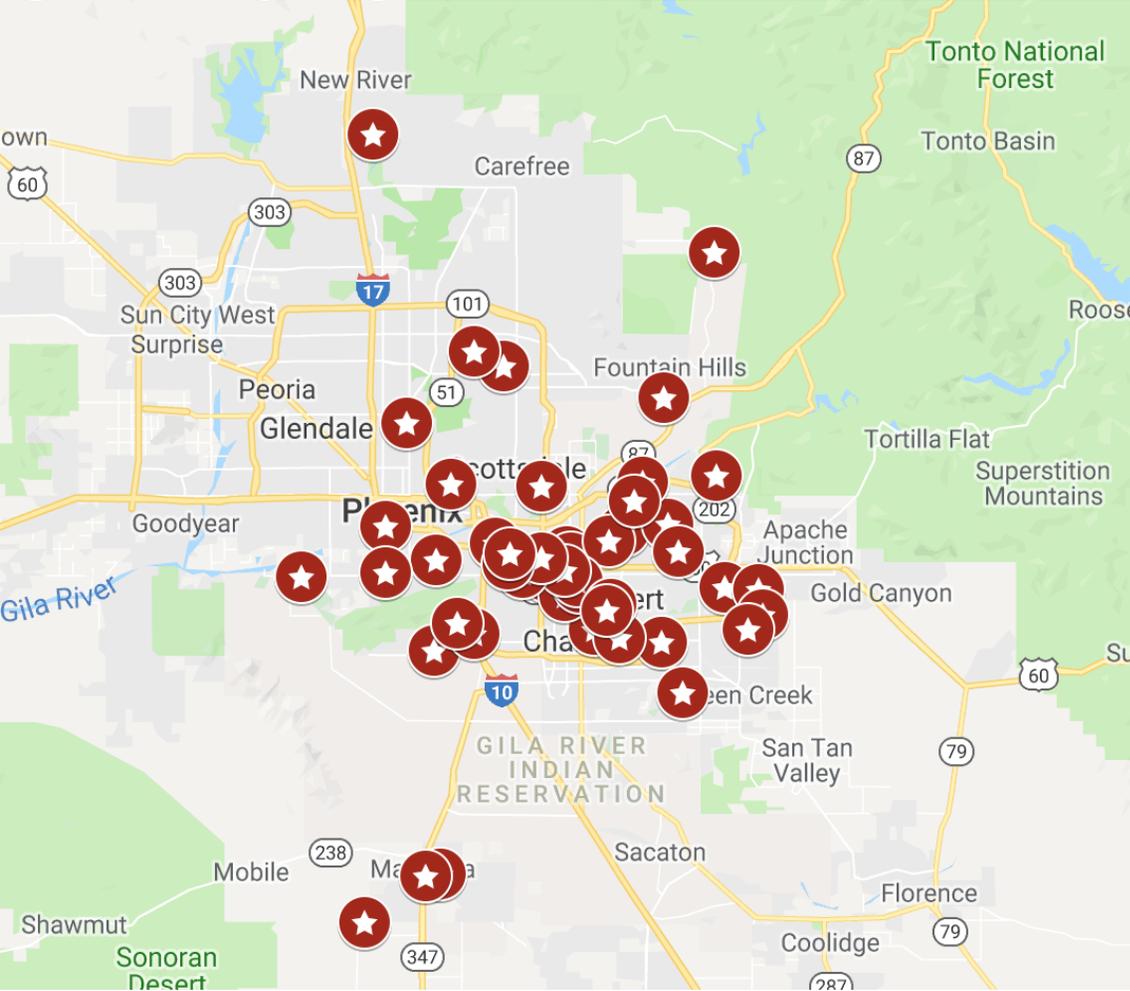
**Figure 4: Visual preference bundle 3**



**Figure 5: Visual preference bundle 4**

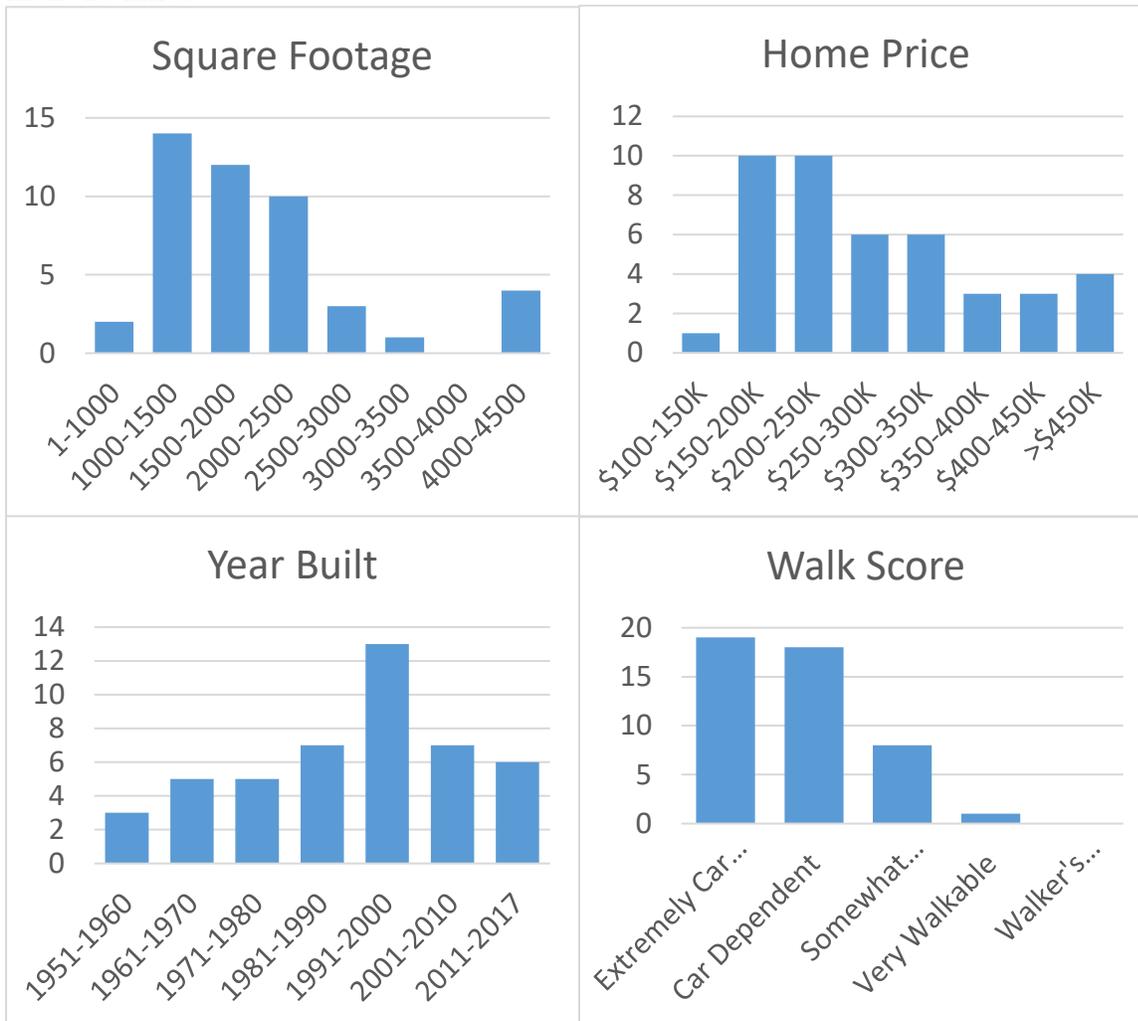


**Figure 6: Home Buyer Sample Characteristics**



**Figure 7: Mapped Locations of the Homes Purchased by our Sample, Scale Approx. 1**

inch≈13 miles



**Figure 8: Characteristics of the homes purchased by households in our sample**

Price was a binding constraint for most households in our sample, and four households in our sample used a first-time homebuyer government assistance program to help with the down payment.

Figure 7 illustrates the geographic distribution of the homes purchased by households in our sample. These homes are largely in the eastern portion of the Phoenix metropolitan area, with a few farther north and south. The homes ranged in size from 2-bedroom condominiums and townhomes of around 1000 square feet up to 5-bedroom single family homes that are more than 4000 square feet. Most of the homes were between 1200 and 2500 square feet and had 3 bedrooms, similar to the Maricopa County home size distribution. The distribution of sale prices paid by the households in our sample was slightly higher than that of homes sold in the County in 2016 (see Figures 1 and 8). This is at least partly related to their location; homes in the eastern part of the Phoenix area are slightly more expensive than those in the western part. The distribution of the neighborhood walkability metric developed by walkscore.com also seems roughly representative of the metropolitan area, with only one household having purchased a home in a “very walkable” area.

While we cannot claim that our sample is truly representative of homebuyers in the Phoenix

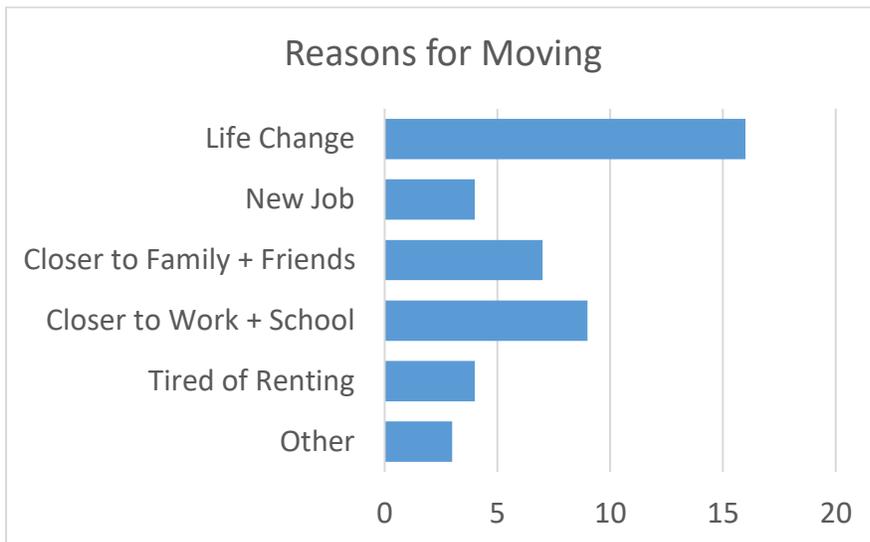
metropolitan area, the sample does represent a diverse set of homebuyers and home on nearly every dimension: (age, household type, home type, home neighborhood, home size, and home price).

Our analysis approach began by first identifying the top three things that each homebuyer household was looking for, and analyzing those data. Then we analyzed the interview text to identify themes in the stories of the homebuying process. Finally, we looked at the evidence on people’s preferences for sustainable transport in their neighborhoods, again aiming to identify themes.

## RESULTS

### Why Households Move

Consistent with prior research and our expectations, nearly half of the households in our sample were motivated to move by a large change in some aspect of their life situation. This change can be a household structural change such as marriage, divorce, death, or birth. Retirement or changes in employment or school location for one or more household members can also prompt a move.



**Figure 9: Sample Household Motivations for Moving**

The moving motivations of the other half of the households in our sample mostly fall into three main categories: the desire to be closer to family and/or friends, the desire to be closer to work or school, and the desire to own a home rather than rent. Figure 9 illustrates the distribution of these moving motivations in our sample. For some households, more than one motivation contributed to the decision to move. For instance, marriage and a desire to own rather than rent often occur at the same time for a household. In these cases, the motivation tallied in Figure 9 is “life change”, since we viewed this as the dominant motivation.

### Key factors in home and neighborhood choice

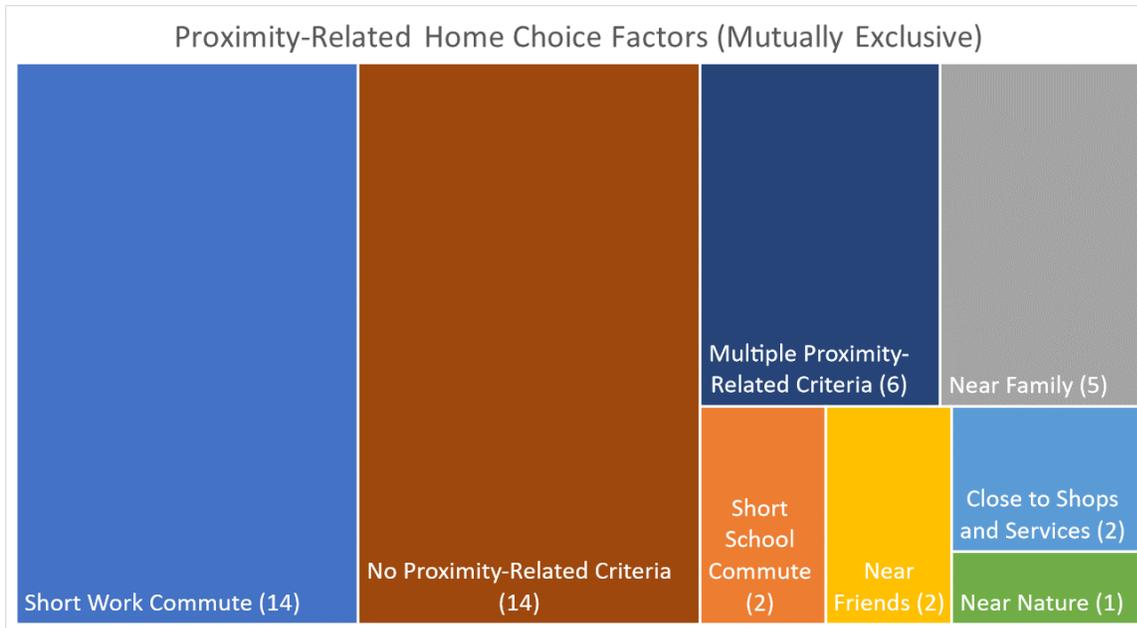
How did people actually make their home buying choices? There was remarkable diversity in the stories we heard, even among households that had similar demographics and job locations. To begin to make sense of the individual and idiosyncratic stories, we extracted what we think were the top 1-4 factors that influenced each household’s home choice, and analyzed these.

It is important to note that these “top” factors are co-determined by the preferences of the

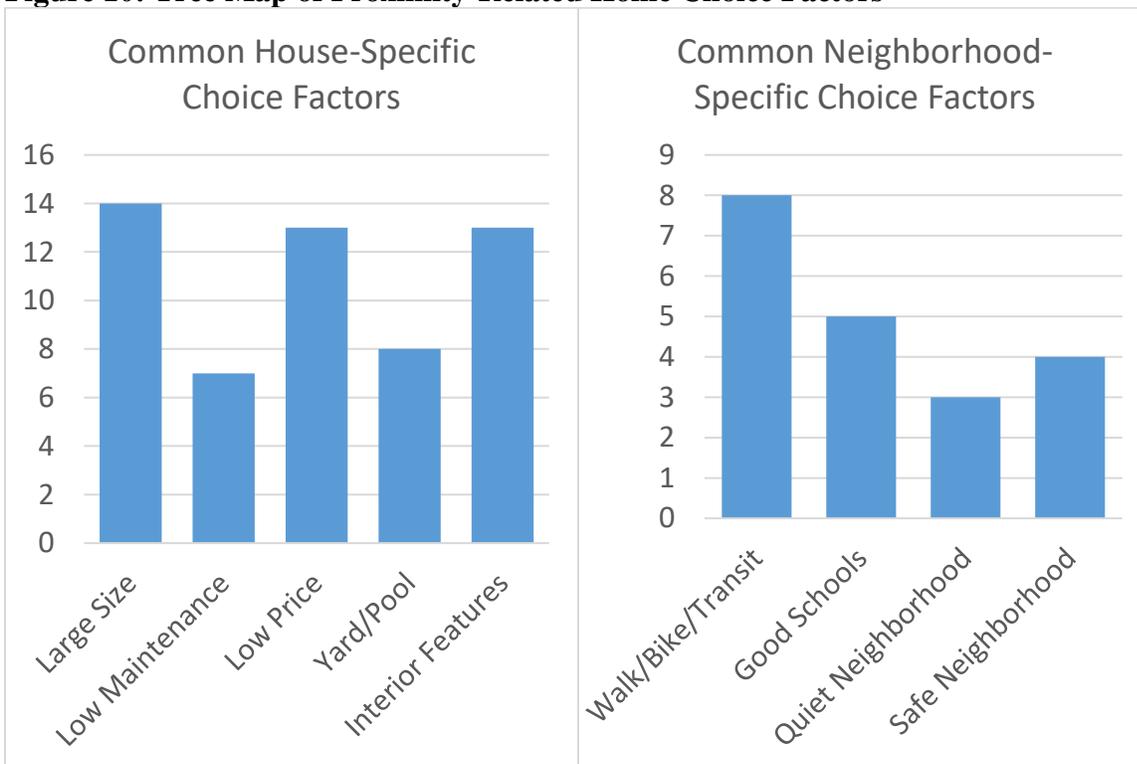
household and the context within which the household made the home choice. Specifically, when there is little variation on a certain factor between home options that a household is seriously considering, then the household may not report that factor as one that was critical in their decision. For instance, we noticed that the households that mentioned wanting a “safe neighborhood” are largely those who bought relatively inexpensive homes. Households that bought more expensive homes may have not considered any homes in neighborhoods that are less “safe”, and therefore even if neighborhood safety was critical to them, this may not have been clear from the interview data. Despite this limitation, key home choice factor categorization illuminates important patterns in our data.

We divided the key home choice factors into proximity-related factors (e.g. short commute, near family, near nature), neighborhood quality factors (e.g. good schools, safe neighborhood), and house quality factors (e.g. updated kitchen, yard, newer home, but not including home price or size). Of the 46 households in our full sample, 32 included at least one proximity-related factor, 22 included at least one neighborhood quality factor, and 24 included at least one house quality factor in their top 1-4 home choice criteria. Interestingly, only 4 of the households in our sample - and only one of our in-depth interviewees - included all three factor types as critical to their home choice.

Drilling down further, we looked at the distribution of specific factors mentioned by our sample households in each category. Figures 10 and 11 illustrate our findings.



**Figure 10: Tree Map of Proximity-Related Home Choice Factors**



**Figure 11: House- and Neighborhood-Specific Choice Factors**

We expected a large fraction of households to be focused on a short work commute, but there was surprising diversity in the proximity-related criteria that households mentioned. In addition to the work commute, households were looking for proximity to their children’s school, to family or friends, to services, and even to nature.

Neighborhood characteristics were important, but home-specific features such as overall floor

plan, interior amenities such as kitchen appliances or a desired type of flooring, and exterior amenities such as a pool, were also key for many (but not all) households in our sample. Many households were looking for value in terms of size for money, sometimes with remarkably few location-specific criteria. One quarter of our in-depth interviewees purchased newly-built homes in order to get exactly what they wanted – at least on the inside!

Surprisingly few households mentioned school quality as a key factor in their home choice. This is likely because Arizona’s public schools are “open enrollment”, meaning that children can attend nearly any regional public school that has space for them. This policy reduces the importance of local public school quality in the home choice for most households.

### **Insights into the choice process**

The home choice process involves making compromises and often settling for a home that isn’t exactly what the buyers originally wanted. The stories told by interviewees can help us understand how homebuyers made these difficult compromises and arrived at their home choices. Here, we rely only on our 12 in-depth household interviews where we heard the full stories of how people made their home buying choice. The sample, therefore, is small, and the results may not be generalizable. Even in this small sample, however, enough clear patterns emerged that it is worth describing them. Some of the mechanisms that enabled compromise were psychological (e.g. narrowing the search geographically to a single neighborhood to avoid mental overload), while others were more practical (e.g. limited search timeframe).

### ***Lowering expectations***

Many interviewees prefaced the whole conversation about their home search process with a variant of “This is Phoenix, so we can’t expect to find ...” This reflects an attitude that regardless of what a household may really want, the “reality” of Phoenix meant that there were certain things that they viewed as just not available. Important for our research, key features that many of our interviewees wrote off as unavailable included a home with a short commute and a neighborhood with more sustainable transportation options.

HH3, P1: “We actually looked into Tempe first. Because we were thinking we wanted to keep it to one car again. ... I think once we realized we weren't going to find something in Tempe, we just kind of gave up on the transit ...”

### ***Geographical narrowing of the search***

There was a tendency among our interviewees to narrow their search to a relatively small geographic area, and, once that choice was made, to not even consider anything outside of that area. A common strategy was to identify a target neighborhood or neighborhoods, and search only in those areas – almost completely ignoring options in the rest of the metropolitan area .

This makes sense as a way to reduce the mental load of the home search, and every household we interviewed used this strategy. The extent to which homebuyers were willing to make geographical compromises varied substantially in our sample, however. Half of our interviewees began and ended their search with highly restrictive geographic criteria (e.g. a single zip code, within biking distance of work, maximum 15 minute commute from two employment destinations).

HH12: “We really wanted to be in this neighborhood. And so then we just decided

‘OK well we'll wait at home and [watch] Zillow until something comes up.’ When this house came on the market, we saw it the first day on Zillow and put in an offer that day. We had our Realtor come and look at it. ... and so we actually put an offer on the house without seeing it in person.”

Others were more geographically flexible, allowing their target neighborhoods to change over the course of their home search process. Among these geographically flexible households, one thing we found surprising was that if they did not initially find a lot of homes of interest in a neighborhood, they would sometimes write off the area entirely and not even circle back to look there again as they went on with their search. This came up often when discussing whether homebuyers considered homes in Tempe (a key location for many of our interviewees due to our sampling strategy, as well as one of the only areas in the region where some neighborhoods have high quality transportation options other than the household car). Many initially looked at homes in Tempe, but only those homebuyers who *insisted* on buying a home in Tempe actually ended up with a home in Tempe.

### ***Search timeframes***

Search timeframes were a critical determinant of the extent to which people compromised. The time that our interviewees took searching for their home varied from a few weeks to 1.5 years. Households that gave themselves less time to search were largely those who were moving to the Phoenix area from another part of the US (5 of our interview sample). Two of these households actually put their offer in without first seeing the home in person. One interviewee expressed a sentiment we heard from most of these households:

HH3: “I don't have any regrets, but ... I guess it would've been interesting to see where we would have ended up, had we been in an apartment and spent a year looking at the different neighborhoods. But we didn't. We didn't want to do that. I mean we wanted to ... be done moving.”

Even households moving within the region usually had externally-imposed time constraints on their search. Households transitioning from renting to owning (4 of our interview sample) needed their home purchase to coincide roughly with the end of their rental lease agreement. Households that owned homes previously often needed to time the home purchase with the timing of the sale of their prior home. Most interviewees mentioned the simple availability of homes on the market during their search timeframe as a significant constraint on what they purchased.

### ***Realtor influence***

Most of the households we interviewed used a realtor in their search. Most of these interviewees reported that their realtors listened to what they said they were looking for, and helped them find at least some of those features in the home that they bought. The influence of the realtor on the final choice was subtle, therefore, but important. Especially in cases where the homebuyer was looking for hard-to-find home and neighborhood features, realtors worked to broaden what the homebuyer would consider, presumably in order to make a sale more quickly.

The clearest example of this was the repeated story of realtors steering homebuyers away from the City of Tempe. Tempe is centrally-located in the Phoenix region and is one of the region's main employment centers. From Tempe, there is easy access to the Phoenix international airport

and three of the main highways that are the transportation arteries of the region. Some Tempe neighborhoods are connected to the city's substantial network of bicycle lanes and transit offerings. Compared to other cities in the region, much of the housing available in Tempe is older. Due to Tempe's regional accessibility and high concentration of jobs, there is high demand for housing. The city does not have many vacant lots, so the supply of single family homes cannot grow to meet demand, making the available homes expensive relative to other cities in the region.

Five of our interviewee households began their housing search in Tempe, but only three actually purchased a home in Tempe. Of those who did purchase a Tempe home, two reported that their realtor actively broadened their search by suggesting options outside of Tempe, which they ultimately rejected. For example, one interviewee said:

HH12: "We said within a mile or two of [ASU's Tempe] campus. That's what we told the realtor ... Now, the realtor ended up showing us quite a few houses that were outside of that, that were a little further... Up to, maybe, five miles [away from ASU's Tempe campus]."

One household that purchased a home outside of Tempe reported that they were steered away by their realtor, saying, "My real estate agent kept saying, 'Don't waste your time [looking in Tempe]. ... if you really want to live in Tempe, you should probably rent.'" (HH10). The other explained that there were two main factors - that Tempe's housing stock was older and in need of renovation with small yards, and that the realtor they worked with when looking in Tempe didn't know the area well.

### ***Expectations for the future***

Households varied substantially in how long they expected to stay in the home that they chose. As expected, households that saw this purchase as a shorter-term home tended to be willing to make more compromises and were somewhat less particular about what they wanted, but were especially concerned with resale value.

### **The role of transportation in home choice**

Transportation is clearly important to households when they are choosing where to live. More than 2/3 of our full sample and half of our interview sample specified a proximity-related factor among their top 1-4 factors they considered when choosing their new home. These proximity-related factors were surprisingly diverse, however. While 18 out of 46 households prioritized a short commute to work, an additional 14 households prioritized proximity to locations other than their workplace. These nonwork locations were generally places that these households traveled to regularly – for school, to see friends, or to access childcare. It was interesting to see that so many households traded off a longer commute in exchange for a shorter distance to travel for these other purposes.

In addition, 8 households listed walkable, bikeable, or transit-accessible neighborhood among their top deciding factors in their home choice. These priorities severely limited the Phoenix-area homes that were attractive to these households, since the vast majority of homes in Phoenix are in highly car-dependent neighborhoods. Two of our interviewee households that moved to bike-friendly parts of Tempe explained their choice this way:

HH12: "...we ended up ... narrowing the neighborhood that we were willing to live

in here in Tempe or, I should say willing to buy a house in, just to a very specific neighborhood and that was ... almost entirely based on bikeability.”

HH9: “...we weren't even looking outside of ... a bike-commutable box. ...we probably could have ... doubled our square footage if we bought a house in Gilbert. And ... for the exact same amount of money.”

Not all households prioritize transport, however, and their homebuying stories made clear that many of our interview households compromised in the area of transportation. Some were initially looking for a neighborhood that allowed them to commute without a car or to have a shorter commute, but found that either time or budget constraints pushed them to make a car-dependent choice. Key quotes from the interviews illustrate the tradeoffs that these households faced. These first two households would have preferred having more transportation alternatives, but were constrained by the higher price of the more walkable and bikeable neighborhoods.

HH4, P1: “I would have loved to stay within biking distance.”

HH4, P2: “And we both biked to work pretty often at the old house. We still could. Now we're just lazy, I think. There's more major roads we have to go on to bike to work from here... I guess it wasn't a deal breaker because ... we're here.”

HH5: “... if there was a better option in Phoenix that was more walkable, I might have looked into it. But, I just don't think that exists. I had two co-workers that were in those neighborhoods, but they paid a lot more for their homes than I did.”

Household 3 thought a lot about the transport context because they had lived in transit-oriented contexts before, and had used buses, trains, and bikes regularly. It came out clearly in the interview that they had wanted to be able to continue doing this, but in the end, they were time-constrained and transit access wasn't a high priority. They bought a house in a car-dependent neighborhood with 60-90 minutes of car commuting each day for one of the household heads, and they reported that they were satisfied with their choice.

HH3, P2: “[Transit access] wasn't at the top of our list. If it was available, we would certainly do it. I lived in Chicago for three years. I rode the L to work every day. When we were in Ann Arbor, P1 took the bus to work. I rode my bike to work pretty frequently. I mean, we were on one car for six years.

HH3, P1: “I wanted it to be not too horrible of a commute for me. Like, [at] a good time of the day it's half an hour for me to get to [work] and [at a] bad time it's, like, 45 minutes, which is doable for me. I don't mind listening to the news and catching up with people on the phone on my commute.”

These final two households bought homes in locations that required long commutes to their jobs, and this was one thing that they really did not like about their homes.

HH6: “I was [previously living]10 miles from [work]. That's a decent commute. And then I said, ‘All right, well, I'll go 15’ and then we weren't finding anything, and it became 20, and then it's like I don't even care anymore because it's more than

20 miles away. It's a killer commute. ...That's how we ended up so far east.”

HH10: “... [this car commute] sucks. It's really stressful ... the only saving grace is ... I don't have to be at work physically every day. If I had to do it five days a week ... I don't know what I'd do ... it's super, super stressful. Had I known it was gonna be this bad, I might have chosen differently.”

The speaker in the HH6 quote reported a one-way commute of at least one hour in stressful driving conditions. HH6 bought a new home on the edge of the developed Phoenix area directly from the builder, with the goal to retain resale value without having to invest in home maintenance. HH10 had moved from a transit-rich city to the Phoenix area, and chose their home largely because of the high local school quality.

## **DISCUSSION AND CONCLUSION**

### **A story of diversity**

Insights from these interviews suggest that there is high diversity in both how homebuyers make their choices and which factors they consider most important. The top priorities among our interviewee households were local school quality (1 household), home resale value + local school quality (1 household), bike-friendly commute (2 households), large yard + move-in ready (1 household), no yard (2 households), open floor plan + near family (1 household), large size (2 households), large size + specific neighborhood (1 household), and nice kitchen + short commute (1 household).

About half of the homebuyers that we interviewed were highly constrained by their budgets, as they were looking at homes priced below the median for the region. This was also true of more than half of the homebuyers in our realtor sample. About half of the homebuyers that we interviewed were highly constrained by their search timelines, as they were either moving to the region from out of state, had a lease that was ending, or had already sold their previous home. About half of the homebuyers that we interviewed insisted on a home in a particular geographic area, but the other half were surprisingly flexible on their new home's location within the region.

Somewhat surprisingly, all of this diversity does not appear – at least based on this sample – to be highly correlated with sociodemographics or anything else that researchers can easily measure. This makes it challenging to suggest how these insights can inform quantitative models of residential location choice. For instance, one of the households that prioritized local school quality had school-aged children, but the other did not. One of the households that prioritized a large house was a multi-generational family, but another was a single woman. Two of our interviewee households were extraordinarily similar in nearly every measurable way (demographics, previous home location and type, current job description and work location), but they bought homes that were 16 miles and a 40 minute drive apart. The important difference was a set of key past experiences – from one homebuyer's childhood and from the other homebuyer's experience as a young adult – that led to different priorities.

### **The importance of transport?**

Of interest for the residential self-selection literature, less than 40% of households in our full sample prioritized non-car transportation availability in their home neighborhood choice. Many households simply assumed that if they were buying a house in the Phoenix region, they were going to be car dependent whether they liked it or not. In a region with more transportation

alternatives, there may be more homebuyers who prioritize them.

In our interview sample, only 2 out of 12 households reported that they prioritized the availability of transportation alternatives in their new neighborhood. This was surprising, especially since 8 of 12 households had previously lived in a place where they had walked, biked, or used transit regularly – and reportedly enjoyed it. Some who chose a home in a car-dependent neighborhood did not mind at all, while others told us they hated the driving, but did not see another option.

Perhaps even more surprising than this was the sizable fraction of households in both our interview sample and the realtor sample that did not have a strong geographic preference for their new home. The prototypical real estate advertisement is “location, location, location”, but a large fraction of our sample would be unmoved. This implies that not only did these households not prioritize transportation alternatives in their home choice, but they also were not particularly concerned about how much time they would need to spend in their cars if they lived in a particular location. Most of them would prefer to spend less time driving, but they were clearly willing to compromise on this preference to get another home or neighborhood feature that they wanted.

Insights from these interviews suggest a potential role for policy to improve transport sustainability in Phoenix by “nudging” homebuyers to make different choices. Homebuyers we interviewed convincingly claimed that they would be happy to make more sustainable transportation choices if they were available in their neighborhoods; many of these households had indeed used transit, walked, or biked regularly when they lived in a different transportation context.

The Phoenix region is investing heavily in transportation alternatives, and has dramatically expanded its bicycle infrastructure and added a light rail system in the last 15 years. Most homebuyers in our sample, however, did not seem to take these services into consideration when choosing their homes – perhaps because they were not aware of them. Improved information about these transportation services could help homebuyers make more informed choices. Realtor education about the growing fraction of the region’s neighborhoods that do have transportation alternatives might be a useful first step. A stronger policy might require realtors to share transportation information with prospective homebuyers, including both information about transportation alternatives as well as estimated car commute times from the homes they are considering.

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## APPENDIX: SEMI-STRUCTURED INTERVIEW QUESTIONS

1. When did you move into your current house?
2. Where did you live just before moving?
  - a. What was that neighborhood like, compared to where you are now?
  - b. Were you happy with your old house and neighborhood?
3. What made you decide to move?
  - a. Were jobs, kids, schools, family situations, or anything else a part of your moving decision?
4. How did you decide where to move? Tell us your whole story!
  - a. What factors did you initially consider?
  - b. Were any of those factors more important than the others?
  - c. What was the most important?
5. How many homes made it into your final choice set?
6. Were all of these homes located in this neighborhood?
7. Did location matter to you? Why/Why not?
8. What decided your final choice?
9. Did you use a real estate agent, broker or other real estate advisor?
  - a. Did that person influence your decision in any way?
10. Did you consider changing neighborhood types – moving from a suburban/urban/rural area to another type of area? Why/ Why not?

11. Which of the following features did you look for?

	Did not want	Did not care	Wanted	Must have
Spacious home				
Beautiful view				
Single family home				
Short commute				
Close to shops/services				
Close to parks or nature				
Good public schools				
Easy to walk or bike				
Good transit access				
Quiet neighborhood				
Low crime neighborhood				
Low price				

One thing we're interested in is understanding how home location choices relate to transportation options and choices.

12. You said that you [did not want-must have] a neighborhood where it was easy to walk or bike.

Can you tell us more about that?

13. You said that you [did not want-must have] a neighborhood with good transit access. Can you tell us more about that?

Visual preferences: As the last part of the interview, we'd like to show you and discuss some images of homes and neighborhoods to further understand your preferences.

**[SHOW IMAGES]**

14. Which of these image sets looks like a place you most want to live? Why? (ask for 3-4 comparison image sets)

15. Do you have anything else to add or any questions for me?