**Online supplement to**

**“Using Virtual Accessibility and Physical Accessibility as Joint Predictors of Activity-Travel Behavior”**

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**TABLE 1 Descriptive statistics of VAM and PAM variables**

|  |  |  |
| --- | --- | --- |
| **VAM** | | |
| Variable | Count | % |
| **Internet Availability** | |  |
| Yes | 2,988 | 90.0 |
| No | 331 | 10.0 |
| **Occupation types** | | |
| Managerial and professional occupations | 1428 | 43.0 |
| Routine, manual, intermediate occupations | 1891 | 57.0 |
| **PAM** | | |
| Variable | Count | % |
| **Travel time to nearest rail station** | | |
| 6 mins or less | 232 | 7.0 |
| 7–13 mins | 362 | 10.9 |
| 14–26 mins | 876 | 26.4 |
| 27–43 mins | 544 | 16.4 |
| 44 mins + | 1,3205 | 39.3 |
| **Travel time to nearest shopping center** | | |
| 15 minutes or less | 1,792 | 54.0 |
| 16 - 20 minutes | 568 | 17.1 |
| 21 - 30 minutes | 528 | 15.9 |
| 31 - 40 minutes | 146 | 4.4 |
| 41 - 60 minutes | 219 | 6.6 |
| 60 minutes + | 66 | 2.0 |
| **Travel time to nearest hospital** | | |
| 15 minutes or less | 734 | 22.1 |
| 16 - 20 minutes | 478 | 14.4 |
| 21 - 30 minutes | 803 | 24.2 |
| 31 - 40 minutes | 329 | 9.9 |
| 41 - 60 minutes | 733 | 22.1 |
| 60 minutes + | 242 | 7.3 |

**TABLE 2 Socio-demographic characteristics**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Variable | Count | % | Variable | Count | % |
| **Gender** | | | **House Type** | | |
| Female | 2,319 | 69.9 | Detached | 753 | 22.7 |
| Male | 1,000 | 30.1 | Semi-detached | 1,080 | 32.5 |
| **Age** | | | Townhome | 973 | 29.3 |
| 17–29 years old | 395 | 11.9 | Apartment/Flat | 501 | 15.1 |
| 30–39 years old | 772 | 23.3 | Other | 12 | 0.4 |
| 40–49 years old | 982 | 29.6 | **Household Tenure Status** | | |
| 50 - 59 years | 838 | 25.2 | Owns/buying | 2,369 | 71.3 |
| 60 years + | 332 | 10.0 | Rents | 928 | 28.0 |
| **Presence of Children** | | | Other | 22 | 0.7 |
| Yes | 1,152 | 34.7 | **Household Income** | | |
| No | 2,167 | 65.3 | Less than £25,000 | 1,002 | 30.2 |
| **Employment Status** | | | £25,000 to £49,999 | 1,224 | 36.9 |
| Full Time | 2,121 | 63.9 | £50,000 and over | 1,093 | 32.9 |
| Part Time | 1,198 | 36.1 | **Residential Location** | | |
| **Employment Type** | | | Metropolitan | 944 | 28.4 |
| Self-employed | 312 | 9.4 | Non-metropolitan | 2375 | 71.6 |
| Employee | 3,007 | 90.6 |  |  |  |
| **Education** |  |  |  |  |  |
| No Degree | 2267 | 68.3 |  |  |  |
| Degree | 1052 | 31.7 |  |  |  |

**TABLE 3 Descriptive statistics of the indicators of PALSAC**

|  |  |  |
| --- | --- | --- |
| Variable | Count | % |
| **Ease to commute without car** | | |
| Very difficult | 853 | 25.7 |
| Quite difficult | 495 | 14.9 |
| Neither easy nor difficult | 139 | 4.2 |
| Fairly easy | 571 | 17.2 |
| Very easy | 1,261 | 38.0 |
| **Ease to shop without car** | |  |
| Very difficult | 308 | 9.3 |
| Quite difficult | 930 | 28.0 |
| Neither easy nor difficult | 261 | 7.9 |
| Fairly easy | 610 | 18.4 |
| Very easy | 1,210 | 36.4 |
| **Rating of quality of pavement** | | |
| Quite poor | 523 | 15.8 |
| Fairly poor | 547 | 16.5 |
| Neither poor/good | 523 | 15.8 |
| Fairly good | 1,505 | 45.3 |
| Quite good | 221 | 6.6 |
| **Rating of quality of bicycle lanes** | | |
| Quite poor | 1,149 | 34.7 |
| Fairly poor | 456 | 13.7 |
| Neither poor/good | 747 | 22.5 |
| Fairly good | 752 | 22.7 |
| Quite good | 214 | 6.4 |

**Table 4 Thresholds and constants of PALSC indicators and loadings of latent variables on indicators**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **PALSC Indicators** | **Threshold 2** | | **Threshold 3** | | **Threshold 4** | | **Constant** | | **Latent variable loading** | |
| **Coeff.** | **t-stat** | **Coeff.** | **t-stat** | **Coeff.** | **t-stat** | **Coeff.** | **t-stat** | **Coeff.** | **t-stat** |
| Ease to commute without a car | -- | -- | 0.587 | 21.01 | 1.386 | 33.34 | 1.078 | 17.49 | 0.852 | 27.13 |
| Ease to shop without a car | 0.818 | 24.59 | 1.095 | 29.82 | 2.050 | 41.70 | 1.536 | 26.72 | 0.715 | 24.67 |
| Rating of quality of pavement | 0.552 | 23.76 | 0.967 | 35.17 | 2.534 | 54.77 | 1.037 | 35.88 | 0.138 | 5.22 |
| Rating of quality of bicycle lanes | 0.366 | 20.80 | 0.971 | 35.36 | 1.961 | 43.60 | 0.434 | 15.51 | 0.203 | 7.40 |

“-- “ not statistically significant

**Table 5 Thresholds of ordinal PAG outcomes**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **PALSC Indicators** | **Threshold 2** | | **Threshold 3** | | **Threshold 4** | |
| **Coeff.** | **t-stat** | **Coeff.** | **t-stat** | **Coeff.** | **t-stat** |
| Average duration of mandatory activity episodes | 0.747 | 20.31 | 1.364 | 32.31 | 2.036 | 44.02 |
| Average duration of maintenance activity episodes | 0.893 | 31.00 | 1.813 | 45.00 | n/a | n/a |
| Average duration of discretionary activity episodes | 1.039 | 32.79 | 1.730 | 44.64 | n/a | n/a |
| Motorized vehicle availability | 1.481 | 29.62 | 3.941 | 34.04 | n/a | n/a |
| Average number of trips per tour | 1.127 | 36.09 | 1.826 | 43.61 | n/a | n/a |

“n/a” not applicable