

# Notes

## Topic

Frequency of use of urban public transport

Study the factors associated with frequent (daily) use of urban public transport (freqtcu)

- Variable of interest Y : freqtcu (variable to be created according to freqtcu = 1 or not)
- Variable X: permis - driving licence holder.
- Variable Z: taillemnng - household size
- Specific focus W: influence of car ownership on your decision variable Y

Which means: **What does impact the frequency of use of urban public transport?**

## Results of beta search

### Bibliography

N°	Article	Notes	Link
1	Paulley, N., Balcombe, R., Mackett, R., Titheridge, H., Preston, J., Wardman, M., ... & White, P. (2006). The demand for public transport: The effects of fares, quality of service, income and car ownership. <i>Transport policy</i> , 13(4), 295-306.		<a href="#">Link</a>
2	Redman, L., Friman, M., Gärling, T., & Hartig, T. (2013). Quality attributes of public transport that attract car users: A research review. <i>Transport policy</i> , 25, 119-127.		<a href="#">Link</a>
3	Zhang, Wang, M., Dong, J., Lu, W., Liu, Y., Ni, A., & Yu, X. (2022). Factors and Mechanism Affecting the Attractiveness of Public Transport: Macroscopic and Microscopic Perspectives. <i>Journal of Advanced Transportation</i> , 2022, 1–16.	Interesting article from the perspective of attractiveness, contains all the data used in the study.	<a href="#">Link</a>
4	Rasca, & Saeed, N. (2022). Exploring the factors influencing the use of public transport by commuters living in networks of small cities and towns. <i>Travel, Behaviour &amp; Society</i> , 28, 249–263.		<a href="#">Link</a>
5	Göransson, & Andersson, H. (2023). Factors that make public transport systems attractive: a review of travel preferences and travel mode choices. <i>European Transport Research Review</i> , 15(1), 32–14.	Special case of Nordic PT	<a href="#">Link</a>

### Factors

fares, quality of service, income, car ownership, size of the city (demographic factor), quality of PT (Service reliability, frequency, Habit-Interrupting Measures: policies), attractiveness of PT, trip distance,

## Summary of useful stuff

### Article 1

#### Objectives:

The main objectives of the study are to understand how different factors such as fares, quality of service, income levels, and car ownership affect the demand for public transport. The research aims to quantify the elasticity of demand in relation to these factors.

#### **Problematic:**

The problematic at the heart of this study is identifying the extent to which and in what ways the aforementioned factors (fares, service quality, income, and car ownership) determine the demand for public transport. This is important for informing policy decisions aimed at increasing public transport usage and reducing reliance on private cars.

#### **Context:**

The context of the study is set within urban transport policy, where there is a need to encourage the use of public transport to address issues such as traffic congestion, environmental pollution, and social inclusion. The research takes place against a backdrop of varying global practices, with data and examples drawn from multiple geographical and economic settings.

#### **Methodology:**

The methodology involves a comprehensive literature review and analysis of secondary data from a range of studies on public transport demand. The authors also use statistical analysis and elasticity measurements to interpret the data and draw conclusions about the relationship between demand and the factors being studied.

#### **Results:**

The results indicate that demand for public transport is indeed sensitive to fares, service quality, income, and car ownership. Each factor has a measurable impact on how likely individuals are to use public transport. The elasticity of demand varies with each factor, indicating that the relationship is complex and context-dependent. For example, a small increase in fares may lead to a disproportionate decrease in demand in some contexts but not in others.

#### **Perspective:**

The perspective of the article is analytical and policy-oriented. The authors look at the demand for public transport through the lens of economics and social policy, with an aim to provide actionable insights that can lead to more effective transport policies. They advocate for a balanced approach that considers the various demand influences in designing strategies to improve public transport usage.

#### **Summary:**

In summary, the article by Paulley et al. investigates the effects of fares, quality of service, income, and car ownership on public transport demand. Through a review of literature and data analysis, the study concludes that these factors significantly influence how people choose their mode of transport. Understanding these relationships is critical for policymakers to create effective strategies to promote public transport, which in turn could address broader issues of urban transport challenges. The study is a valuable contribution to the field of transport policy, providing evidence-based insights into the dynamics of public transport demand.

### **Factors:**

Fares, quality of service, income levels, and car ownership

#### Articles Iragaël & Helene

##### Article I

The factors that impact the frequency of use of urban public transport, as identified in the second article, include:

1. **Socio-Economic Characteristics:** These are individual factors like age and income.
2. **Spatial Characteristics:** The percentage of the origin and destination municipalities located in high-density areas.
3. **Journey Characteristics:** This includes which mode of transport (train, coach, or car) is used for the reference trip, and the frequency of the trip.
4. **General Mobility Indicators:** This covers the individual's access to a car and the frequency of use of alternative modes to the car.

These factors collectively influence individual decisions on the use of different modes of transport, including the frequency of utilizing urban public transport.

##### Article II

The factors that impact the frequency of use of urban public transport, as discussed in the article, include a combination of alternative-specific variables and individual variables:

1. **Alternative-Specific Variables:**
  - **Time:** The travel time associated with different transport modes.
  - **Cost:** The financial cost of using various transport modes.
  - **Comfort:** The level of comfort provided by each mode of transport.
  - **Time \* Comfort:** A combination factor considering both the travel time and the comfort level.
2. **Individual Variables:**
  - **Socio-Economic Characteristics:** This includes factors like age and income of the individual.

- **Spatial Characteristics:** Percentage of the origin and destination municipalities in high-density areas.
- **Journey Characteristics:** This includes the type of user (car or coach user for the reference trip), frequency of the trip, and whether there is an imperative schedule.
- **General Mobility:** This involves access to a car and the frequency of use of modes alternative to the car.

These factors collectively influence the choices individuals make regarding their mode of transport, which in turn affects the frequency of use of urban public transport.

### Article III

The several factors that influence the frequency of use of urban public transport:

1. **Instrumental Motives:** These are determined by objective level of service variables like travel cost, travel time, and frequency of the transport service.
2. **Perceptual Variables:** The demand for public transport is also driven by perceptions, which may even matter more than the actual reality in travel decisions. For instance, people who usually do not drive perceive cars as less safe, more costly, less comfortable, and offering fewer varied experiences compared to public transport.
3. **Quality of Travel Time and Feelings:** The quality of the time spent traveling and the feelings experienced during public transport travel significantly influence mode choice habits. This underscores the importance of designing public transport infrastructures that make travel time as pleasant and efficient as possible.
4. **Public Policies and Emotional Experience:** Improving public transport users' emotional experience through infrastructures and public policies can be a key determinant in promoting the use of public transport and inducing a modal shift.
5. **Environmental Concern, Affective and Symbolic Motives:** These factors also partly dictate mode choice habits. Managing these dimensions, such as publicizing the environmental impact of car use or promoting the positive image of public transport, is crucial. The media's role in offsetting negative images of public transport with suitable communication strategies is highlighted as important.

N°	Article
1	Paulley, N., Balcombe, R., Mackett, R., Titheridge, H., Preston, J., Wardman, M., ... & White, P. (2006). The demand for public transport: The effects of fares, quality of service, income and car ownership. <i>Transport policy</i> , 13(4), 295-306.
2	Redman, L., Friman, M., Gärling, T., & Hartig, T. (2013). Quality attributes of public transport that attract car users: A research review. <i>Transport policy</i> , 25, 119-127.
3	Zhang, Wang, M., Dong, J., Lu, W., Liu, Y., Ni, A., & Yu, X. (2022). Factors and Mechanism Affecting the Attractiveness of Public Transport: Macroscopic and Microscopic Perspectives. <i>Journal of Advanced Transportation</i> , 2022, 1–16.
4	Rasca, & Saeed, N. (2022). Exploring the factors influencing the use of public transport by commuters living in networks of small cities and towns. <i>Travel, Behaviour &amp; Society</i> , 28, 249–263.
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