**Online supplement to**

**“On the Use of Probit Based Models for Ranking Data Analysis”**

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**TABLE A.1 Parameters estimated using ROL, ROP, HROL and HROP models on the gaming console dataset**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Model** | **ROL** | **ROP** | **HROL** | **HROP** |
| Alternative specific constants (Base: PC) |
| PlayStation | 0.9381(0.26) | 0.8938(0.32) | 0.9306(0.33) | 0.8314(0.33) |
| PlayStation Portable | 0.8018(0.27) | 0.6032(0.33) | 0.6498(0.38) | 0.5343(0.36) |
| Gamecube | 0.0460(0.29) | -0.0017(0.34) | 0.0266(0.44) | 0.0431(0.36) |
| Gameboy | 0.0922(0.27) | -0.2286(0.33) | -0.4758(0.54) | -0.3037(0.4) |
| X-box | 1.3965(0.28) | 1.3283(0.33) | 1.4297(0.35) | 1.2642(0.35) |
| Hours spent playing (Base: PC) |
| PlayStation | -0.1296(0.04) | -0.1221(0.05) | -0.1127(0.05) | -0.1133(0.05) |
| PlayStation Portable | -0.2342(0.05) | -0.2166(0.05) | -0.2661(0.08) | -0.2140(0.06) |
| Gamecube | -0.1865(0.05) | -0.1952(0.06) | -0.2865(0.09) | -0.2156(0.07) |
| Gameboy | -0.235(0.05) | -0.2205(0.06) | -0.3451(0.11) | -0.2428(0.07) |
| X-box | -0.1729(0.04) | -0.1595(0.05) | -0.1524(0.05) | -0.1526(0.05) |
| Platform ownership | 0.9639(0.19) | 1.2409(0.22) | 1.4423(0.30) | 1.2310(0.29) |
| Log scaling parameter |
| Rank level 1 (Fixed) | -- | -- | 0.0000 | 0.0000 |
| Rank level 2 | -- | -- | -0.4495(0.26) | -0.0958(0.24) |
| Rank level 3 | -- | -- | -0.4093(0.26) | 0.1478(0.24) |
| Rank level 4 | -- | -- | -1.1033(0.52) | -0.2852(0.50) |
| Rank level 5 | -- | -- | -1.4055(0.80) | -0.3928(0.71) |

(This table is to be read along with section 6.1 of the original paper. The values in parenthesis indicate standard errors.)

**TABLE A.2 Parameters estimated using ROL, ROP, HROL and HROP models on the LPG bus utility dataset**

(This table is to be read along with section 6.2 of the original paper. The values in parenthesis indicate standard errors.)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Model** | **ROL** | **ROP** | **HROL** | **HROP** |
| Fuel type is LPG | -3.3495(0.38) | -4.2307(0.43) | -5.8498(0.62) | -5.1101(0.54) |
| Fuel price (in HK$) | -0.9972(0.08) | -1.1716(0.09) | -1.4173(0.13) | -1.3078(0.11) |
| Vehicle price (in 100,000 HK$) | -1.1344(0.39) | -1.048(0.45) | -0.9478 (0.60) | -0.8964(0.53) |
| Refueling distance (km) | -0.2431(0.03) | -0.2793(0.04) | -0.2591(0.05) | -0.2788(0.04) |
| Vehicle range (in 100 km) | 0.3399(0.06) | 0.3932(0.07) | 0.3348(0.08) | 0.3779(0.07) |
| Vehicle life (years) | 0.2736(0.04) | 0.3307(0.05) | 0.3446(0.06) | 0.3496(0.05) |
| Number of seats | 0.5399(0.04) | 0.6121(0.05) | 0.7663(0.06) | 0.6784(0.05) |
| Horse Power (kW@3600 rpm) | 0.0222(0.00) | 0.026(0.00) | 0.0237(0.01) | 0.0258(0.01) |
| Log scaling parameter |  |  |  |  |
| Rank level 1 (fixed) | -- | -- | 0.0000 | 0.0000 |
| Rank level 2 | -- | -- | -0.7306(0.11) | -0.2205(0.10) |
| Rank level 3 | -- | -- | -1.6911(0.29) | -0.8365(0.24) |