Marketing Research Project Analysis (due Dec. 7th, midnight)

If your student ID ends in an odd number, you will work with survey 1 (cars); if your student ID ends in an even number, you will work with survey 2 (Uber) (the authors of the survey can work with the data for their survey). Both the surveys and the excel files with the data are in the content folder.

First, you need to personalize your data file. Download the data file and modify it in the following way. You will have to delete the first *x* observations (rows), where *x* is the penultimate (second from the end) digit of your student number. So, if your student number ends with 35, you should delete the first 3 rows. If the penultimate digit of your ID is 0, do not delete any rows.

You will have to follow the same procedure you used for HW2 to merge the survey and the data file in order to be able to run the clogit command in Stata.

You should produce a 2-4 page report that contains the econometric analysis of the data, interpretation of the results, and strategy suggestions. It should start with a description of your task, summary stats, include the formulas for the regressions you are running, the tables with the estimated coefficients (make them nice, not just copies of Stata output), the interpretation of these coefficients, and your recommendations about how the business strategy should be adjusted based on these interpretations. Try to make use of all data that is available to you and run multiple models.

For all questions related to the marketing project proposal, contact Sarah.
Her office hours are on ???, ???, from ??? until ??? at ECON126.

Good luck!

Survey 1 (cars):

You are working for Porsche and are responsible for the introduction of a new car, Porsche 666, which is targeted to upper-middle class consumers and will be priced in the 35,000-45,000 range. Your task is to use the data from the survey to investigate how this car will perform against major competitors: BMW 3, Infinity Q 50, and Audi A4. You need to estimate consumers' WTP for different brands and performance (measure by 0-60mph time). What is the impact of consumer income and valuation of different brands? Finally, you need to issue a recommendation for the optimal strategy for introducing this car.

Survey 2 (Uber):

You have been hired by Uber to lead the project designed to better understand consumers preference with regard to self-driving cars. You need to determine whether it is desirable at this point to roll out a fleet of driverless cars and if so, how they should be priced. Use the data from the survey to estimate the consumer's WTP for riding in a self-driving vehicle. Examine which consumer characteristics affect consumers' choice and issue a recommendation to Uber.

Participant Instruction

This short survey is a study of consumers purchasing decision towards variety of characteristic. All of your answer will be anonymous.

There will be three main type of questions which you will be choosing or evaluating cars models with the characteristics of price and performance.

There are four car brands you can choose from: BWM 3, Porsche 666, Infiniti Q50 and Audi A4.

We will assign different price and performance for different kinds of brands. And you will need to choose which one you would purchase. Please read each question carefully and consider each choice thoroughly.

You will be given 10 minutes to complete all of the questions. If you finish early, please raise your hand and turn in the survey.

If you have question at any time, please raise your hand and wait for the instructor to come and see you.

You may begin as soon as you have finished reading these instructions.

Please circle the number which corresponds to the value that ascribe to each of the following brands:

BMW	1	2	3	4	5	6	7	8	9
Audi	1	2	3	4	5	6	7	8	9
Infiniti	1	2	3	4	5	6	7	8	9
Porsche	1	2	3	4	5	6	7	8	9

Please circle your annual income range:

Below 50,000 50,000 - 60,000 60,000 – 70,000 70,000 – 80,000 80,000 +

Consider the following choice, please circle the choice that you would buy:

Question 1:

	BMW 3	Porsche 666	Infiniti Q50	Audi A4
Price:	34,900	35,000	35,500	36,000
0-60 mph seconds:	7.1	7.1	7.1	7.1

Question 2:

	BMW 3	Porsche 666	Infiniti Q50	Audi A4
Price:	34,900	38,000	35,500	36,000
0-60 mph seconds:	7.1	7.1	7.1	7.1

Question 3:

	BMW 3	Porsche 666	Infiniti Q50	Audi A4
Price:	34,900	34,000	36,000	34,500
0-60 mph seconds:	7.1	7.1	7.1	7.1

Question 4:

	BMW 3	Porsche 666	Infiniti Q50	Audi A4
Price:	34,900	35,000	35,500	36,000
0-60 mph seconds:	7.1	6.8	6.8	6.3

Question 5:

	BMW 3	Porsche 666	Infiniti Q50	Audi A4
Price:	34,900	35,000	35,500	36,000
0-60 mph seconds:	7.1	7.7	6.8	6.5

Question 6:

	BMW 3	Porsche 666	Infiniti Q50	Audi A4
Price:	35,500	35,500	35,500	35,500
0-60 mph seconds:	7.1	7.7	6.8	6.5

Question 7:

	BMW 3	Porsche 666	Infiniti Q50	Audi A4
Price:	35,500	35,500	35,500	35,500
0-60 mph seconds:	7.1	6.8	7.1	7.1

Question 8:

	BMW 3	Porsche 666	Infiniti Q50	Audi A4
Price:	35,500	35,500	35,500	35,500
0-60 mph seconds:	7.1	7.1	7.1	7.1

Question 9:

	BMW 3	Porsche 666	Infiniti Q50	Audi A4
Price:	34,900	37,000	35,500	36,000
0-60 mph seconds:	7.1	7.7	6.8	6.5

Question 10:

	BMW 3	Porsche 666	Infiniti Q50	Audi A4
Price:	34,900	34,000	35,500	36,000
0-60 mph seconds:	7.1	7.7	6.8	6.5

Participant Instructions

This questionnaire is a study of consumer purchase behavior. It will last 30 minutes. All of your answers will be completely anonymous.

Uber is a mobile application that allows users to book fast, convenient rideshares. Users enter their destination in the application and Uber matches them with a driver, as well as estimates the time of arrival and rideshare fare.

In this survey, you will be presented with a number of Uber rideshare options. There are four Uber rideshare options to choose from: UberX, UberPool, UberX Autonomous, and UberPool Autonomous. For each question please choose **ONE** option. This should be the option that you choose if you are riding alone. Descriptions of each rideshare option will be provided on the reverse side of the page, which you are welcome to consult throughout the questionnaire.

In some of the questions, the rideshare options will be assigned different prices and you will have to choose which option you would select. The prices may change for each question, so please read each question and consider each option carefully.

If you have a question at any time, please raise your hand and wait for a proctor. You may begin the questionnaire as soon as you have finished reading these instructions.

UberX

- Private ride meant for 1-4 people
- Driver has your destination and directions to get to location, but you can request a specific route

UberPool

- Can request at most 2 seats
- Shared ride, carpool with others
- Uber will match you with other riders heading in the same directions
- There may be additional pickups/drop offs because of other riders, which may lead to an increased estimated arrival time
- Tends to be cheaper than UberX because you're splitting your fare with other riders

UberX Autonomous (UberX Auto)

- Same features as UberX, but without a driver
- Driver is replaced with autonomous vehicle

UberPool Autonomous (UberPool Auto)

- Same features as UberPool, but without a driver
- Driver is replaced with autonomous vehicle

What is your average annual income?

_____

What is your age?

_____

In each of the following rows, take note of the prices charged for each ride share option. Please circle the ride share option that you would most likely select in each option.

UberX Price: $12.25 ETA: 10 min	**UberPool** Price: $8.57 ETA: 22 min	**UberX Auto** Price: $12.25 ETA: 10 min	**UberPool Auto** Price: $8.57 ETA: 22 min

UberX Price: $12.15 ETA: 10 min	**UberPool** Price: $9.00 ETA: 22 min	**UberX Auto** Price: $13.75 ETA: 10 min	**UberPool Auto** Price: $10.22 ETA: 22 min

UberX Price: $8.92 ETA: 7 min	**UberPool** Price: $6.33 ETA: 15 min	**UberX Auto** Price: $8.92 ETA: 17 min	**UberPool Auto** Price: $6.33 ETA: 12 min

UberX Price: $11.14 ETA: 12 min	**UberPool** Price: $9.23 ETA: 15 min	**UberX Auto** Price: $11.14 ETA: 10 min	**UberPool Auto** Price: $9.23 ETA: 12 min

Consider the following prices being charged for each rideshare option, which would you choose (choose one option for each row):

UberX Price: $12.99 ETA: 13 min	**UberX Auto** Price: $12.99 ETA: 13 min

UberPool Price: $8.99 ETA: 27 min	**UberPool Auto** Price: $8.99 ETA: 27 min

In each of the following rows, take note of the prices charged for each ride share option. Please circle the ride share option that you would most likely select in each option.

UberX Price: $19.89 ETA: 14 min	**UberPool** Price: $13.14 ETA: 27 min	**UberX Auto** Price: $10.71 ETA: 23 min	**UberPool Auto** Price: $20.01 ETA: 10 min

UberX Price: $18.99 ETA: 8 min	**UberPool** Price: $12.32 ETA: 12 min	**UberX Auto** Price: $16.20 ETA: 8 min	**UberPool Auto** Price: $12.09 ETA: 11 min

UberX Price: $48.67 ETA: 46 min	**UberPool** Price: $15.89 ETA: 55 min	**UberX Auto** Price: $44.90 ETA: 46 min	**UberPool Auto** Price: $11.98 ETA: 57 min

UberX Price: $22.44 ETA: 20 min	**UberPool** Price: $11.98 ETA: 32 min	**UberX Auto** Price: $22.44 ETA: 20 min	**UberPool Auto** Price: $11.98 ETA: 32 min

You are given a free ride, which option would you choose:

UberX	**UberPool**	**UberX Auto**	**UberPool Auto**
Price: $16.20 ETA: 22 min	Price: $14.74 ETA: 29 min	Price: $16.20 ETA: 22 min	Price: $14.74 ETA: 29 min

Please select the answer that you feel applies best:

1. I take into consideration price when booking a ride with Uber.
    - ❑ Strongly agree
    - ❑ Somewhat agree
    - ❑ Neither agree nor disagree
    - ❑ Somewhat disagree
    - ❑ Strongly disagree

2. I take into consideration ride duration when booking a ride with Uber.
    - ❑ Strongly agree
    - ❑ Somewhat agree
    - ❑ Neither agree nor disagree
    - ❑ Somewhat disagree
    - ❑ Strongly disagree

3. I would be interested in Uber creating rides with autonomous vehicles.
    - ❑ Strongly agree
    - ❑ Somewhat agree
    - ❑ Neither agree nor disagree
    - ❑ Somewhat disagree
    - ❑ Strongly disagree

Marketing Research Project: Results

Variables	Coefficients (without consumer characteristic)	Coefficients (with income)	Coefficients (with age)
UberX	-0.532***	-0.208	-0.419
Auto	(0.131)	(0.176)	(1.662)
Pool	-0.456**	0.0949	4.406**
	(0.177)	(0.214)	(1.910)
Pool Auto	-0.594***	-0.190	6.856***
	(0.156)	(0.195)	(1.984)
Price	-0.153***	-0.157***	-0.158***
	(0.0215)	(0.0219)	(0.0218)
ETA	-0.110***	-0.113***	-0.113***
	(0.0188)	(0.0190)	(0.0190)
inc_X_Auto		-9.17e-06***	
		(3.52e-06)	
inc_Pool		-1.75e-05***	
		(4.11e-06)	
inc_Pool_auto		-1.21e-05***	
		(3.72e-06)	
Age_X_Auto			-0.00517
			(0.0742)
Age_Pool			-0.220**
			(0.0864)
Age_Pool_Auto			-0.339***
			(0.0906)
Observations:	1944	1944	1944
Standard errors in parentheses		***** p<0.01, ** p<0.05, * p<0.1**	

Type	Percent
Uber X	70.4%
Pool	70.4%
Auto loyal	24.07%
Driver Loyal	64.8%

Dependent Variables:	Evaluation of Question 12	Evaluation of Question 13	Evaluation of Question 14
Regressors	Coefficients	Coefficients	Coefficients
Income	-3.18e-06 (3.60e-06)	-6.53e-07 (3.86e-06)	-1.07e-05** (5.23e-06)
Age	-0.0768 (0.0828)	-0.109 (0.0889)	0.115 (0.120)
Constant	6.319*** (1.776)	6.795*** (1.906)	1.181 (2.582)
Observations	54	54	54