

## Appendix E Likelihood Ratio Test Results

**Table E1 Equality of All Parameter Estimates: Swait and Louviere Test Results**

<b>Data</b>	$L_{2018}$	$L_{2019}$	$L_{2020}$	$L_{pool}$	$\lambda$	<b>Degrees of freedom</b>	<b>Critical value</b>	<b>Reject <math>H_0</math></b>
CB	-12549	-8503	-20545	-41859	525	312	354.19	Yes
RP-CB	-19893	-8462	-30795	-59491	684	314	356.33	Yes

Note: This table reports the results of likelihood ratio tests by Swait and Louviere (1993). We conducted a joint test of equality of all preference parameters with CB data and joint RP-CB data respectively in the following five steps. First, we constructed a “restricted” version of datasets so that the numbers of alternatives in the choice set are the same across three years. Second, we ran a pooled model with data from three years and obtained the log-likelihood value  $L_{pool}$ . Third, we ran the same model for each dataset separately, and obtained the log-likelihood values  $L_{2018}$ ,  $L_{2019}$ ,  $L_{2020}$ . Fourth, we calculated the chi square statistics (i.e.,  $\lambda$ ), which equals to  $-2 \times (L_{pool} - (L_{2018} + L_{2019} + L_{2020}))$ . Fifth, we compared the chi square statistics to the cut-off values for the chi square statistics and rejected the null hypothesis that all parameters are equal across three years using the 95% confidence interval.