THE PATH OF LEAST RESISTANCE Identifying supporters of public and active transportation projects

ABSTRACT

The financing and implementation of transportation projects are more likely to be successful with the support of local communities.

Hence, it is important to understand differences in levels of support for transportation projects.

The **objectives** of this study are:

- to segment a university population in order to better understand current levels of support towards transportation investments, and
- to seek out **important allies** to endorse public and active transportation projects.

A factor-cluster analysis reveals five clusters of individuals with varying **opinions** towards transportation investments and distinct motivations.

METHODOLOGY

The data used for this study are derived from the 2013 **McGill Commuter Survey**, which include:

- O detailed descriptions of typical commutes
- travel duration
- travel frequency
- O mode of transportation
- Satisfaction with service quality
- socio-demographic information
- residential selection criteria
- O travel preferences
- o personal opinion towards transportation investment

Our data consist of **2319** observations in total.

This study uses **factor-cluster analysis** to isolate clusters of individuals within the study sample bearing similar characteristics and opinions about transportation investment.

FACTOR ANALYSIS

RESULTS



The principal component factor analysis was used to identify sets of highly correlated variables. It generated eight factors from 27 variables.

FACTORS	VARIABLES	LOADING
Support for public and active transportation investment	We need to use taxes to improve and expand public transportation. We need to use taxes to improve and expand pedestrian areas and sidewalks. We need to use taxes to improve and expand the bicycle network.	0.772 0.763 0.704
Preference for public and active transportation	I would like to cycle more than I currently do. I would like to walk more than I currently do. I would like to transit more than I currently do.	0.699 0.699 0.606
Preference for driving	We need to use taxes to improve and expand the highway network. I need a car to do many of the things I like to do. I would like to drive more than I currently do.	0.761 0.691 0.666
Unpleasant commuting experience	I feel stressed during my trips to McGill. My commute to McGill negatively impacts my punctuality / attendance / working hours. I feel energized when I arrive at McGill.	0.847 0.837 -0.708
Commuting frequency	How often are you on campus? Are you at McGill full-time? I'm on campus during regular work day hours from approximately 9am — 5pm.	0.803 0.798 0.662
Residential selection criteria	When you moved into your current residence, how important were the following factors in your decisions? Cost of commuting (excluding the cost of parking) Proximity to public transportation Being in a location where I wouldn't have to drive Proximity to McGill	0.773 0.761 0.696 0.635
Household characteristics	How many licensed drivers are in your household, including yourself? How many people are in your household, including yourself? How many automobiles are owned by your household?	0.893 0.858 0.687
Personal characteristics	What is your age? Are you a faculty or staff at McGill? For how many years have you been regularly commuting to McGill? What is your yearly personal income? For how many years have you been living at your current residence?	0.911 0.82 0.804 0.742 0.662

- support investing in public and active transportation
- wish to increase their use of active transportation
- have low intentions to increase driving
- O undergo the least commuting stress
- tend to be older with higher incomes
- inclined to select their home location to be near public transit

- greatest proponents of using taxes to improve and expand the highway network
- O highly supportive of investing in public transportation
- A have low intentions to cycle and walk more
- Show the highest levels of commuting stress and lowest energy levels
- tend to perceive that having a car is a necessity

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CLUSTER ANALYSIS

A non-hierarchical cluster analysis was used to segment the respondents into five clusters, allowing discernible distinction of opinions, travel patterns and experiences.



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to oppose investing ghway network ovements

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do not commute on a regular basis

- generally supportive of transportation investments
- O demonstrate levels of support similar to individuals belonging in other advocate groups
- Ieast concerned about situating their residence near McGill University
- highest proportion of individuals who commute by driving

o against using taxes to fund any transportation improvements or network expansions

- living near campus
- high proportion of by foot
- travel to McGill University the most frequently

• have comparatively low income



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DISCUSSION & CONCLUSION

Among the **five clusters** generated from the factor-cluster analysis, only one consists of individuals who oppose using taxes to fund transportation investments (funding opponents):

- **o** strong advocates are the greatest allies for promoting public transportation investments.
- O highway / transit funders appear to be driven by a **perceived failure** of the existing transportation Understanding their system. source of dissatisfaction would allow effective allocation of funds to **finance discernible transportation** infrastructure improvements.
- cycling advocates are valuable for publicizing the benefits of expanding the bicycle network.
- some infrequent commuters show a discrepancy between transit support and current transit use. While advocating for public and active transportation investments, transit agencies and cities should also promote increased usage of public transit, walking and cycling.
- **O** public consultation is necessary to interpret whether **funding opponents** are simply against spending, opposed to transportation infrastructure investment in general, or specifically against using tax revenue to fund these projects.

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highly concerned about commuting cost and

individuals who commute

