PROGRAM PROGRESS PERFORMANCE REPORT (PPPR #2) - APPENDIX

TOMNET Center for Teaching Old Models New Tricks









Submitted to: US Department of Transportation (OST-R)

Office of the Assistant Secretary for Research and Technology

Federal Grant No: 69A3551747116

Center Title: Center for Teaching Old Models New Tricks (TOMNET)

Center Director: Ram M. Pendyala, Professor, Arizona State University

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Submitting Official: Center Director

Submission Date: April, 30, 2018

DUNS Number: 943360412

Employer Identification Number: 86-01-96696

Recipient Organization: Arizona State University

Office of Research and Sponsored Projects Administration

(ORSPA)

PO Box 876011, Tempe, AZ 85287-6011

Grant Period: December 1, 2016 – September 30, 2022

Reporting Period: June 1, 2017 – March 31, 2018

Report Frequency: Semi-Annual

Signature of Submitting Official:

Ram M. Pendyala, PhD, Director

APPENDIX

List of Presentations Delivered by TOMNET Faculty and Students

The following is a list of <u>presentations</u> delivered by or involving TOMNET core faculty members during the reporting period covered by this PPPR.

Arizona State University

- 1. Singh, A.C., Astroza, S., Garikapati, V.M., Pendyala, R.M., Bhat, C.R., and Mokhtarian, P.L. (2018) Quantifying the Contribution of Various Factors to Household Vehicle Miles of Travel. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington D.C.
- 2. Dias, F.F., Astroza, S., Garikapati, V.M., Pendyala, R.M., Bhat, C.R., and Mokhtarian, P.L. (2018) A Multivariate Exploration of Emotional Feelings of Subjective Well-Being during Travel Episodes. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington D.C.
- 3. Vinayak, P., Dias, F.F., Astroza, S., Bhat, C.R., Pendyala, R.M., and Garikapati, V.M. (2018) Accounting For Multi-dimensional Dependencies among Decision-makers within a Generalized Model Framework: An Application to Understanding Shared Mobility Service Usage Levels. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington D.C.
- 4. Astroza, S., Bhat, P.C., Bhat, C.R., Pendyala, R.M., and Garikapati, V.M. (2018). Understanding Activity Engagement Across Weekdays and Weekend Days: A Multivariate Multiple Discrete-Continuous Modeling Approach. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington D.C.
- 5. Astroza, S., Garikapati, V.M., Pendyala, R.M., Bhat, C.R., and Mokhtarian, P.L. (2018) Representing Heterogeneity in Structural Relationships among Multiple Choice Variables Using a Latent Segmentation Approach. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington D.C.
- 6. Li, H., Cebe, J., Khoeini, S., Xu, Y., and Guensler, R. (2018) A Semi-Automated Method to Generate GIS-Based Sidewalk Networks for Asset Management and Pedestrian Accessibility Assessment. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington D.C.
- 7. Nair, G.S., Astroza S., Bhat C.R., Khoeini S., and Pendyala, R.M. (2018) An Application of a Rank Ordered Probit Modeling Approach to Understanding Level of Interest in Autonomous Vehicles. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington D.C.
- 8. Catherine, M. and Salon, D. (2018). Does Informal Transit Complement or Compete Against Formal Transit? Case Study of Commuter Vans in Eastern Queens, New York. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington D.C.
- 9. King, D., Salon, D., and Maltz, A. (2018) A Geographical Analysis of Pass Through Truck Traffic in the US. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington D.C.
- Breetz, H. and Salon, D. (2018). Do Electric Vehicles Need Subsidies? A Comparison of Ownership Costs for Conventional, Hybrid, and Electric vehicles. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington D.C.
- 11. Thigpen, T. (2018) Measurement Validity of Retrospective Survey Questions of Bicycling Behavior, Attitudes, and Skills. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington D.C.
- 12. Thigpen, T. (2018) Do Bicycling Experiences and Exposure Influence Bicycling Skills and Attitudes? Evidence from a Bicycle-Friendly University. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington D.C.
- 13. Thigpen, T. (2018) From Peak Hour to Time of Day: A Case Study of a Novel Parking Occupancy Measure and an Evaluation of Infill Development and Carsharing as Solutions to Parking Oversupply. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington D.C.
- 14. Thigpen, C. and Handy, S. (2018) The Effects of Building a Stock of Bicycling Experience in Youth. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington D.C.
- 15. Handy, S. and Thigpen, C. (2018) Commute Quality: Exploring the Role of Mode and Other Factors Using the UC Davis Campus Travel Survey. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington D.C.

- 16. Thigpen, C. (2017) From Peak-hour to Time-of-Day: A Case Study of a Novel Parking Occupancy Measure. 57th Annual Conference of the Association of Collegiate Schools of Planning, Denver, CO.
- 17. Thigpen, C. and Handy, S. (2017) The Value of a College Education: Changes in Students' Bicycling Skills and Attitudes at a Bicycle-Friendly University. 57th Annual Conference of the Association of Collegiate Schools of Planning, Denver, CO.
- 18. Conway, M. W., Byrd, A., and Eggermond, M.V. (2017) A Statistical Approach to Comparing Accessibility Results: Including Uncertainty in Public Transport Sketch Planning. World Symposium on Transportation and Land Use Research, Brisbane, Queensland, Australia.
- 19. Breetz, H. and Salon, D. (2017) Do Electric Vehicles Need Subsidies? A Comparison of Ownership Costs for Conventional, Hybrid, and Electric vehicles. Transportation, Energy, Environment, and Economy (TE3) Conference, Ann Arbor, MI.

Georgia Institute of Technology

- 20. Mokhtarian, P.L. (2018) Investigating the Attitude-moderated Effects of the Built Environment and Sociodemographics on Vehicle Ownership Using Latent Class Choice Modeling. Quantitative Psychology seminar, Georgia Institute of Technology, February 22.
- 21. Mokhtarian, P.L. (2018) ICTs and Expanding Use of Travel Time. Singapore-MIT Alliance for Research and Technology (SMART), Future Urban Mobility Symposium. Singapore, January 17.
- 22. Mokhtarian, P.L. (2018) The Times They Are A-Changin': What Do the Expanding Uses of Travel Time Portend for Policy, Planning, and Life? Thomas B. Deen Distinguished Lecture, 97th Annual Meeting of the Transportation Research Board, Washington, D.C., January 8.
- 23. Harb, M., Xiao, Y., Circella, G., Mokhtarian, P.L., and Walker, J.L. (2018) Projecting Travelers into a World of Self-driving cars: Naturalistic Experiment for Travel Behavior Implications. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington D.C.
- 24. Delbosc, A., McDonald, N., Stokes, G., Lucas, K., Circella, G., and Lee, Y. (2018) Millennials in Cities. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington D.C.
- 25. Alemi, F., Circella, G., Mokhtarian, P.L., and Handy, S.L. (2018) On-Demand Ride Services in California: Investigating the Factors Affecting the Frequency of Use of Uber and Lyft. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington D.C.
- 26. Alemi, F., Circella, G., and Sperling, D. (2018) Limitations to the Adoption of Uber and Lyft in California and Impacts on the Use of Other Travel Modes. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington D.C.
- 27. Tiedeman, K. and Circella, G. (2018) Real-Time Riders? Millennials, Smartphone Use, and Public Transportation Ridership. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington D.C.
- 28. Lee, Y., Circella, G., Mokhtarian, P.L., and Guhathakurta, S. (2018) Are Millennials More Multimodal? A Latent Class Analysis with Attitudes and Preferences. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington D.C.
- 29. Daniels, C., Miller, E., Chatman, D., Circella, G., Daziano, R., Erhardt, G., Harb, M., Moeckel, R., Picado, R., Sall, E., Sivakumar, A., and Weeks, J.L. (2018) Advancing TDM: Strengthening Linkages with Policy and Planning. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington D.C.
- 30. Erhardt, G., Ory, D., Axhausen, K., Circella, G., Gao, S., Hess, S., Kressner, J., Mahmassani, H., Miller, E., Moeckel, R., Pozdnoukhov, A., and Waddell, P.A. (2018) Advancing TDM: Advancing Knowledge in a Generalizable and Testable Manner. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington D.C.
- 31. Circella, G. (2018) Policy Responses to Vehicle Sharing, Electrification, and Automation. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington D.C.
- 32. Kim, S.H. and Mokhtarian, P.L. (2018) Taste Heterogeneity as an Alternative Form of Endogeneity Bias: Investigating the Attitude-Moderated Effects of Built Environment and Socio-demographics on Vehicle Ownership using Latent Class Modeling. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington D.C.
- 33. Shaw, F.A., Malokin, A., Mokhtarian, P.L., and Circella, G. (2018) Outcomes of Travel-Based Multitasking: Reported Benefits and Disadvantages of Conducting Activities While Commuting. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington D.C.

- 34. Etezady, A., Circella, G., and Mokhtarian, P.L. (2018) Investigating the Satisfaction with Travel Amounts: A Comparison of Commuters and Non-Commuters in California. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington D.C.
- 35. Malokin, A., Mokhtarian, P.L., and G. Circella, G. (2018) An Investigation of Methods to Enrich National Household Travel Survey Data with Attitudinal Variables. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington D.C.
- 36. Watkins, K. (2018) Bicyclist Facility Preferences and Effects on Increasing Bicycle Trips Update. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington D.C.
- 37. Watkins, K. (2018) Transit Traveler Response to Highway Disruption: the Atlanta I-85 Bridge Collapse. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington D.C.
- 38. Watkins, K. (2018) How Do We Build a Sustainable Transportation Infrastructure. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington D.C.
- 39. Circella, G. (2017) Impacts on Travel Behavior, the Value of Travel Time and Mode Choice, and the Need for Transportation Policy to Regulate an Autonomous Vehicle Future. Presented at the Annual Conference of the Association of Collegiate Schools of Planning, Denver, CO.
- 40. Lee, Y., Circella, G., Guhathakurta, S., and Mokhtarian, P.L. (2017) Are All Millennials Really the "Urban Hipster"?

 A Latent Class Approach to Classify Today's Young Adults Based on Their Location Preference. Annual Conference of the Association of Collegiate Schools of Planning, Denver, CO.
- 41. Alemi, F., Circella, G., Handy, S.L., and Mokhtarian, P.L. (2017) Measuring Environmental and Transportation-Related Attitudes in the California Millennials' Study. 11th International Conference on Transport Survey Methods, Estérel, Québec, Canada.
- 42. Watkins, K. (2017) Designing Streets for All Users: Bike Transport for the Interested but Concerned. Keynote Address, Georgia Planning Association Fall Conference.
- 43. Watkins, K. (2017) Multiuse Infrastructure: Resiliency in Action. City Parks Alliance Webinar, September.
- 44. Grossman, A. and K. Watkins (2017) Data, Research, and Policy Backing Safety Treatments: National Survey Results for State DOTs and MPOs. International Cycling Safety Conference.
- 45. Ederer, D. and Watkins, K. (2017) Determining Cyclist Trip Purpose on Off-street Urban Trails in Four US Cities. International Cycling Safety Conference.
- 46. Clark, C., Circella, G., and Watkins, K. (2017) Perceived Safety and Willingness to Use Bicycle Infrastructure in the Southern United States. International Cycling Safety Conference.
- 47. Watkins, K. (2017) Safety Impacts of Bicycle Infrastructure: A Critical Review. International Cycling Safety Conference.
- 48. Boyd, N., Macfarlane, G., Ederer, D., and Watkins, K. (2017) Accessibility to Urban Parks. American Public Health Association Annual Conference.
- 49. Watkins, K. (2017) Mobility as a Service. Smart Cities Speaker Series, City of Atlanta, July.
- 50. Watkins, K. (2017) Sustainable Mobility Forum. German American Chamber of Commerce of Southern US, July.
- 51. Mokhtarian, P.L. (2017) Value of Travel Time. Presentation at Breakout Session 1: Research to Understand Behavioral Responses to AVs, Automated Vehicles Symposium, San Francisco CA, July 11.

University of Washington

- 52. Zhu, X., Wang, F. and Chen, C. (2018) Personalized Controls to Promote Sustainable Travel Behaviors. 15th IFAC Symposium on Control in Transportation Systems, Savona, Italy, June 6-8.
- 53. Guan, X. and Chen, C. (2018) Inferring the Failure Propagation Dynamics in Interdependent Infrastructure Networks: A Backward Approach. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington D.C.
- 54. Wang, F. and Chen, C. (2018) Passively Generated Cell Phone Data: Data Issues and Processing Required. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington D.C.
- 55. Ban, J. and Chen, C. (2018) Promises of Big Data for Transportation Planning Applications. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington D.C.
- 56. Chen, C. (2018) Big Data, Mobility Patterns and Modeling of Influenza Spreading, NIH MIDAS PI Conference, Bethesda, MD, April 5.

- 57. Chen, C. (2017) Civil Infrastructure Systems (CIS): Past, Present and Future Perspectives. Arizona State University Distinguished Lecture Series, October.
- 58. Chen, C. (2017) Universal Methodology for Inferring Failure Propagation Patterns. Northwestern University, November.
- 59. Abramson, D. (2017) Human-centered Urban Planning and Design. Keynote Speaker, 11th International Association for China Planning (IACP) Conference, Harbin Institute of Technology, Harbin, June 16-18.
- 60. Abramson, D. (2017) Building Community Adaptive Capacity through Spatial Hubs and Transpatial Networks Schools and Telehealth as a Nexus of Resilience. Position Statement for National Science Foundation-Sponsored Workshop on Community-University-Industry Collaboration Models for Smart and Connected Communities Research, Institute for Computing and Computational Science and Engineering, Washington, D.C., November 30 December 1.

University of South Florida

- 61. Tahlyan, D. and Pinjari, A. (2018) Performance Evaluation of Choice Set Generation Algorithms for Modeling Truck Route Choice: Insights from Large Streams of Truck-GPS Data. Presented at the 97th Annual Meeting of the Transportation Research Board, Washington D.C.
- 62. Tahlyan, D. and Pinjari, A. (2017) Performance Evaluation of Choice Set Generation Algorithms for Modeling Truck Route Choice: Insights from Large Streams of Truck-GPS Data. 5th Annual UTC Conference for the Southeastern Region, University of Florida, Gainesville FL, November.
- 63. Sheela, P.V., Balusu, S.K., Maness, M., and Pinjari, A. (2017) Modeling the Most Preferred Way of Using Autonomous Vehicles: Some New Evidences Based on a Stated-Choice Survey. 5th Annual UTC Conference for the Southeastern Region, University of Florida, Gainesville FL, November.
- 64. Balusu, S.K. and Pinjari, A. (2017) Understanding People's Preference and Their Willingness to Pay for Advanced Safety Features in Automobiles. 5th Annual UTC Conference for the Southeastern Region, University of Florida, Gainesville FL, November.