Understanding Mode Choice Behavior of People with Disabilities: A Case Study in Utah

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Introduction & Background

- People with disabilities (PwDs) have unique travel needs
  e.g. ability to drive or find suitable parking independently,
  accessing appropriate transit stations
- Disability travel behavior is associated with poverty & vehicle ownership (Okoro, 2018)
- Travel limited Disability: 8-10% (BTS 2018): 9.2% in Utah for working age adults (*UDoHHS*, 2017)
- Mode choice models designed for the general population may not be suitable

Objectives

- Development of Multinomial Logit (MNL) Models to PwDs and comparing the results
- Identification of key factors influencing the disability mode-choice behavior
- Willingness to pay estimation through Revealed Preference HHTS dataset
- Policy implications for inclusive and equitable transportation system planning

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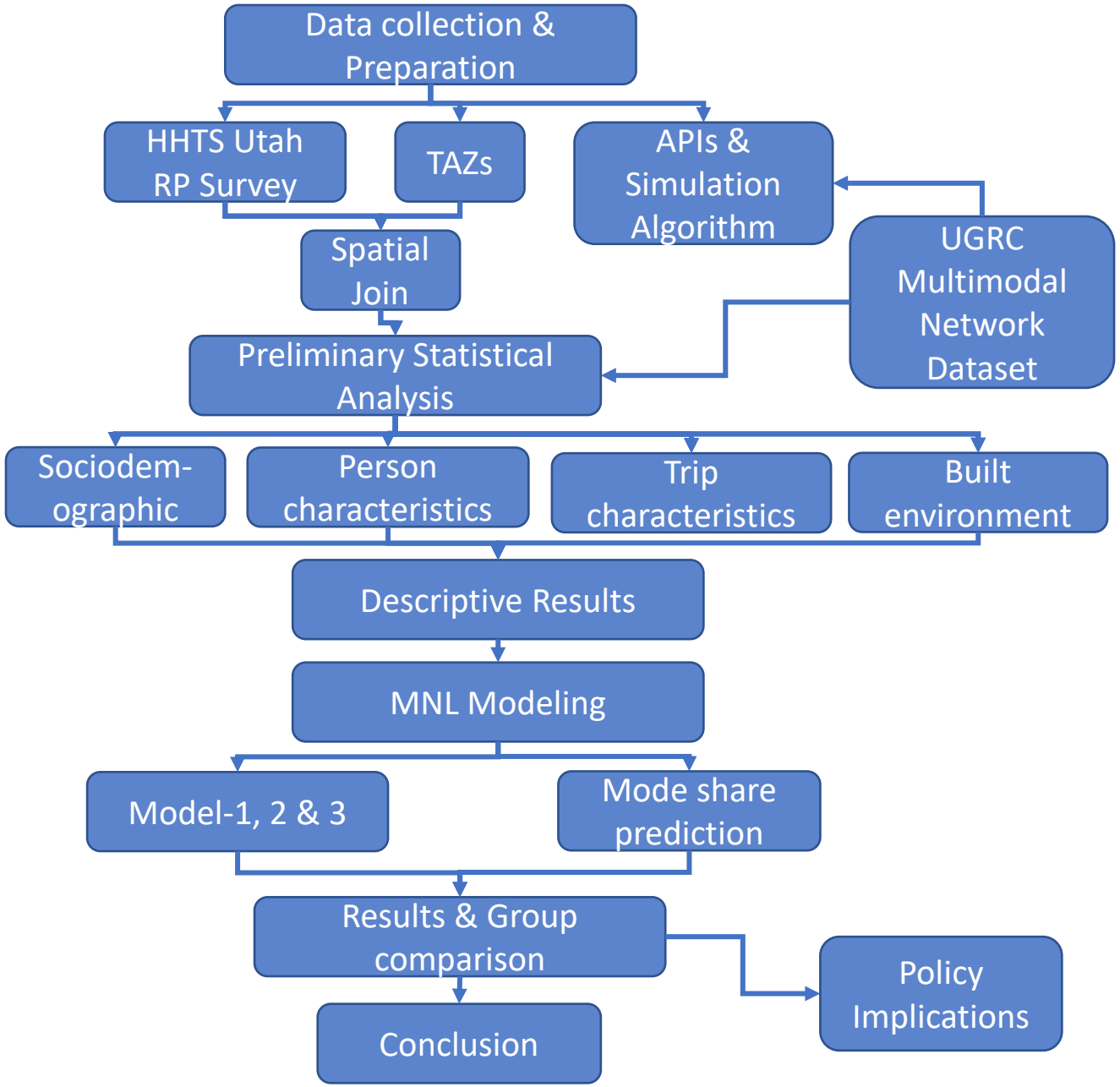
Data & Methodology



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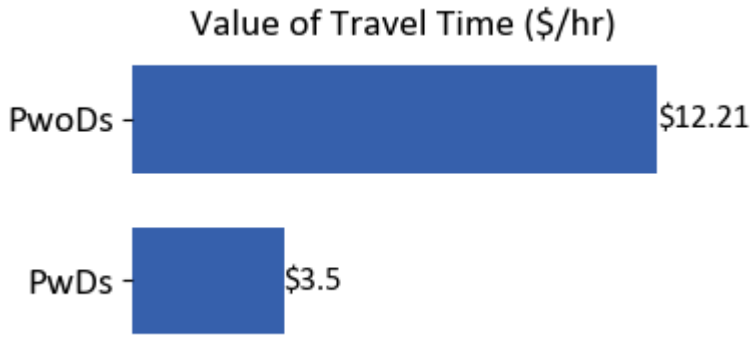
Results

*** - 1% CI, ** - 5% CI & * - 10% CI

Variable	Model1- General Population		
	Carpool	NM	Transit
Disability attribute (ref: no disability)	0.066 *	-0.318 ***	0.364 **

- Disability is associated with increased transit use & decreased nonmotorized mode preference



- PwoDs: strong consideration over travel time and less for PwDs
- ✓ PwDs mostly used shared ride, transit use has 50% reduced fare and most works part time

	PwoDs			PwDs		
	Carpool	NM	Transit	Carpool	NM	Transit
Low (<35k)	0.0486 *	0.112 **	0.171 *	0.901 ***	0.602 **	-
Very High (>100k)	-0.189 ***	-0.076 *	-0.297 ***	-	-	-0.721 *

- Low income: disabled preferred carpool whereas counterpart group likely to use transit
- Very high income: both showed negative preference over transit

- Household without a single vehicle inclined towards **transit** but showed distributed preference over all available modes

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Conclusion

- **Uniqueness:** Contrasting mode choice pattern has been observed for **Gender, Employment, Age, Residential location** and **Transit use** among two groups

- Lower WTP for PwDs

- General model showed transit preference but no such concrete evidence specific to disable group. Which suggests we need to address **inclusive transit policy**

Questions?

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