

Mobility behaviour of the Employees of the companies at EUREF-Campus

Comprehensive data analysis with
recommendations for action

Quantitative Data Analysis: Group 02

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Introduction

Importance of understanding mobility behavior of the commuters:

- Effective transportation planning and design
- To ensure accessibility and inclusivity
- To create right incentive structures
- To identify the measures needed for sustainable transformation
- To ensure improved quality of life

-  Gastronomie
Restaurants
-  Batteriespeicher
Battery Storage
-  Energiewerkstatt mit BHKW
EUREF Energy Workshop with CHP
-  Ladepunkte Elektroautos
Charging Points Electric Cars
-  TESLA Supercharger (12 Plätze)
TESLA Supercharger (12 stations)
-  Fahrradstellplätze
Bicycle Parking
-  Motorradstellplätze
Motorcycle Parking
-  Tiefgarage öffentlich
Public Underground Parking
-  Zugang Tiefgarage
Access Underground Parking
-  Tiefgarage Mieter
Tenant Underground Parking
-  Parkplätze Mieter
Tenant Parking
-  Hotel im Wasserturm
Hotel Wasserturm
-  1. Hilfe
First-Aid
-  Defibrillator
Defibrillator
-  WC rollstuhlgerecht
Wheelchair-Friendly Restrooms
-  WC
Restrooms
-  Duschen
Showers

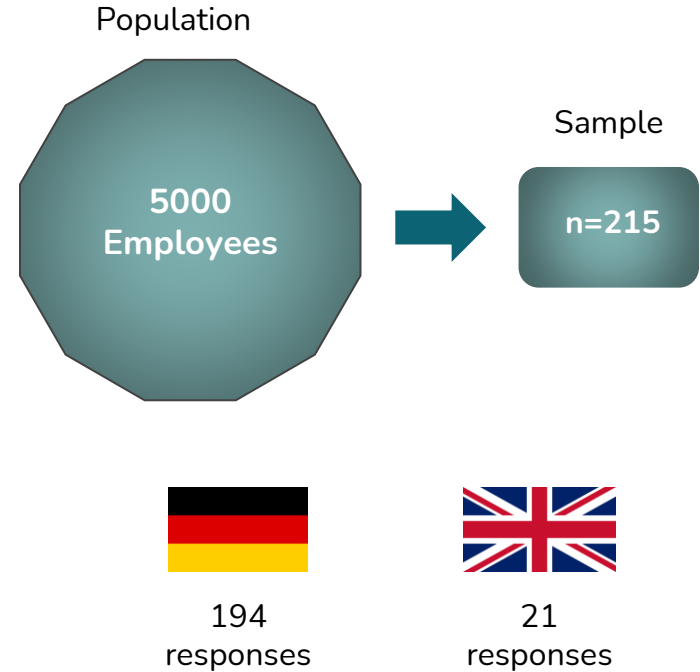
-  Büroflächen EUREF-Campus 1-25
Office Spaces
-  Veranstaltungsorte
Event Locations
-  Showroom Schneider Electric
-  Grey Garage ZeeMo.Base
-  Schleusenhaus
-  Reglerhaus
-  TU-Campus EUREF Seminarräume
TU-Campus EUREF Seminar Rooms
-  Ladezonen
Loading Areas
-  Pförtner
Concierge
-  Raucherbereich
Smoking Area





Methodology

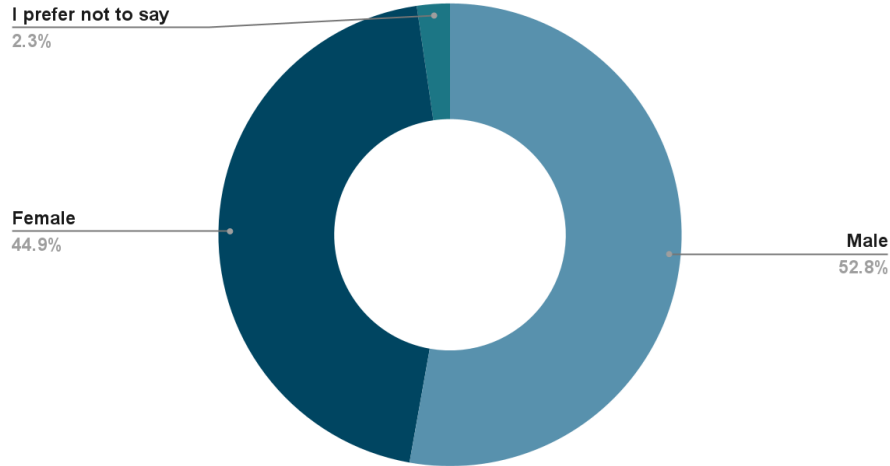
- **Survey conducted by:**
Energy Masters Students of TU Berlin
- **The survey was administered from:**
06.01.2023 - 24.01.2023
- **Aim of the study:**
To assess the mobility behaviour of the employees of the companies at EUREF-Campus Berlin Schöneberg, and to provide recommendations for action
- **No. of successful responses:** 215
- **Languages:** English, German



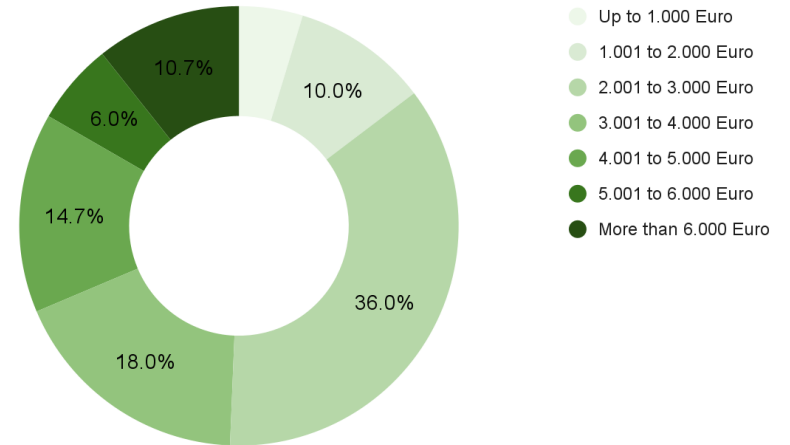


Demographics

Gender

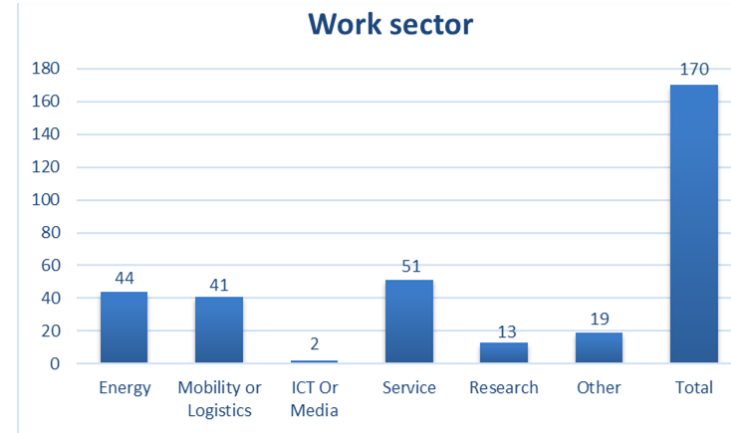
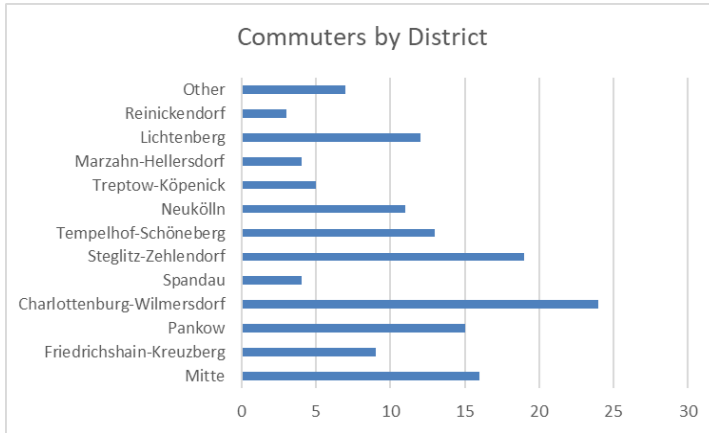
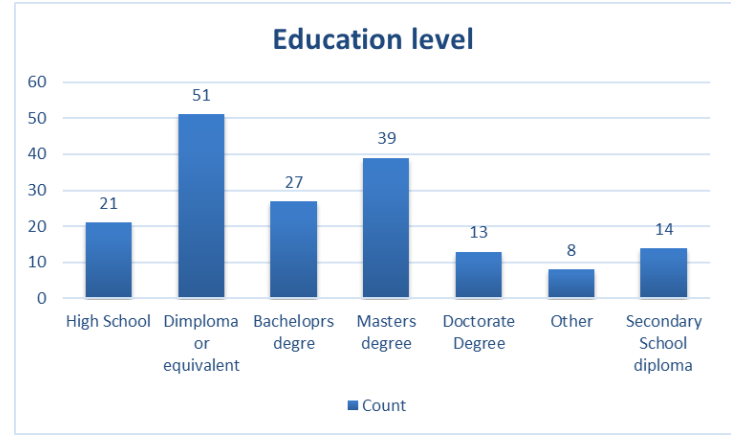
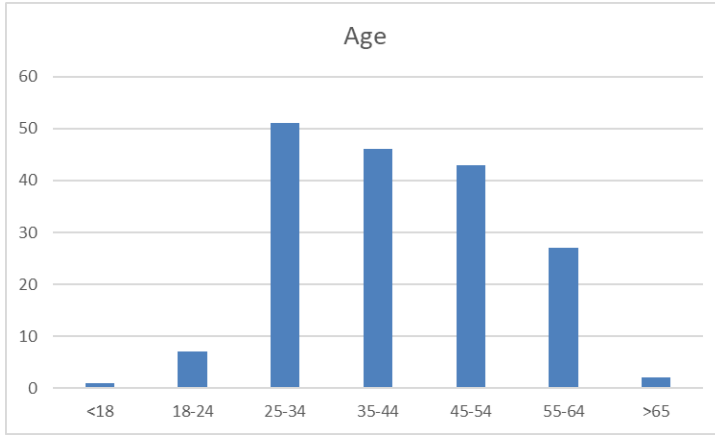


Income



Majority of the employees are in 2000-3000 euro bracket

Demographics

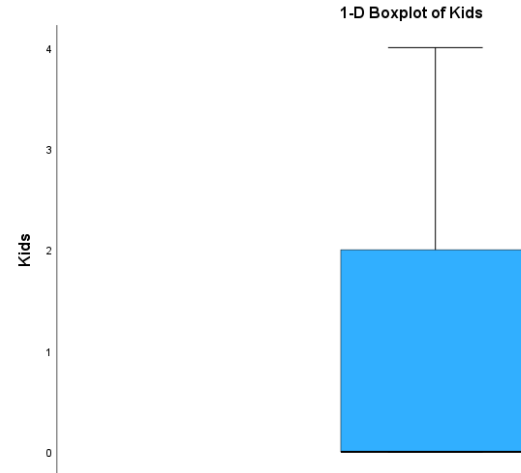




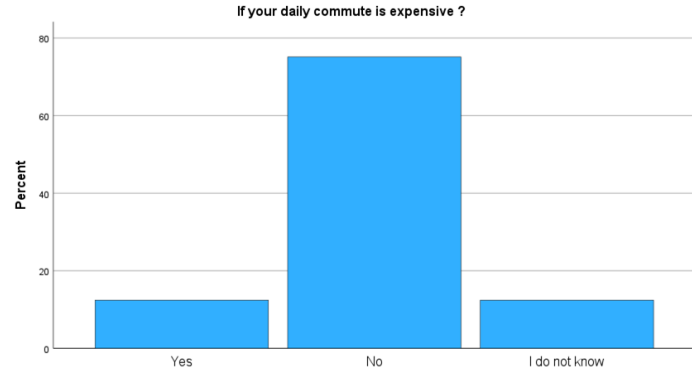
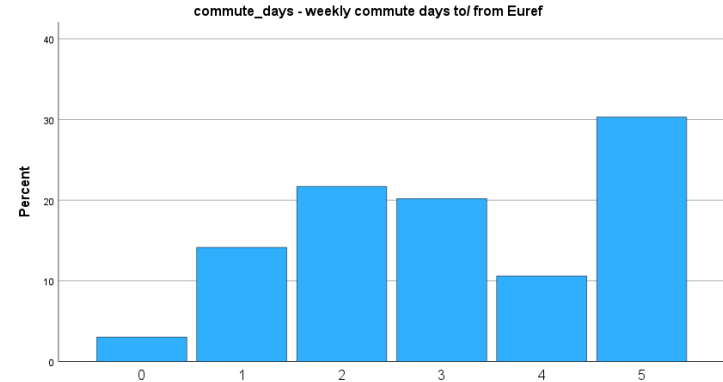
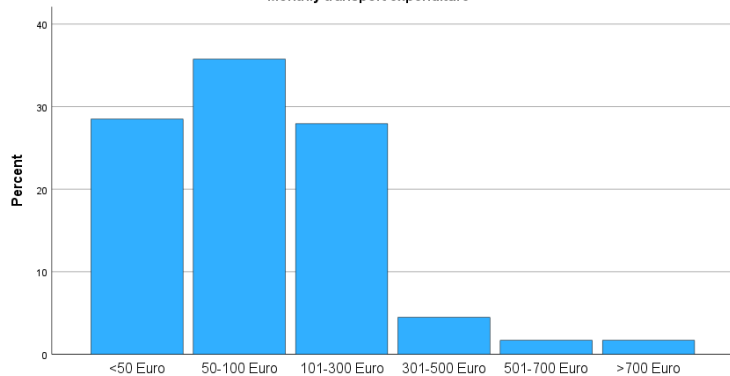
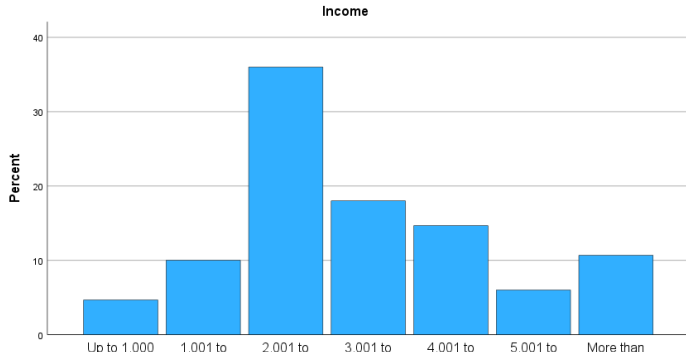
Number of Kids- Descriptive Stats

Descriptive Statistics

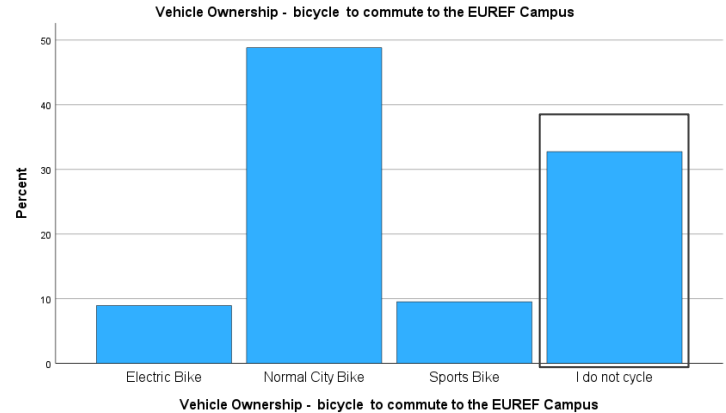
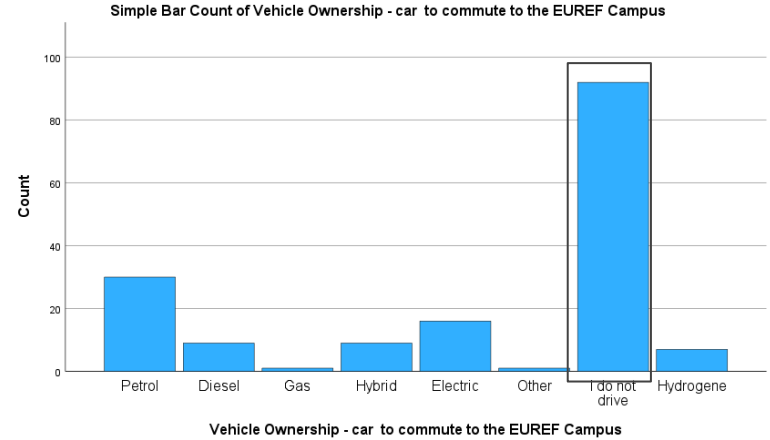
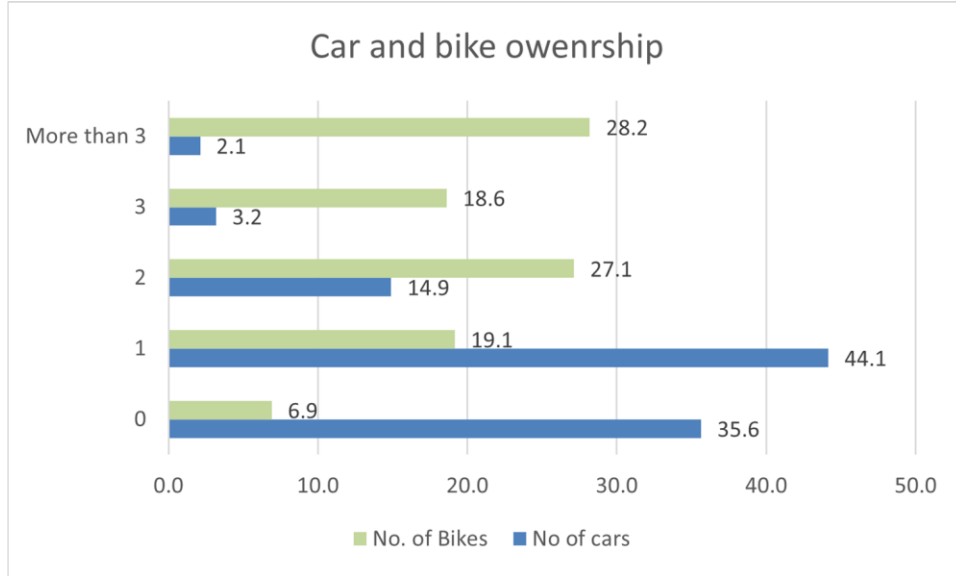
| | N | Minimum | Maximum | Mean | Std. Deviation | Variance |
|--------------------|-----|---------|---------|------|----------------|----------|
| Kids | 169 | 0 | 4 | .86 | 1.043 | 1.087 |
| Valid N (listwise) | 169 | | | | | |



Mobility Behaviour - Income and Expense

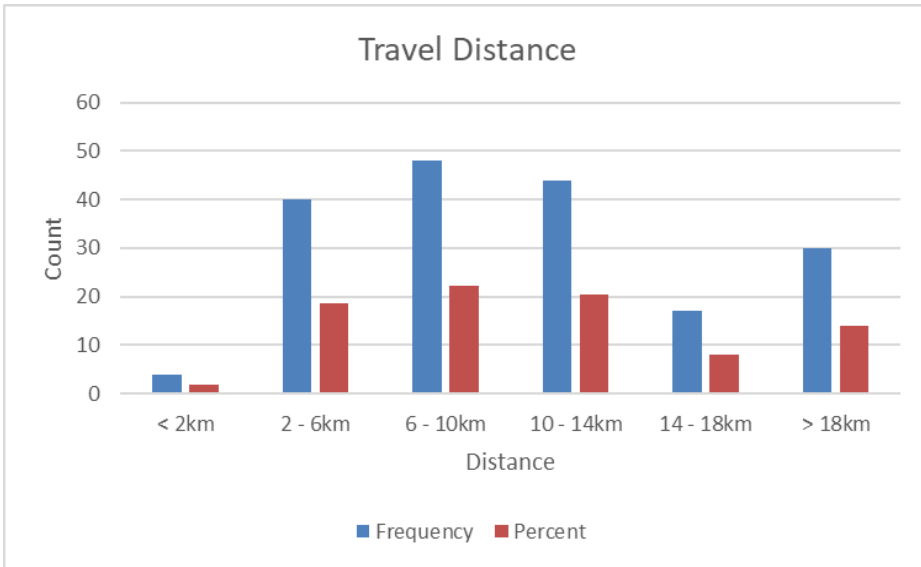


Mobility Behaviour- Vehicle ownership

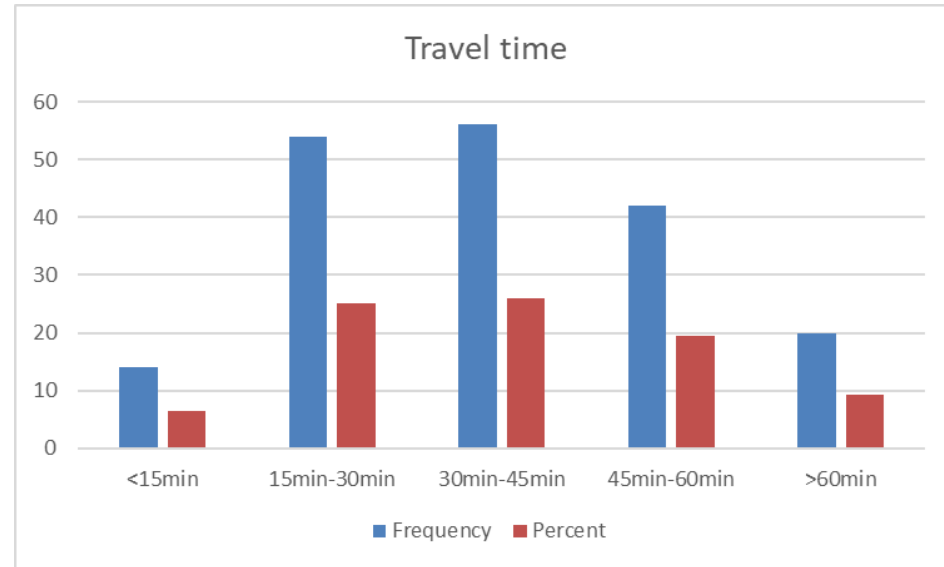




Mobility Behaviour - Travel time and Distance



42% of the respondents reside within 6-14 km range from EUREF

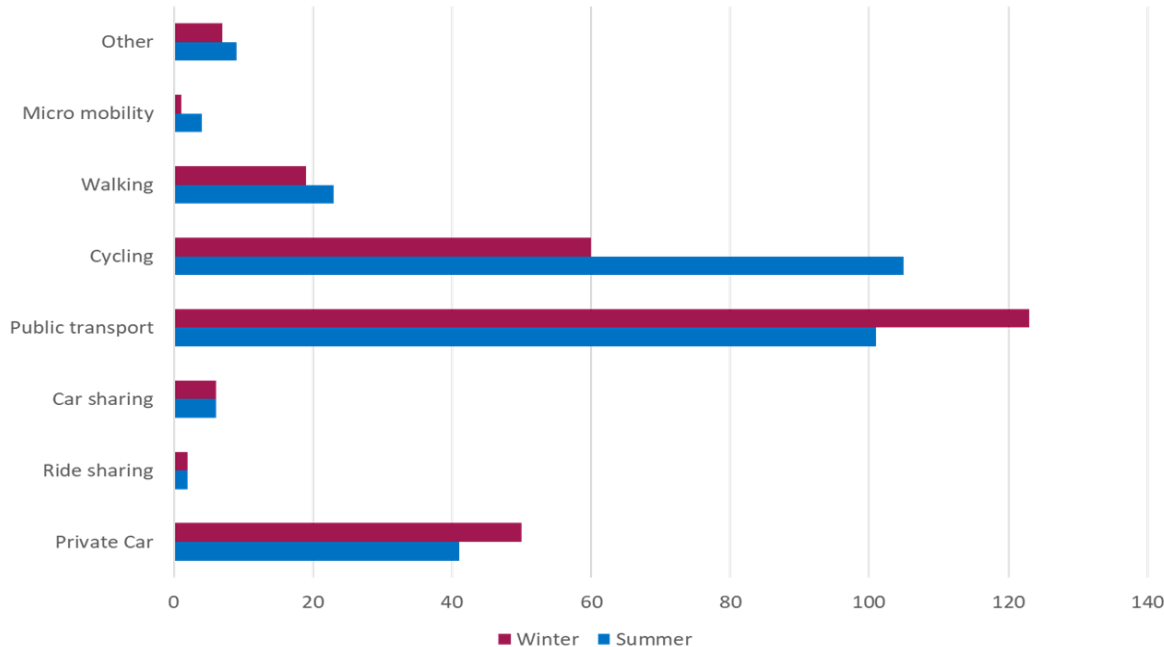


Around half of the total respondents spend 15-45 minutes commuting to/from EUREF



Mobility Behaviour

Preferred mode of commute to/from EUREF during Winter and Summer



Majority of the employees use public transport in winter

Significant number of commuters shift from PT to cycling in summer

Carsharing and Ridesharing users don't change their mode choice seasonally

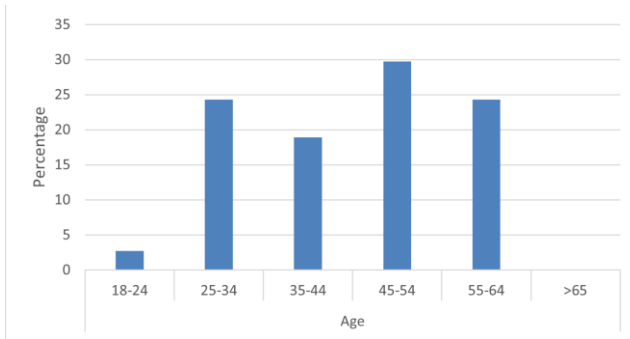
Around 25% of the respondents use private car during summer

Very few number of respondents use micromobility options to get to EUREF

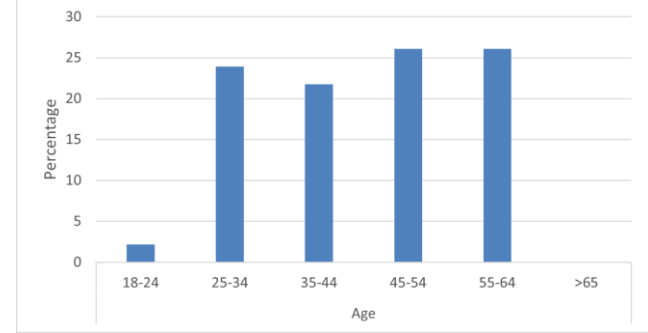


Mobility behaviour based on age group

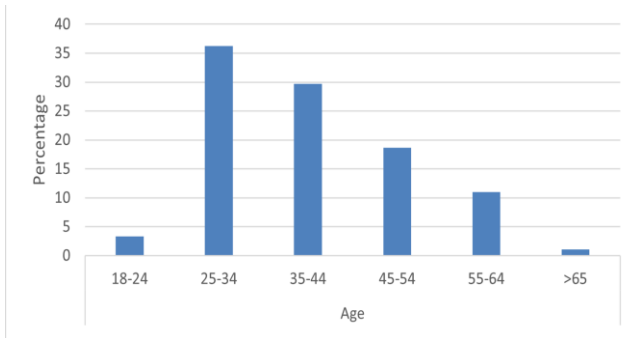
Private car users in summer



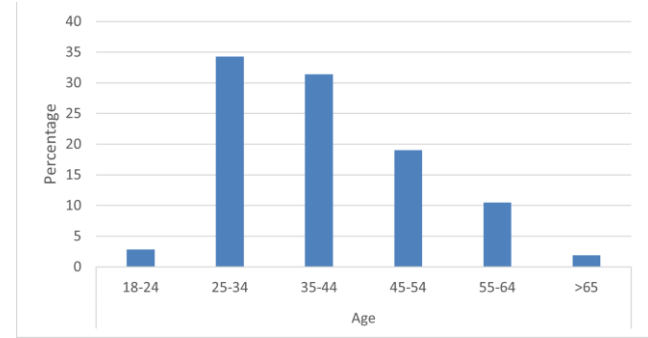
Private car users in winters



Public transport users in summer

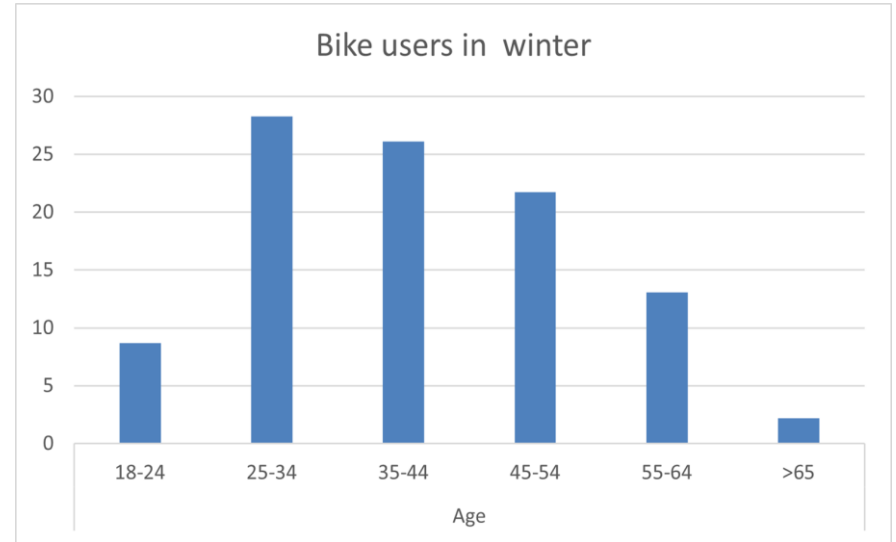
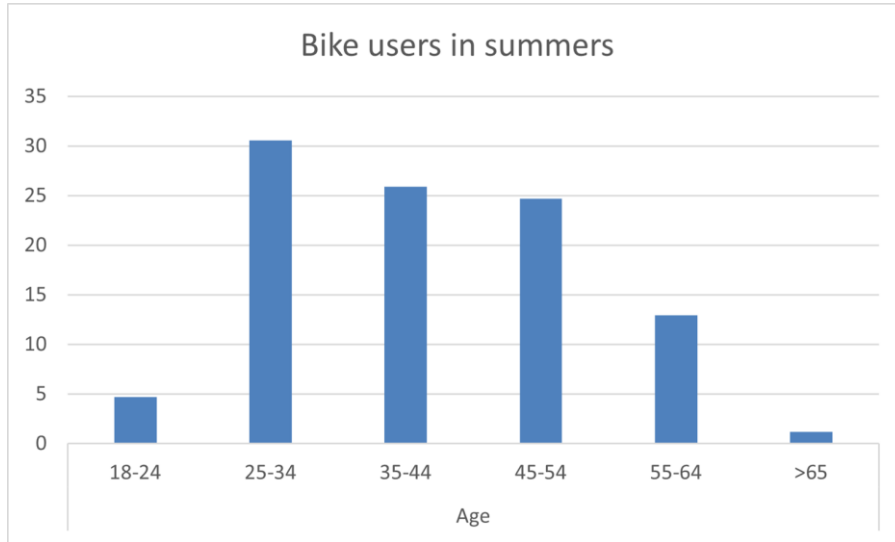


Public transport users in winter





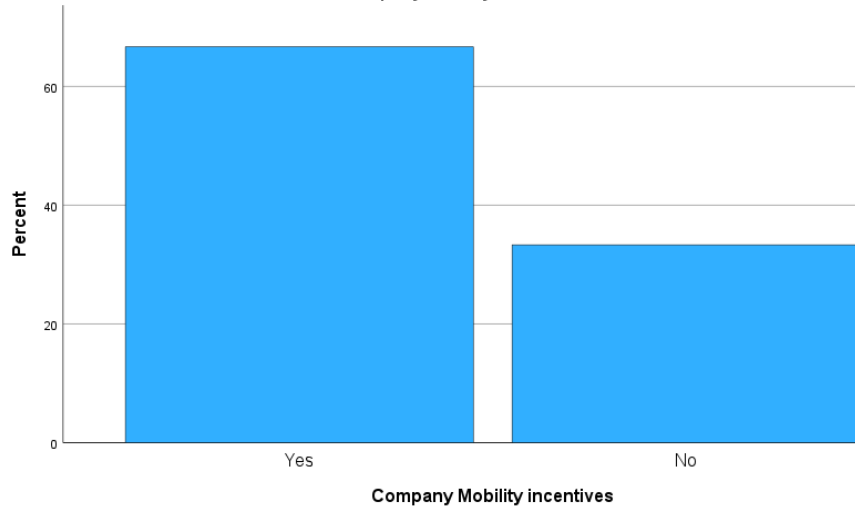
Bike users by age (Summer & Winter)



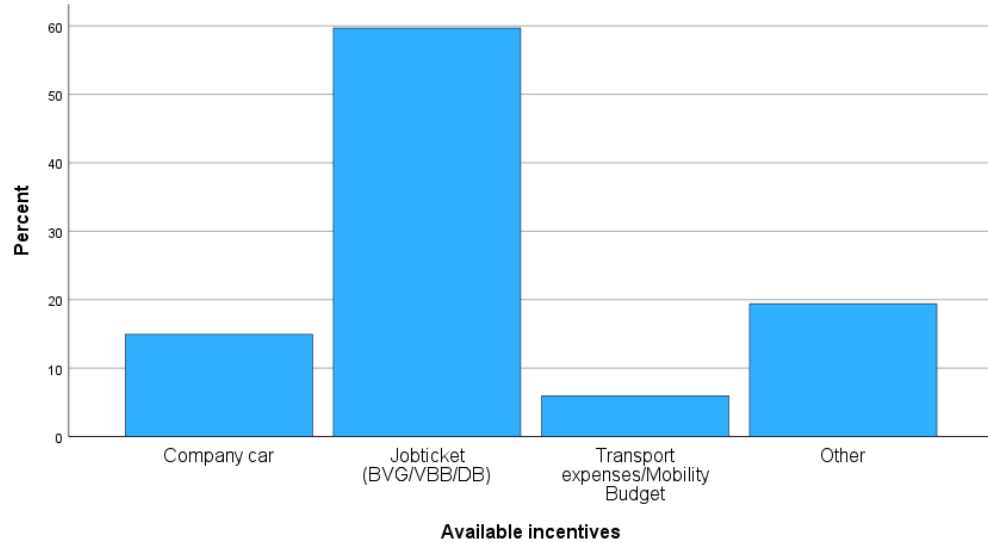


Mobility Incentives

Company Mobility incentives

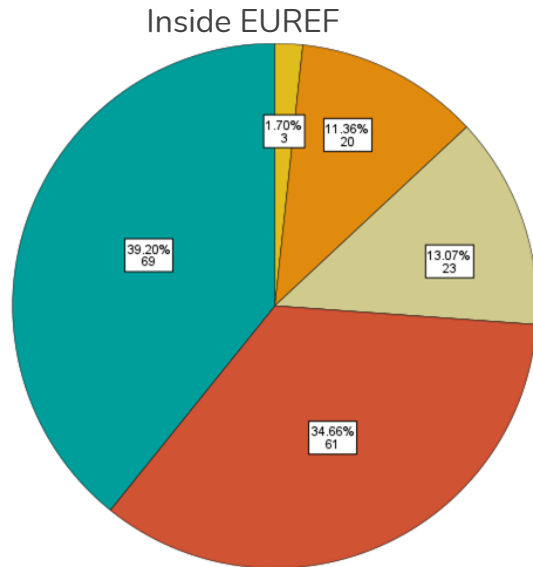


Available incentives

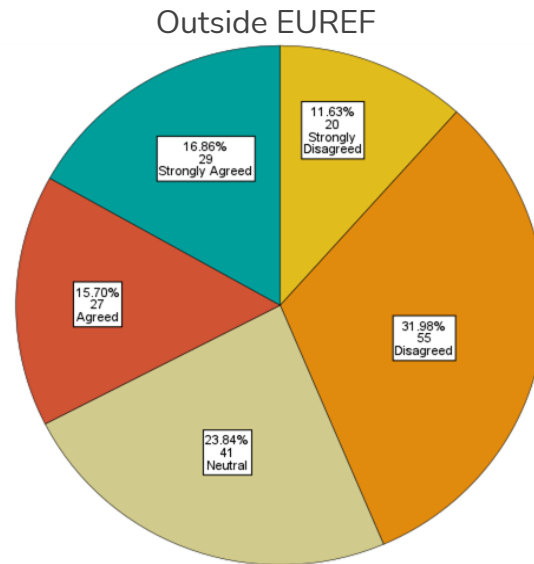


Mobility Infrastructure

Q: Are there enough safe roads, pedestrian ways and bike lanes in EUREF premises and surrounding areas?



75 % agrees



67 % doesn't agree

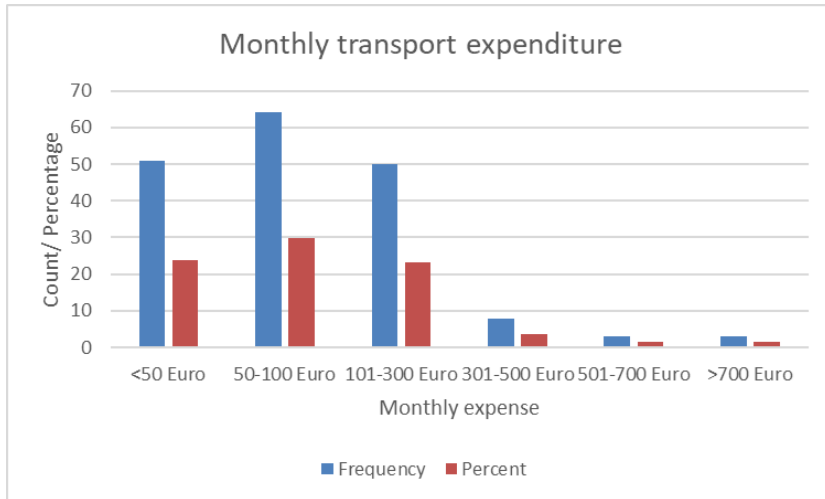
Parking Management :
There are enough safe roads, pedestrian ways and bike lanes provided in the area of the EUREF-Campus..

- Strongly Disagreed
- Disagreed
- Neutral
- Agreed
- Strongly Agreed



Correlation

Q: Is there a correlation between monthly income and monthly transport expenditure?



30% of the respondents spend 50-100 euro monthly for transport

Correlations

| | | Income | Monthly transport expenditure |
|-------------------------------|---------------------|--------|-------------------------------|
| Income | Pearson Correlation | 1 | .333** |
| | Sig. (2-tailed) | | <.001 |
| | N | 150 | 134 |
| Monthly transport expenditure | Pearson Correlation | .333** | 1 |
| | Sig. (2-tailed) | <.001 | |
| | N | 134 | 179 |

** . Correlation is significant at the 0.01 level (2-tailed).

Yes, there is a significant correlation between these two parameters.

Regression: Predictors for monthly transport expenditure

Model Summary^b

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | R Square Change | Change Statistics | | | |
|-------|-------------------|----------|-------------------|----------------------------|-----------------|-------------------|-----|-----|---------------|
| | | | | | | F Change | df1 | df2 | Sig. F Change |
| 1 | .436 ^a | .190 | .178 | .948 | .190 | 15.385 | 2 | 131 | <.001 |

a. Predictors: (Constant), Vehicle Ownership - available household cars, Income

b. Dependent Variable: Monthly transport expenditure

17.8% of the Variance of the DV is explained by the IVs

ANOVA^a

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|-----|-------------|--------|--------------------|
| 1 | Regression | 27.651 | 2 | 13.825 | 15.385 | <.001 ^b |
| | Residual | 117.722 | 131 | .899 | | |
| | Total | 145.373 | 133 | | | |

a. Dependent Variable: Monthly transport expenditure

b. Predictors: (Constant), Vehicle Ownership - available household cars, Income

p Value < 0.05 (alpha)

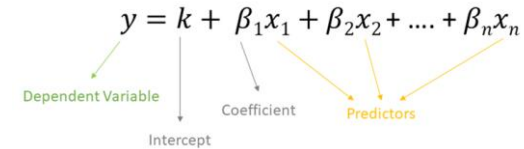


The model is significant

Coefficients^a

| Model | | Unstandardized Coefficients | | Standardized Coefficients Beta | t | Sig. | 95.0% Confidence Interval for B | |
|-------|--|-----------------------------|------------|-----------------------------------|-------|-------|---------------------------------|-------------|
| | | B | Std. Error | | | | Lower Bound | Upper Bound |
| 1 | (Constant) | .991 | .247 | | 4.019 | <.001 | .503 | 1.479 |
| | Income | .165 | .056 | .244 | 2.964 | .004 | .055 | .274 |
| | Vehicle Ownership - available household cars | .326 | .091 | .295 | 3.585 | <.001 | .146 | .506 |

a. Dependent Variable: Monthly transport expenditure



y : Monthly transport expenditure

k : Intercept (= 0.991)

x₁: Income, β₁: 0.165

x₂: Available household cars, β₂: 0.326



Improvement Suggestions by Employees at Euref Campes

- Expansion of Torgauer Street and to have cycling lane and pedestrian area.
- To have asphalt instead of cobblestones on Torgauer Street
- To improve foot/cycle infrastructure of the connection to Albertstrasse
- To have more bicycle stands available around the campus
- To have clear cycling lanes in Euref Campus.
- A cycling lane from Julius-Leber Brucke side towards the rear entrance of Euref Campus.



Recommendations

- Encourage getting rid of private cars, at least in summer
- Launching employees sustainability program for the companies at Euref Campus
- Company cars: Are they EVs or not? If not, make them all EVs because charging facilities are there
- Incentivize private and ICE car owners to switch to EV
- Waiting room or for the EV users during charging their cars
- Incentives programs from the companies in Euref to support on using the Bike instead of the car



TO
CAMPUS
EUREF

MCC

MCC
Molecular Research Institute
for Cancer Care

Thank You