Center for Teaching Old Models New Tricks (TOMNET)

A USDOT Tier 1 University Transportation Center

PROJECT PROPOSAL 2018-2019

Title: The role of transport in how we choose where to live: A qualitative investigation of residential location choice in the Phoenix, AZ region

Principal Investigator: Deborah Salon, Assistant Professor, School of Geographical Sciences and Urban Planning, Arizona State University

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1. Introduction/Problem Statement

There is an enormous literature on how people make daily travel choices – where to go and why, which transport mode to use, when to make their trips, and which route to take. One finding from this literature is that travel choices depend – at least in part – on where people live (Ewing & Cervero, 2010; Salon et al., 2012).

In fact, travel options are critically constrained by where people live. If a person lives in a rural setting, the only useful option to access stores and services is likely to be a private vehicle of some kind – public transit is likely not available, and walking and biking are too slow. If a person lives in a city center, on the other hand, they can access most things without a private vehicle. Understanding how people make their choices about home location, therefore, is critical for understanding how they travel.

There is a 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. 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 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. This literature includes relatively few studies of the home choice process that use in-depth interviews as evidence (two examples are Chatman, 2009; Senior et al., 2004). Thus, this project will contribute to the literature with a qualitative, interview-based study of how home buyers choose their homes, and the role of transportation factors in that choice.

2. Project Objectives

The main objective of this project is to improve our understanding about how people choose where to live by asking households directly about how they made their choices. We are interested in how the overall choice of home is made, but especially interested in the role that transportation preferences play in that

choice. The objective is open-ended because there have been surprisingly few qualitative, interview-based studies on this topic.

3. Proposed Methodology and Data

The methodology to be used in this project is in-depth household interviews, which will be recorded and transcribed, and then analyzed to identify key patterns and insights. These transcripts, together with other information that the research team will put together about each interviewee's home and neighborhood context (e.g. home price, square footage, neighborhood walkscore, local school quality index), will form the data to be analyzed.

The interviews will be conducted in participants' homes using a semi-structured format, where a series of questions is created to be used consistently in all interviews, but the actual conversation is purposely meant to feel as natural as possible, and follow-up questions may differ between households depending on what each interviewee actually says. We will focus on recent homebuyers because these households will have spent a sizable amount of time and mental energy making their decisions, and will easily be able to recall and explain them.

Because this project is mainly formulated as an undergraduate honors thesis (relatively little TOMNET funding is actually allocated to this project), we will obtain our sample of households to interview through an initial convenience sample of people that we know who have recently purchased homes. Then, we will use a snowball sampling and informal advertising approach to (hopefully) reach recent homebuyers who are not direct contacts of the research team.

To analyze and report on the interview data, we will use a combination of qualitative coding for key questions, and pulling out key insights using direct quotes from interviewees to illustrate findings.

4. Work Plan (Project Tasks)

Task 1: Interview questionnaire preparation and IRB review

Because this work involves human subjects, the first step in the research will be to obtain approval for the interviews from ASU's Institutional Review Board. To obtain this approval, we will write a human subjects protocol document, attach a draft of our semi-structured questionnaire, and draft participant consent language. This was completed in early 2018, before the timeline for this TOMNET project began.

Task 2: Interviews

The interviews themselves will each last about an hour, and it will take some time to identify participants and find a convenient time to hold the interviews. The research team will travel to the participants' homes to conduct the interviews in person, and they will be audio-recorded to allow for subsequent transcription.

Task 3: Interview transcription

After the interviews are complete, we will use the online automatic transcription service Trint to do a first cut at transcribing the audio recordings. Trint is specifically programmed to identify when different people are talking, and break up the automatic transcription by speaker. This is important when transcribing interviews, which is why we chose this service. The research team will also manually fix errors in the Trint transcriptions.

Task 4: Collect supplementary data

As described above, we will add supplementary data about the homes and neighborhoods where the research participants chose to buy. These data will be drawn from a combination of real estate websites such as Zillow, the US Census, and additional sources of neighborhood data such as Great Schools and WalkScore.

Task 5: Data interpretation and analysis

The data to be collected in this project is largely qualitative interview data, and the sample size is not

expected to be large (our plan is to conduct approximately 15 interviews). We plan to interpret these data using qualitative interview coding techniques.

Task 6: Write report
We will write a complete report detailing our project research and findings, with the plan to submit the research for peer-reviewed publication.

5. Project Schedule

	2018					2019						
Task	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July
1												
2												
3												
4												
5												
6												

6. Relevance to the Center Theme/Mission
This project is directly relevant to the TOMNET Center mission. We will be looking specifically at the attitudes and preferences that determine home location choices, which is an important determinant of the transportation options that people have to choose from for their daily travel.

7. Anticipated Outcomes and Deliverables
We anticipate that this research will produce new qualitative insights regarding the complexities and diversity in how people make residential location choices. We hope that these insights can be used to improve future quantitative models of travel behavior that incorporate home location choice in a meaningful way.

Our main deliverables will be written accounts of our work and results, as well as public presentations of the work.

8. Research Team and Management Plan
The research team for this project will include Elyse Kats and Deborah Salon. Kats is in the last year of her undergraduate studies at ASU, and will be doing this work as her Honors thesis project. Salon is both a faculty member in the School and Associate Director of TOMNET.

Salon and Kats will meet regularly to ensure timely delivery of the project.

9. Technology Transfer Plan

We expect this project will result in at least one peer-reviewed journal article. If funds permit, this article will be published as open access and/or deposited into the ASU Digital Repository (https://repository.asu.edu) to facilitate application and reuse outside of the academic realm.

In addition, Kats will present the work in an ASU Honors thesis poster session, and together Kats and Salon will present results at both national conferences and in a TOMNET webinar that will be open to the public.

10.Workforce Development and Outreach Plan

One of the main team members on this project will be Kats, who is an undergraduate student and will (hopefully) learn and grow tremendously from this research experience.

We will present findings at major transportation and geography conferences, as well as through a public TOMNET webinar (as specified above).

11.References

Chatman, D. G. (2009). Residential Choice, the Built Environment, and Nonwork Travel: Evidence Using New Data and Methods. *Environment and Planning A: Economy and Space*, *41*(5), 1072–1089. https://doi.org/10.1068/a4114

Ettema, D., & Nieuwenhuis, R. (2017). Residential self-selection and travel behaviour: What are the effects of attitudes, reasons for location choice and the built environment? *Journal of Transport Geography*, *59*, 146–155. Scopus. https://doi.org/10.1016/j.jtrangeo.2017.01.009

Ewing, R., & Cervero, R. (2010). Travel and the Built Environment. *Journal of the American Planning Association*, *76*(3), 265–294. https://doi.org/10.1080/01944361003766766

Gehrke, S. R., Currans, K. M., & Clifton, K. J. (2018). Assessing the importance of housing, accessibility, and transportation characteristics on stated neighbourhood preference. *International Journal of Urban Sciences*, *0*(0), 1–18. https://doi.org/10.1080/12265934.2018.1436983

Liao, F. H., Farber, S., & Ewing, R. (2015). Compact development and preference heterogeneity in residential location choice behaviour: A latent class analysis. *Urban Studies*, *52*(2), 314–337. https://doi.org/10.1177/0042098014527138

Salon, D. (2009). Neighborhoods, cars, and commuting in New York City: A discrete choice approach. *Transportation Research Part A: Policy and Practice*, *43*(2), 180–196. https://doi.org/10.1016/j.tra.2008.10.002

Salon, D., Boarnet, M. G., Handy, S., Spears, S., & Tal, G. (2012). How do local actions affect VMT? A critical review of the empirical evidence. *Transportation Research Part D: Transport and Environment*, *17*(7), 495–508. https://doi.org/10.1016/j.trd.2012.05.006

Schwanen, T., & Mokhtarian, P. L. (2005). What affects commute mode choice: Neighborhood physical structure or preferences toward neighborhoods? *Journal of Transport Geography*, *13*(1), 83–99. https://doi.org/10.1016/j.jtrangeo.2004.11.001

Senior, M. L., Webster, C. J., & Blank, N. E. (2004). Residential Preferences versus Sustainable Cities: Quantitative and Qualitative Evidence from a Survey of Relocating Owner-Occupiers. *The Town Planning Review*, *75*(3), 337–357. JSTOR.

12.Budget Including Non-Federal Matching Funds

Institution: Arizona State University

Project Title: The impact of non-transportation attitudes, preferences, and personality characteristics on residential location and travel choices

Principal Investigator: Deborah Salon

Budget Period: 8/1/2018 - 07/31/2019

CATEGORY	Budgeted Amount from Federal Share	Budgeted Amount from Matching Funds	Explanatory Notes; Identify Source of Matching Funds
Faculty Salaries	$ -	$ 8,485.89	Salon 5% AY + 0.5 summer month
Other Staff Salaries	$ -	$ -	
Student Salaries	$ -	$ -	
Fringe Benefits	$ -	$ 2,291.19	ERE for above
Total Salaries & Benefits	$ -	$ 10,777.08	
Student Tuition Remission	$ -	$ -	
Operating Services and Supplies	$ -	$ -	
Domestic Travel	$ 2,000.00	$ -	Conference travel costs for Kats
Other Direct Costs (specify)	$ -	$ -	
Other Direct Costs (specify)	$ -	$ -	
Total Direct Costs	$ 2,000.00	$ 10,777.08	
F&A (Indirect) Costs	$ 1,140.00	$ 6,142.94	
TOTAL COSTS	$ 3,140.00	$ 16,920.02	

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EDUCATION

- University of California at Davis, Davis, CA, USA
  - Ph.D., Agricultural and Resource Economics, May 2006
- Carleton College, Northfield, MN
  - B.A., Physics, June 1994

PROFESSIONAL EXPERIENCE

- Arizona State University
  - Assistant Professor, School of Geographical Sciences and Urban Planning, 2014-present
  - Graduate Faculty, School of Sustainability, 2016-present
  - Senior Sustainability Scientist, Global Institute of Sustainability, 2014- present
- University of California, Davis, Institute of Transportation Studies
  - Professional Researcher, 2008-2014
- The Earth Institute at Columbia University
  - Post-Doctoral Fellow, 2006-2008

RELEVANT REFEREED PUBLICATIONS (Total: 21 Refereed Publications)

1. Salon, Deborah. (2015) Heterogeneity in the relationship between the built environment and driving: Focus on neighborhood type and travel purpose. *Research in Transportation Economics*, 52, 34-45.
2. Cook, Jonathan, James Sanchirico, Deborah Salon, and Jeffrey Williams. (2015) Empirical distributions of vehicle use and fuel efficiency across space: Implications of asymmetry for policy analysis. *Transportation Research Part A: Policy and Practice*, 78, 187-199.
3. Salon, Deborah, Marlon Boarnet, Susan Handy,Steven Spears, and Gil Tal. (2012) How do local actions affect VMT? A critical review of the empirical evidence. *Transportation Research Part D* 17(7): 495-508.
4. Salon, Deborah. (2009) Neighborhoods, cars, and commuting in New York City: A discrete choice approach. *Transportation Research Part A: Policy and Practice* 43(2): 180-196.

RELEVANT RESEARCH PROJECTS (Total Sponsored Research: ~ $700,000)

- *A Spatial Analysis of Housing and Transportation Affordability in Los Angeles County*, University of California Transportation Center, 2012-2015
- *Quantifying the effect of local government actions on VMT*, California Air Resources Board, 2010-2014

JOURNAL EDITORIAL ACTIVITIES

- CO- EDITOR OF SPECIAL ISSUE, *RESEARCH IN TRANSPORTATION ECONOMICS* (ELSEVIER), 2015
- EDITORIAL BOARD, JOURNAL OF *TRANSPORTATION GEOGRAPHY* (ELSEVIER), 2016-present
- EDITORIAL BOARD, TRANSPORTATION RESEARCH PART D (ELSEVIER), 2017-present

EDUCATION AND STUDENT ADVISING

- Thesis/Dissertation Major Advisor/Chair: 1 PhD student in progress; 4 MS (Thesis) students completed
- Thesis/Dissertation Committee Member: 3 PhD students completed, 2 PhD students in progress; 5 MS (Thesis) students completed

Grant Deliverables and Reporting Requirements for UTC Grants (November 2016)

Exhibit F

UTC Project Information	
Project Title	The role of transport in how we choose where to live: A qualitative investigation of residential location choice in the Phoenix, AZ region
University	Arizona State University
Principal Investigator	Deborah Salon
PI Contact Information	deborah.salon@asu.edu
Funding Source(s) and Amounts Provided (by each agency or organization)	TOMNET: $3,140 ASU, SGSUP: $16,920
Total Project Cost	$20,060
Agency ID or Contract Number	
Start and End Dates	8/1/2018-7/31/2019
Brief Description of Research Project	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? This research is an interview-based project that focuses on the household choice of where to live, with the goal to gain a more complete understanding of the role of transport in this choice.
Describe Implementation of Research Outcomes (or why not implemented) Place Any Photos Here	TBD
Impacts/Benefits of Implementation (actual, not anticipated)	TBD
Web Links • Reports • Project Website	TBD