

Airline Passenger Satisfaction

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DSC 465 SPRING 2020

Data Set

- ▶ US Airline Passenger Satisfaction
- ▶ 25,976 observations
 - ▶ Each represents an individual passenger rating their experience on an individual flight
- ▶ 23 Variables
 - ▶ Categorical: Gender, Customer Type (Loyal or Not), Type of Travel (Business or Personal), Cabin Class (Business, Economy, Economy Plus), Satisfaction (Satisfied or Not)
 - ▶ Numerical: Age, Flight Distance, Departure Delay, Arrival Delay
 - ▶ Numerical: Ratings for 15 categories on a 0 to 5 scale
 - ▶ Inflight Wifi, Departure & Arrival Time Convenient, Ease of Online booking, Gate location, Food & drink, Online boarding, Seat comfort, Inflight entertainment, Onboard service, Leg room, Baggage handling, Checkin service, Inflight service, Cleanliness
- ▶ For some analysis, calculated average scores for 110 passenger groups based on the Categorical variables and Age Ranges

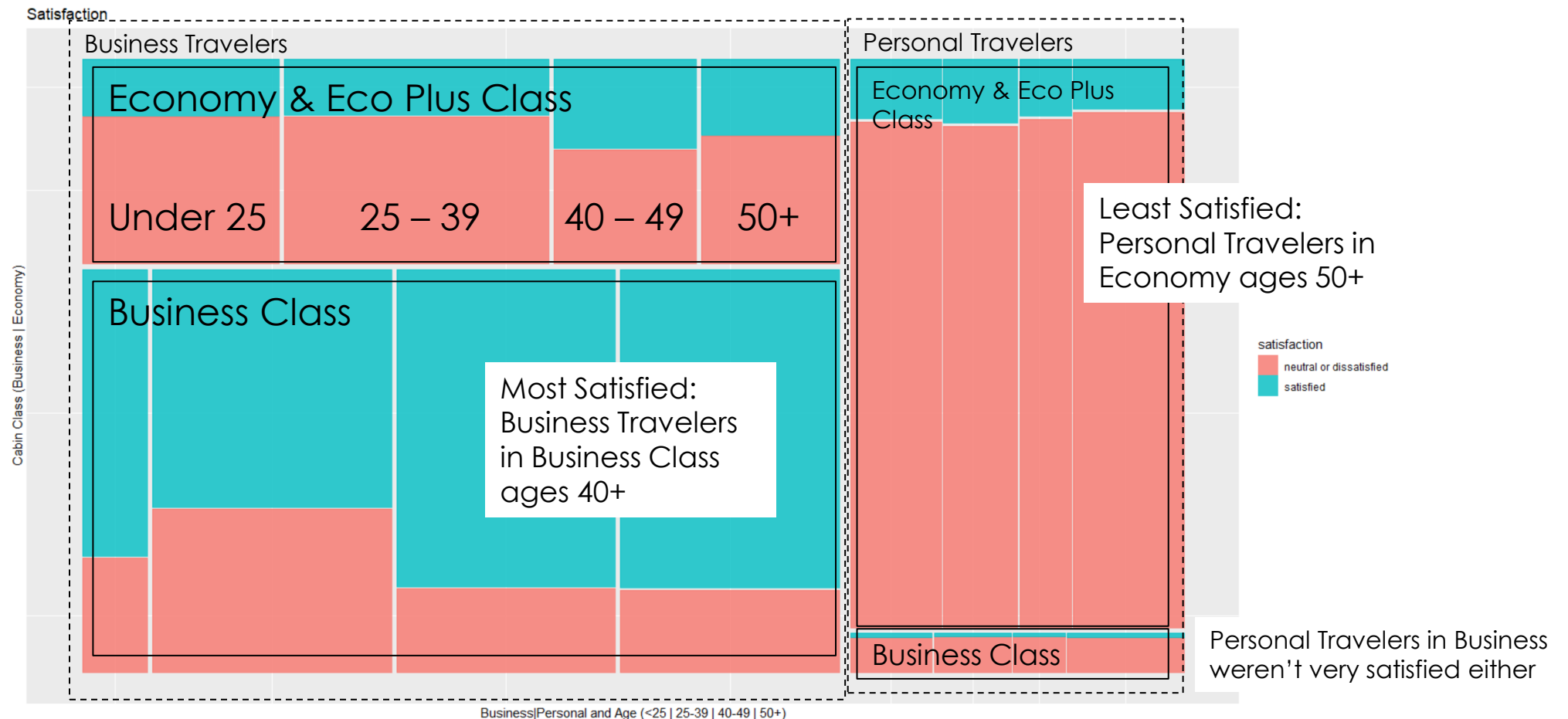
	Purpose	Class2	Loyalty	satisfaction	Gender	Age.Range	n
1	Business travel	Business	disloyal Customer	neutral or dissatisfied	Female	24 and under	20
2	Business travel	Business	disloyal Customer	neutral or dissatisfied	Female	25-39	390
3	Business travel	Business	disloyal Customer	neutral or dissatisfied	Female	40-49	119
4	Business travel	Business	disloyal Customer	neutral or dissatisfied	Female	50 and over	39
5	Business travel	Business	disloyal Customer	neutral or dissatisfied	Male	24 and under	21
6	Business travel	Business	disloyal Customer	neutral or dissatisfied	Male	25-39	396
7	Business travel	Business	disloyal Customer	neutral or dissatisfied	Male	40-49	94
8	Business travel	Business	disloyal Customer	neutral or dissatisfied	Male	50 and over	41
9	Business travel	Business	disloyal Customer	satisfied	Female	24 and under	153
10	Business travel	Business	disloyal Customer	satisfied	Female	25-39	164
11	Business travel	Business	disloyal Customer	satisfied	Female	40-49	48
12	Business travel	Business	disloyal Customer	satisfied	Female	50 and over	24
13	Business travel	Business	disloyal Customer	satisfied	Male	24 and under	152
14	Business travel	Business	disloyal Customer	satisfied	Male	25-39	154
15	Business travel	Business	disloyal Customer	satisfied	Male	40-49	40
16	Business travel	Business	disloyal Customer	satisfied	Male	50 and over	18
17	Business travel	Business	Loyal Customer	neutral or dissatisfied	Female	24 and under	146
18	Business travel	Business	Loyal Customer	neutral or dissatisfied	Female	25-39	426
19	Business travel	Business	Loyal Customer	neutral or dissatisfied	Female	40-49	274
20	Business travel	Business	Loyal Customer	neutral or dissatisfied	Female	50 and over	313
21	Business travel	Business	Loyal Customer	neutral or dissatisfied	Male	24 and under	111
22	Business travel	Business	Loyal Customer	neutral or dissatisfied	Male	25-39	363
23	Business travel	Business	Loyal Customer	neutral or dissatisfied	Male	40-49	254
24	Business travel	Business	Loyal Customer	neutral or dissatisfied	Male	50 and over	335
25	Business travel	Business	Loyal Customer	satisfied	Female	24 and under	215

Showing 1 to 28 of 110 entries, 7 total columns

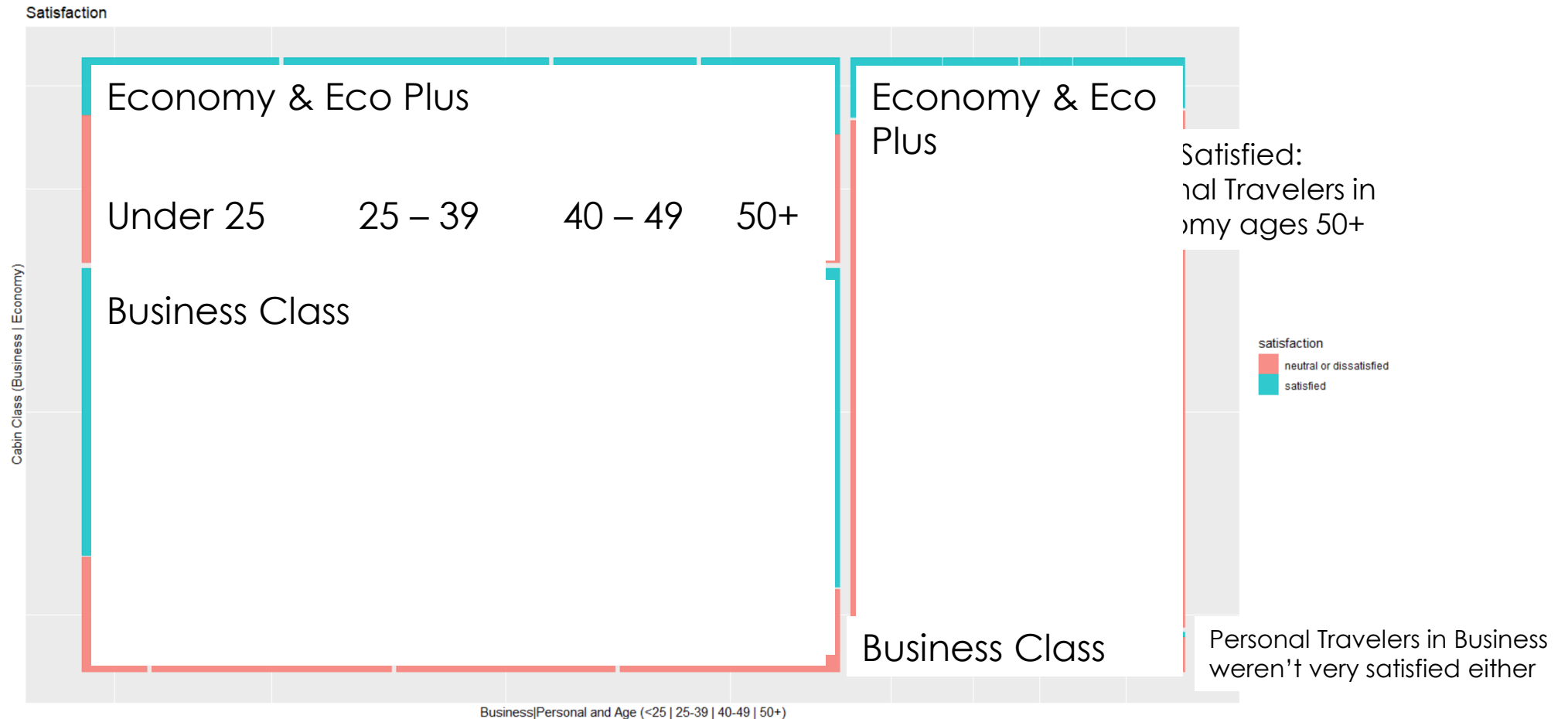
Goals

- ▶ What drives passenger satisfaction?
 - ▶ Satisfaction – rated as “Satisfied” or “Neutral or Dissatisfied” does not directly correlate with rating scores, so it’s presumably a self-identified metric.
 - ▶ What do “Satisfied” passengers rank highly? What do “Neutral or Dissatisfied” passengers rank lowly?
- ▶ How do those values vary by passenger group? Which groupings have the most consistent ratings?
 - ▶ Business vs Personal Travelers
 - ▶ Business vs Economy/Economy Plus Cabin Class
 - ▶ Loyal vs Disloyal Passengers
 - ▶ Flight Delay vs No Delay

Exploratory Analysis

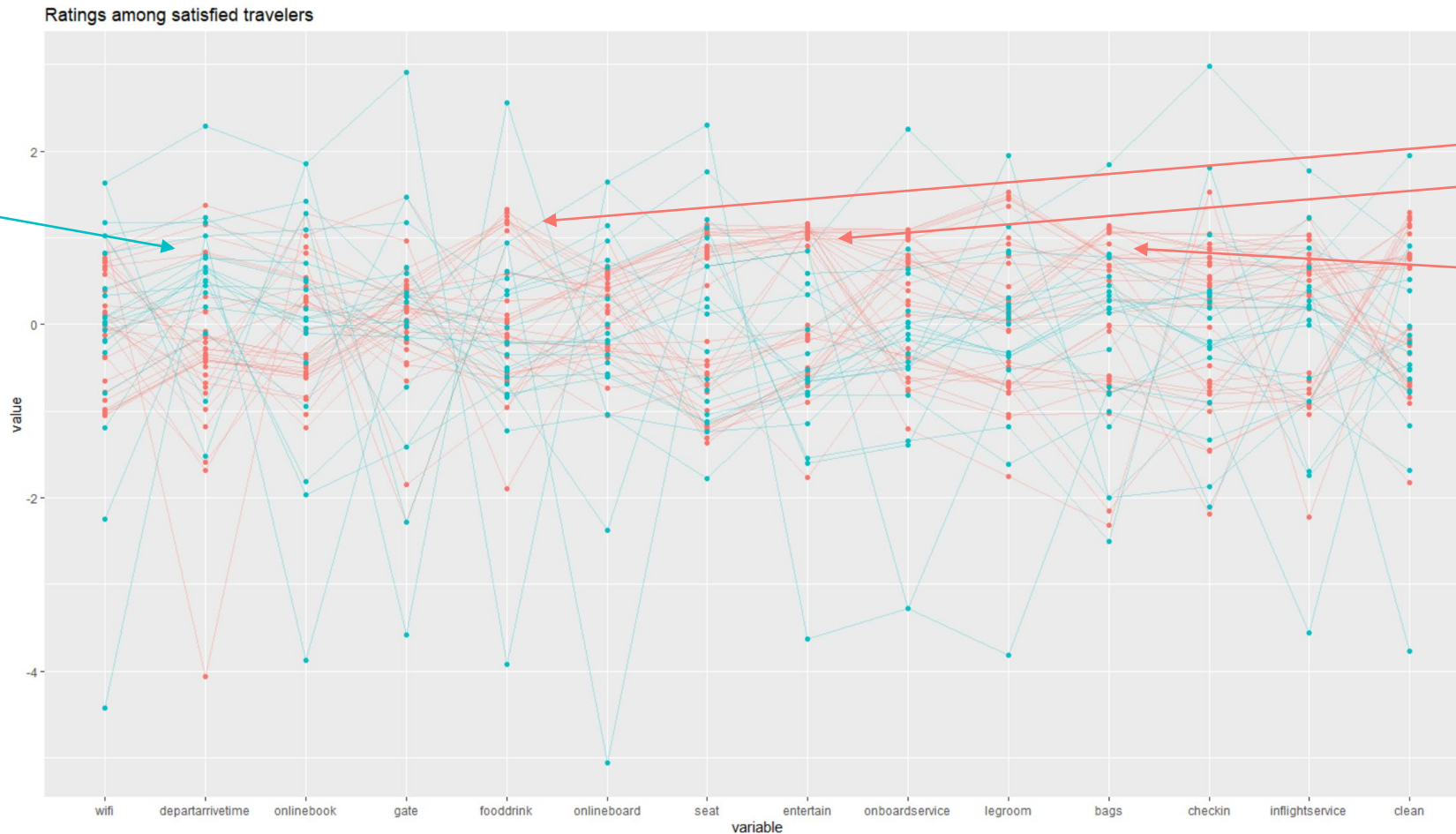


Exploratory Analysis



What drives satisfaction?

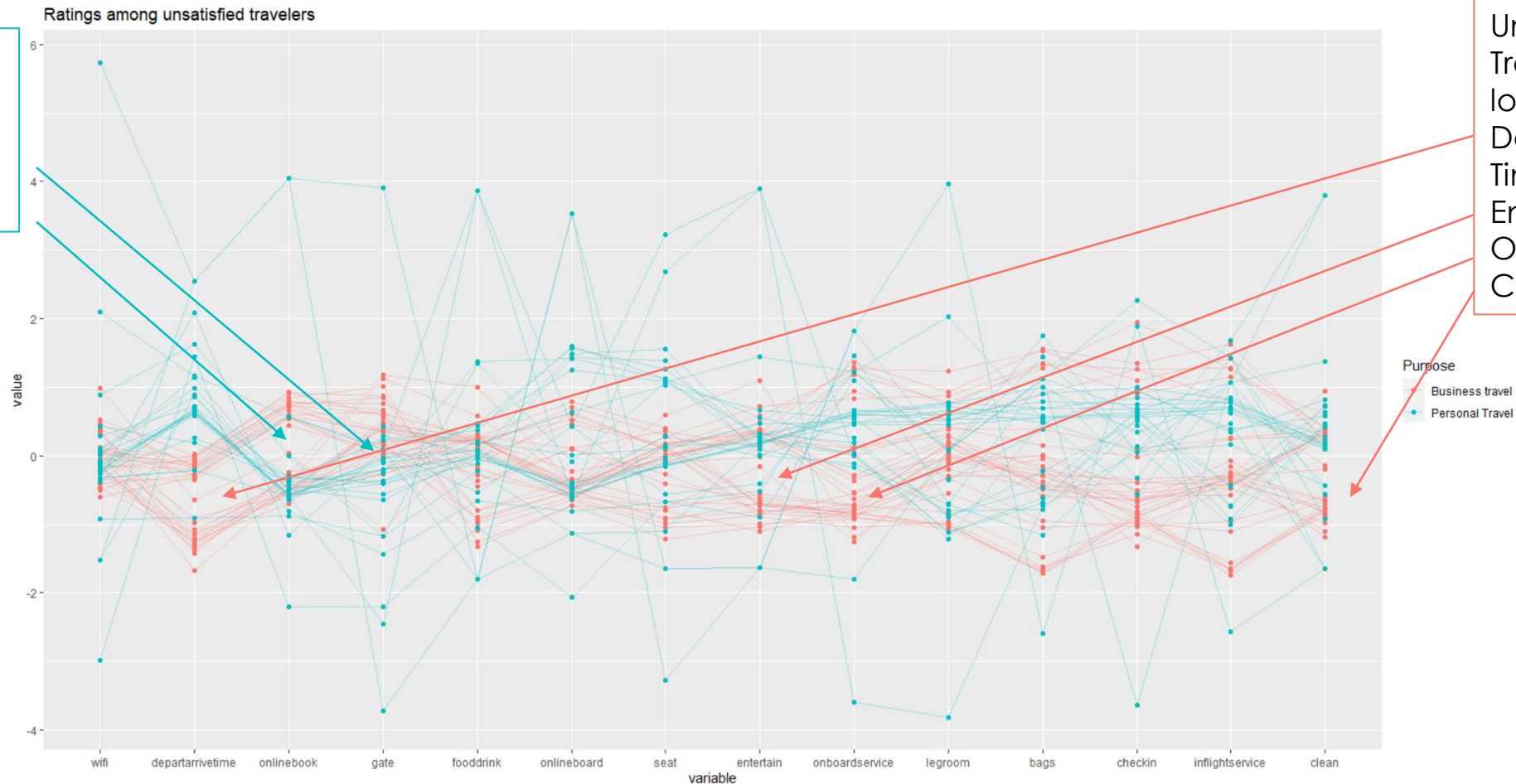
Satisfied Personal Travelers ranked highly: Depart & Arrive Time Convenient



Satisfied Business Travelers ranked highly: Food & Drink, Inflight Entertainment, Baggage Handling

What drives dissatisfaction?

Unsatisfied
Personal Travelers
ranked lowly:
Online Booking,
Gate Location



Unsatisfied Business
Travelers ranked
lowly:
Departure & Arrival
Time, Inflight
Entertainment,
Onboard Service,
Check-in Service

Next Steps

- ▶ Look at similar parallel coordinates visualizations for other passenger groupings
- ▶ Identify any passenger groups that are similar
- ▶ Clearly visualize which categories drive satisfaction or dissatisfaction