# Results

## **Bayesian Independent Samples T-Test**

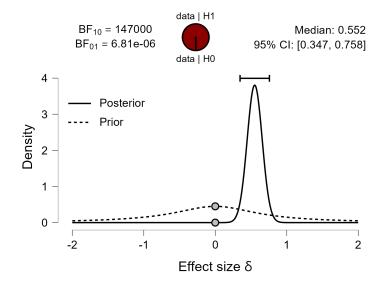
Bayesian Independent Samples T-Test

	BF <sub>10</sub>	error %
Flight Distance	146750.982	1.497e-11
Departure Delay	0.294	0.057
Arrival Delay	0.194	0.083
Departure and Arrival Time Convenience	3.313e+6	6.008e-13
Ease of Online Booking	1.723	0.011
Check-in Service	0.123	0.126
Online Boarding	692.336	4.090e-5
Gate Location	0.343	0.050
On-board Service	0.127	0.122
Seat Comfort	0.277	0.061
Leg Room Service	2.114	0.009
Cleanliness	0.119	0.130
Food and Drink	0.191	0.085
In-flight Service	0.242	0.068
In-flight Wifi Service	0.423	0.041
In-flight Entertainment	0.391	0.044
Baggage Handling	0.125	0.123

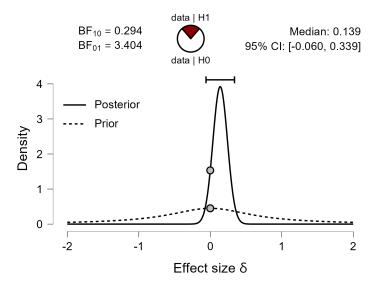
## Inferential Plots

### Flight Distance

## Prior and Posterior

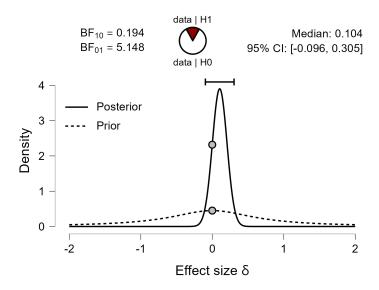


### Departure Delay



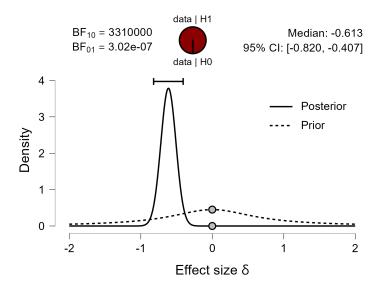
#### Arrival Delay

#### **Prior and Posterior**

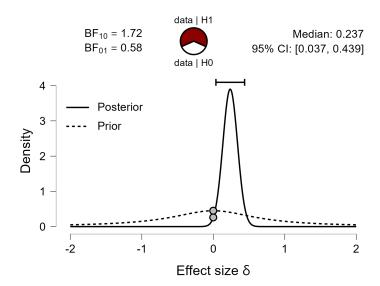


### **Departure and Arrival Time Convenience**

#### **Prior and Posterior**

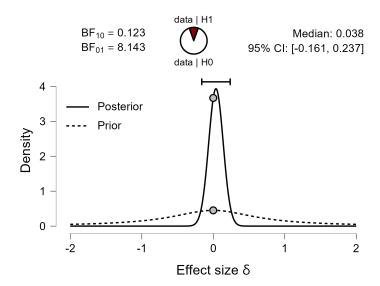


#### Ease of Online Booking



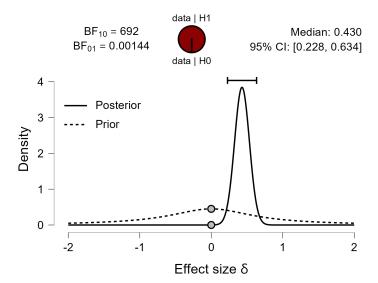
#### Check-in Service

#### **Prior and Posterior**

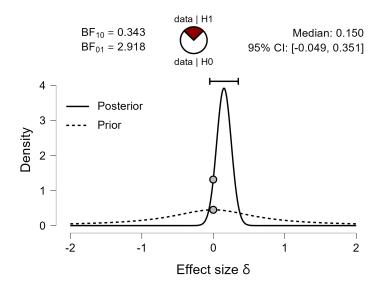


### Online Boarding

#### **Prior and Posterior**

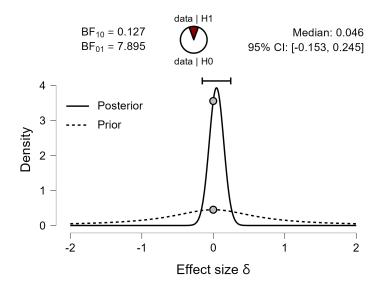


#### **Gate Location**



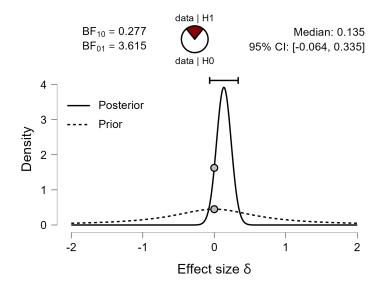
#### On-board Service

#### **Prior and Posterior**

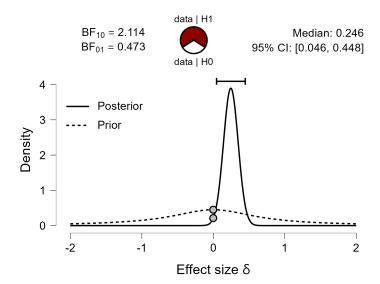


## Seat Comfort

#### **Prior and Posterior**

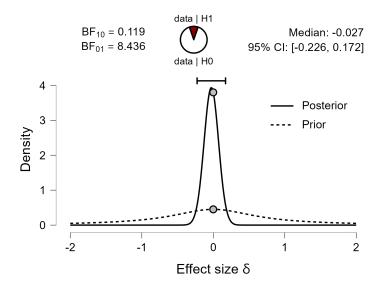


#### Leg Room Service



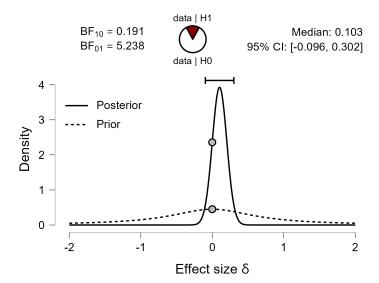
#### Cleanliness

#### **Prior and Posterior**

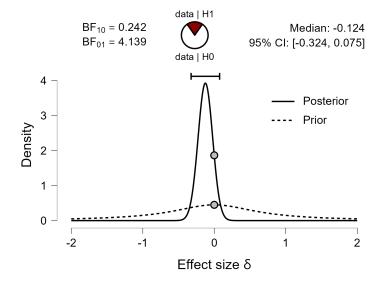


#### Food and Drink

#### **Prior and Posterior**

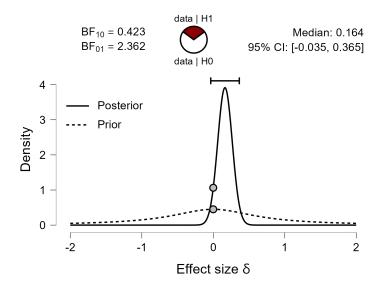


### In-flight Service



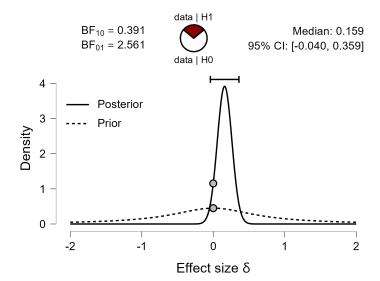
#### In-flight Wifi Service

#### **Prior and Posterior**

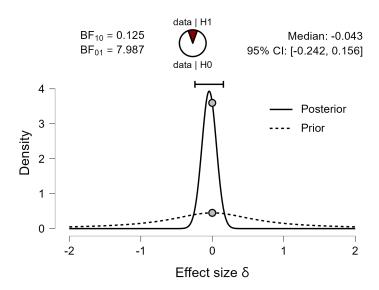


### In-flight Entertainment

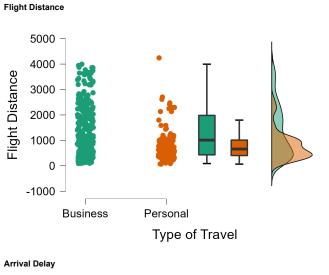
#### **Prior and Posterior**

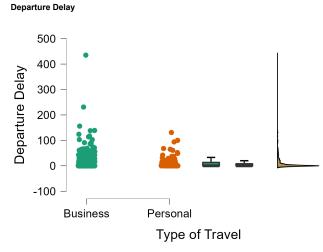


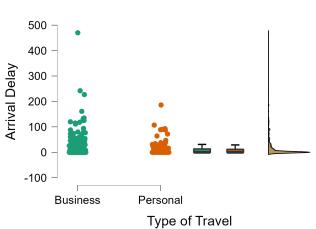
### Baggage Handling

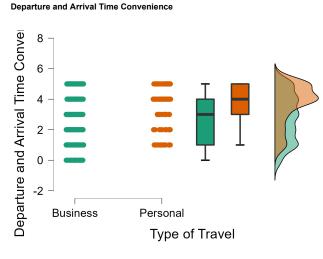


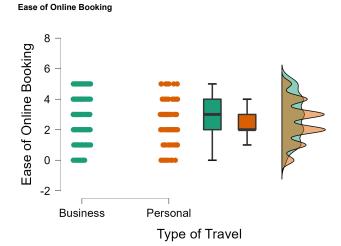


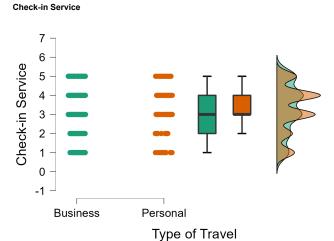


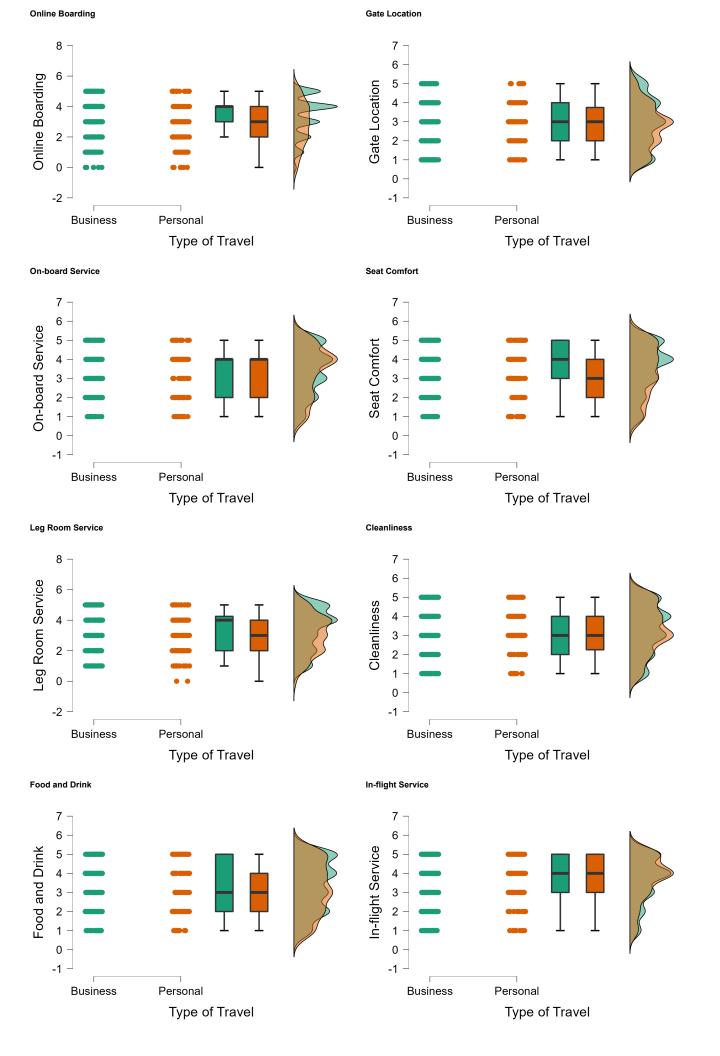


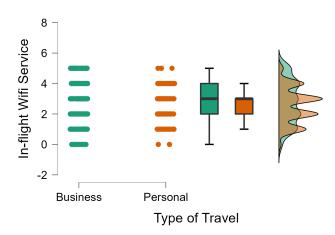


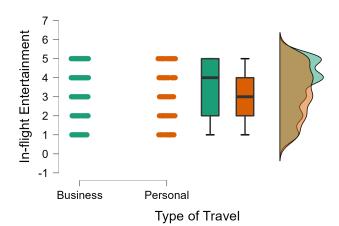




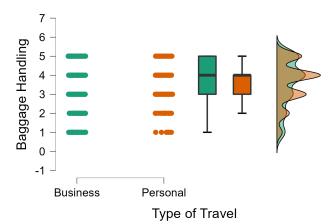








## Baggage Handling



## **Bayesian Linear Regression**

Model Comparison - In-flight Wifi Service

Models	P(M)	P(M data)	$BF_M$	BF <sub>10</sub>
Flight Distance + Ease of Online Booking + Online Boarding + Gate Location + In-flight Entertainment	1.347e-5	0.072	5741.081	1.000
Flight Distance + Ease of Online Booking + Online Boarding + Gate Location + Seat Comfort + In-flight Entertainment	7.346e-6	0.064	9346.487	1.641
Flight Distance + Departure and Arrival Time Convenience + Ease of Online Booking + Online Boarding + In-flight Entertainment	1.347e-5	0.060	4735.235	0.835
Flight Distance + Ease of Online Booking + Online Boarding + In-flight Entertainment	3.232e-5	0.044	1419.816	0.255
Flight Distance + Departure and Arrival Time Convenience + Ease of Online Booking + Online Boarding + Seat Comfort + In-flight Entertainment	7.346e-6	0.025	3548.241	0.649
Flight Distance + Ease of Online Booking + Online Boarding + Gate Location + Seat Comfort + Cleanliness + In-flight Entertainment	5.142e-6	0.025	5038.015	0.922
Flight Distance + Departure and Arrival Time Convenience + Ease of Online Booking + Online Boarding + Gate Location + In-flight Entertainment	7.346e-6	0.023	3172.905	0.582
Flight Distance + Departure and Arrival Time Convenience + Ease of Online Booking + Online Boarding + Gate Location + Seat Comfort + In-flight Entertainment	5.142e-6	0.021	4209.792	0.773
Flight Distance + Ease of Online Booking + Online Boarding + Gate Location + Seat Comfort + In-flight Service + In-flight Entertainment	5.142e-6	0.018	3586.521	0.661
Flight Distance + Ease of Online Booking + Online Boarding + Seat Comfort + In-flight Entertainment	1.347e-5	0.016	1197.329	0.221

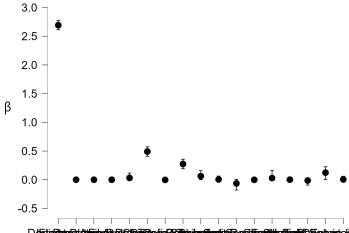
Note. Table displays only a subset of models; to see all models, select "No" under "Limit No. Models Shown".

### **Posterior Summary**

Posterior Summaries of Coefficients

								95% Credi	ble Interval
Coefficient	P(incl)	P(excl)	P(incl data)	P(excl data)	BF <sub>inclusion</sub>	Mean	SD	Lower	Upper
Intercept	1.000	0.000	1.000	0.000	1.000	2.693	0.042	2.614	2.775
Flight Distance	0.500	0.500	1.000	9.436e-7	1.060e+6	-2.638e-4	4.503e-5	-3.527e-4	-1.792e-4
Departure Delay	0.500	0.500	0.089	0.911	0.098	-2.133e-6	5.478e-4	-6.897e-4	4.987e-4
Arrival Delay	0.500	0.500	0.090	0.910	0.099	-2.832e-5	4.980e-4	-0.001	1.447e-4
Departure and Arrival Time Convenience	0.500	0.500	0.452	0.548	0.825	0.031	0.041	0.000	0.116
Ease of Online Booking	0.500	0.500	1.000	1.876e-14	1.062e+27	0.491	0.043	0.409	0.573
Check-in Service	0.500	0.500	0.111	0.889	0.125	-0.003	0.014	-0.042	0.009
Online Boarding	0.500	0.500	1.000	6.948e-9	1.439e+8	0.274	0.043	0.192	0.357
Gate Location	0.500	0.500	0.624	0.376	1.662	0.063	0.058	-5.963e-4	0.158
On-board Service	0.500	0.500	0.129	0.871	0.148	0.005	0.021	-0.010	0.064
Seat Comfort	0.500	0.500	0.549	0.451	1.216	-0.064	0.069	-0.179	0.008
Leg Room Service	0.500	0.500	0.097	0.903	0.107	-0.001	0.011	-0.023	0.016
Cleanliness	0.500	0.500	0.300	0.700	0.428	0.029	0.054	0.000	0.162
Food and Drink	0.500	0.500	0.100	0.900	0.111	9.788e-4	0.016	-0.004	0.046
In-flight Service	0.500	0.500	0.216	0.784	0.276	-0.014	0.033	-0.093	0.000
In-flight Entertainment	0.500	0.500	0.872	0.128	6.840	0.123	0.067	0.000	0.226
Baggage Handling	0.500	0.500	0.121	0.879	0.137	0.004	0.019	-9.405e-4	0.060

### Posterior Coefficients with 95% Credible Interval



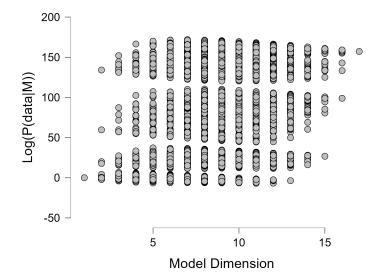
Defitiefiterfat. Alleinte de 12.00 fan Villoutin Gescheitergland je de voor fan Gelden die geber de state de la

#### **Posterior Log Odds**

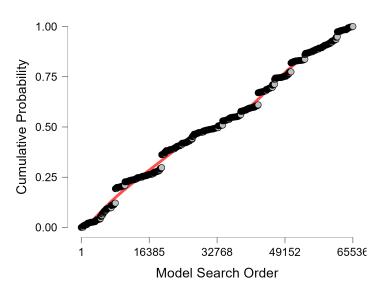
#### Model Rank 5 6 7 8 9 10 11 13 15 17 Intercept Flight Distance Departure Delay Arrival Delay al Time Convenience se of Online Booking Check-in Service Online Boarding Gate Location On-board Service Seat Comfort Leg Room Service Cleanliness Food and Drink In-flight Service -flight Entertainment Baggage Handling 1.398 1.169 0.665 0.551 0.063

Log Posterior Odds

### Log(P(data|M)) vs. Model Size



#### **Model Probabilities**





			Pearson's r	BF <sub>10</sub>	Lower 95% CI	Upper 95% CI
Flight Distance	-	Departure Delay	-0.051	0.105	-0.142	0.042
Flight Distance	-	Arrival Delay	-0.041	0.086	-0.133	0.052
Flight Distance	-	Departure and Arrival Time Convenience	0.010	0.060	-0.083	0.102
Flight Distance	-	Ease of Online Booking	0.026	0.069	-0.066	0.118
Flight Distance Flight Distance	-	Check-in Service Online Boarding	-0.015 0.157*	0.062 15.901	-0.107 0.066	0.077 0.245
Flight Distance	-	Gate Location	0.024	0.067	-0.068	0.116
Flight Distance	-	On-board Service	0.045	0.092	-0.048	0.136
Flight Distance	-	Seat Comfort	0.131	2.834	0.039	0.220
Flight Distance	-	Leg Room Service	0.068	0.165	-0.025	0.159
Flight Distance	-	Cleanliness	0.050	0.104	-0.042	0.142
Flight Distance	-	Food and Drink	0.020	0.065	-0.072	0.112
Flight Distance	-	In-flight Service	0.009 -0.137	0.060	-0.084 -0.226	0.101 -0.045
Flight Distance Flight Distance	-	In-flight Wifi Service In-flight Entertainment	0.012	3.971 0.061	-0.226	0.104
Flight Distance	-	Baggage Handling	-0.029	0.072	-0.121	0.063
Departure Delay	-	Arrival Delay	0.935***	9.267e+197	0.922	0.946
Departure Delay	-	Departure and Arrival Time Convenience	-0.033	0.075	-0.124	0.060
Departure Delay	-	Ease of Online Booking	0.008	0.060	-0.084	0.100
Departure Delay	-	Check-in Service	0.025	0.068	-0.067	0.117
Departure Delay	-	Online Boarding	0.052	0.108	-0.041 -0.072	0.143
Departure Delay Departure Delay	-	Gate Location On-board Service	0.020 -0.030	0.065 0.073	-0.072 -0.122	0.112 0.062
Departure Delay	-	Seat Comfort	-2.439e-4	0.079	-0.092	0.002
Departure Delay	-	Leg Room Service	0.065	0.153	-0.027	0.156
Departure Delay	-	Cleanliness	0.019	0.064	-0.073	0.111
Departure Delay	-	Food and Drink	-0.031	0.073	-0.122	0.062
Departure Delay	-	In-flight Service	-0.019	0.064	-0.110	0.074
Departure Delay	-	In-flight Wifi Service	0.024	0.067	-0.069	0.115
Departure Delay	-	In-flight Entertainment	-0.017	0.063	-0.109	0.075
Departure Delay Arrival Delay	-	Baggage Handling Departure and Arrival Time Convenience	0.026 -0.032	0.069 0.074	-0.066 -0.124	0.118 0.061
Arrival Delay	-	Ease of Online Booking	0.009	0.060	-0.084	0.101
Arrival Delay	-	Check-in Service	0.036	0.078	-0.057	0.128
Arrival Delay	-	Online Boarding	0.041	0.086	-0.052	0.133
Arrival Delay	-	Gate Location	0.019	0.064	-0.073	0.112
Arrival Delay	-	On-board Service	-0.033	0.076	-0.125	0.059
Arrival Delay	-	Seat Comfort	-0.008	0.060	-0.100	0.085
Arrival Delay	-	Leg Room Service	0.070	0.178	-0.023	0.162
Arrival Delay	-	Cleanliness Food and Drink	0.032 -0.028	0.074	-0.061 -0.120	0.124 0.065
Arrival Delay Arrival Delay	-	In-flight Service	-0.050	0.071 0.102	-0.141	0.043
Arrival Delay	-	In-flight Wifi Service	0.015	0.062	-0.078	0.107
Arrival Delay	-	In-flight Entertainment	-0.038	0.081	-0.130	0.055
Arrival Delay	-	Baggage Handling	0.021	0.065	-0.072	0.113
Departure and Arrival Time Convenience	-	Ease of Online Booking	0.362***	2.223e+12	0.278	0.438
Departure and Arrival Time Convenience	-	Check-in Service	-0.013	0.061	-0.105	0.080
Departure and Arrival Time Convenience	-	Online Boarding	0.066	0.157	-0.026	0.157
Departure and Arrival Time Convenience	-	Gate Location	0.445***	1.473e+20	0.367	0.515
Departure and Arrival Time Convenience Departure and Arrival Time Convenience	-	On-board Service Seat Comfort	0.058 -0.060	0.126 0.131	-0.034 -0.151	0.149 0.033
Departure and Arrival Time Convenience		Leg Room Service	-0.013	0.061	-0.105	0.033
Departure and Arrival Time Convenience	-	Cleanliness	-0.036	0.079	-0.128	0.056
Departure and Arrival Time Convenience	-	Food and Drink	-0.057	0.123	-0.148	0.035
Departure and Arrival Time Convenience	-	In-flight Service	0.077	0.226	-0.015	0.168
Departure and Arrival Time Convenience	-	In-flight Wifi Service	0.295***	4.132e+7	0.208	0.376
Departure and Arrival Time Convenience	-	In-flight Entertainment	-0.042	0.088	-0.134	0.050
Departure and Arrival Time Convenience	-	Baggage Handling	0.042	0.088	-0.050	0.134
Ease of Online Booking Ease of Online Booking	-	Check-in Service Online Boarding	0.068 0.441***	0.164	-0.025	0.159
Ease of Online Booking	-	Gate Location	0.433***	5.318e+19 7.817e+18	0.362 0.354	0.511 0.504
Ease of Online Booking	-	On-board Service	0.433	0.059	-0.090	0.095
Ease of Online Booking	-	Seat Comfort	0.034	0.077	-0.058	0.126
Ease of Online Booking	-	Leg Room Service	0.056	0.118	-0.037	0.147
Ease of Online Booking	-	Cleanliness	-0.020	0.065	-0.112	0.072
Ease of Online Booking	-	Food and Drink	-0.017	0.063	-0.109	0.075
Ease of Online Booking	-	In-flight Service	-0.012	0.061	-0.104	0.081
Ease of Online Booking	-	In-flight Wifi Service	0.680***	6.029e+58	0.625	0.725
Ease of Online Booking Ease of Online Booking	-	In-flight Entertainment Baggage Handling	-0.011 0.037	0.061 0.080	-0.103 -0.055	0.081 0.129
Check-in Service	-	Online Boarding	0.226***	7241.515	0.136	0.311
Check-in Service	-	Gate Location	-0.014	0.062	-0.106	0.078
Check-in Service	-	On-board Service	0.218***	3161.425	0.128	0.304
Check-in Service	-	Seat Comfort	0.220***	3954.821	0.130	0.306
Check-in Service	-	Leg Room Service	0.078	0.231	-0.014	0.169
Check-in Service	-	Cleanliness	0.188***	184.546	0.097	0.275
Check-in Service	-	Food and Drink	0.138	4.311	0.046	0.227
Check in Service	-	In-flight Service	0.133	3.231	0.041	0.222
Check-in Service Check-in Service	-	In-flight Wifi Service In-flight Entertainment	0.094 0.187***	0.436 164.215	0.002 0.096	0.185 0.274
Check-in Service Check-in Service	-	Baggage Handling	0.271***	1.534e+6	0.183	0.274
Online Boarding	-	Gate Location	0.007	0.060	-0.085	0.100
Online Boarding	-	On-board Service	0.153*	11.619	0.061	0.241
Online Boarding	-	Seat Comfort	0.395***	1.727e+15	0.313	0.469
Online Boarding	-	Leg Room Service	0.071	0.180	-0.022	0.161
Online Boarding	-	Cleanliness	0.243***	48882.442	0.154	0.328
Online Boarding	-	Food and Drink	0.202***	611.522	0.111	0.288
Online Boarding	-	In-flight Service	0.066	0.155	-0.027	0.157
Online Boarding	-	In-flight Wifi Service	0.497***	1.947e+26	0.423	0.563
Online Boarding Online Boarding	-	In-flight Entertainment Baggage Handling	0.246*** 0.078	63311.618 0.230	0.156 -0.015	0.330 0.169
	-	Daduade Hallulliu	0.076	U.Z3U	-0.015	U. 109

Gate Location

\* BF<sub>10</sub> > 10, \*\* BF<sub>10</sub> > 30, \*\*\* BF<sub>10</sub> > 100

			Pearson's r	BF <sub>10</sub>	Lower 95% CI	Upper 95% CI
Gate Location	-	Seat Comfort	-0.025	0.068	-0.116	0.068
Gate Location	-	Leg Room Service	-0.066	0.157	-0.157	0.026
Gate Location	-	Cleanliness	-0.043	0.089	-0.134	0.050
Gate Location	-	Food and Drink	-0.073	0.192	-0.163	0.020
Gate Location	-	In-flight Service	-0.008	0.060	-0.100	0.085
Gate Location	-	In-flight Wifi Service	0.313***	5.653e+8	0.226	0.393
Gate Location	-	In-flight Entertainment	-0.079	0.240	-0.170	0.013
Gate Location	-	Baggage Handling	-0.072	0.189	-0.163	0.020
On-board Service	-	Seat Comfort	0.139	4.639	0.047	0.228
On-board Service	-	Leg Room Service	0.385***	2.134e+14	0.303	0.460
On-board Service	-	Cleanliness	0.079	0.235	-0.014	0.169
On-board Service	-	Food and Drink	0.030	0.072	-0.062	0.122
On-board Service	-	In-flight Service	0.594***	8.609e+40	0.529	0.650
On-board Service	-	In-flight Wifi Service	0.092	0.389	-7.518e-4	0.182
On-board Service	-	In-flight Entertainment	0.399***	3.367e+15	0.317	0.472
On-board Service	-	Baggage Handling	0.573***	1.933e+37	0.506	0.631
Seat Comfort	-	Leg Room Service	0.052	0.108	-0.040	0.143
Seat Comfort	-	Cleanliness	0.673***	2.027e+57	0.618	0.720
Seat Comfort	-	Food and Drink	0.596***	2.288e+41	0.532	0.652
Seat Comfort	-	In-flight Service	0.020	0.065	-0.072	0.112
Seat Comfort	-	In-flight Wifi Service	0.113	1.020	0.020	0.202
Seat Comfort	-	In-flight Entertainment	0.625***	6.006e+46	0.564	0.677
Seat Comfort	-	Baggage Handling	0.093	0.401	3.396e-5	0.183
Leg Room Service	-	Cleanliness	0.030	0.072	-0.062	0.122
Leg Room Service	-	Food and Drink	-0.004	0.059	-0.096	0.088
Leg Room Service	-	In-flight Service	0.311***	4.310e+8	0.224	0.391
Leg Room Service	-	In-flight Wifi Service	0.047	0.097	-0.046	0.138
Leg Room Service	-	In-flight Entertainment	0.248***	84998.392	0.159	0.332
Leg Room Service	-	Baggage Handling	0.294***	3.435e+7	0.207	0.375
Cleanliness	-	Food and Drink	0.682***	2.838e+59	0.628	0.728
Cleanliness	-	In-flight Service	-3.147e-4	0.059	-0.092	0.092
Cleanliness	-	In-flight Wifi Service	0.140	4.827	0.048	0.229
Cleanliness	-	In-flight Entertainment	0.699***	4.929e+63	0.647	0.742
Cleanliness	-	Baggage Handling	0.122	1.696	0.030	0.212
Food and Drink	-	In-flight Service	-0.051	0.105	-0.142	0.042
Food and Drink	-	In-flight Wifi Service	0.105	0.711	0.013	0.195
Food and Drink	-	In-flight Entertainment	0.645***	7.727e+50	0.586	0.695
Food and Drink	-	Baggage Handling	0.038	0.082	-0.054	0.130
In-flight Service	-	In-flight Wifi Service	0.017	0.063	-0.076	0.109
In-flight Service	-	In-flight Entertainment	0.315***	7.965e+8	0.229	0.395
In-flight Service	-	Baggage Handling	0.567***	2.155e+36	0.499	0.625
In-flight Wifi Service	-	In-flight Entertainment	0.168**	35.412	0.077	0.256
In-flight Wifi Service	-	Baggage Handling	0.105	0.702	0.013	0.195
In-flight Entertainment	-	Baggage Handling	0.390***	5.500e+14	0.308	0.464

<sup>\*</sup> BF<sub>10</sub> > 10, \*\* BF<sub>10</sub> > 30, \*\*\* BF<sub>10</sub> > 100

## **Bayesian Unidimensional Reliability**

Bayesian Scale Reliability Statistics

Estimate	Cronbach's α
Posterior mean	-0.003
95% CI lower bound	-0.017
95% CI upper bound	0.011
R-hat	1.000

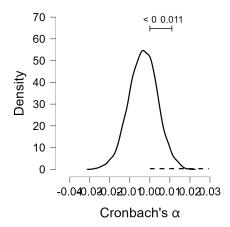
Note. Of the observations, pairwise complete cases were used. The following item correlated negatively with the scale: Gate Location.

Probability that Reliability Statistic is Larger than 0.70 and Smaller than 0.90

	Probability		
Statistic	Prior	Posterior	
Cronbach's α	0.157	0.000	

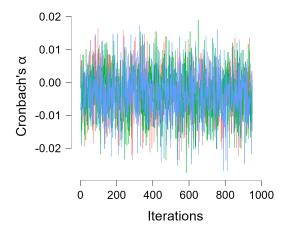
#### **Posterior Plots**

### Cronbach's α



## **Convergence Traceplot**

## Cronbach's $\alpha$



# **Bayesian Contingency Tables**

### Contingency Tables

Gender	Business	Personal	Total
Female	583	203	786
Male	540	284	824
Total	1123	487	1610

Bayesian Contingency Tables Tests

	Value
BF <sub>10</sub> Independent multinomial	71.481
N	1610

Note. For all tests, the alternative hypothesis specifies that group Female is not equal to Male.

Log Odds Ratio

	95% Credible Interval			
Log Odds Ratio	Lower Upper			
0.412	0.198	0.627		

### **Log Odds Ratio Plots**

### Gender - Type of Travel

