Humboldt University Berlin
Institute of Marketing
Dr. Narine Yegoryan & Mareike Sachse

Customer Analytics and Customer Insights
Syllabus WS 2021/22

Course Dates

Lectures	Wednesday	12:15-13:45	Live (Zoom) or Pre-recordings
Exercises	Thursday	12:15-13:45	Live (Zoom) or Pre-recordings

Course Description

Marketing is about offering customers products that provide more value than competitors' products. Firms must constantly focus on gaining and sustaining competitive advantages. Therefore, marketing has to ensure that firms develop and market superior products in the mind of consumers. Because consumer preferences for product offerings continuously change or evolve over time, firms have to engage in an ongoing process of delivering superior products to their customers or new customer groups.

In this class, we will study core concepts and methods to better understand the firm's actual and potential customers and their preferences. We will learn how to obtain quantitative measures and descriptions about customers and their perception of the market and estimate customer preferences for product characteristics of established and new products. Therefore, a large part of the classwork will focus on econometric and statistical tools to support firms in their marketing decisions.

Course Prerequisites

There are no hard prerequisites. However, keep in mind that the course targets 3rd year Master's students. Hence, our soft prerequisites (i.e., our recommendation) include successful participation in Marketing Management and Econometric Methods.

Soft prerequisite implies we do not control for these as we do not know the background of each of our students, which is particularly true for exchange and 1st-year students. It is left to your discretion to decide whether 1) you have the necessary background, and 2) if not, you are willing to put in the additional effort to succeed in the course. In general, we expect that you come with some basic (at least Bachelor-level) knowledge in Marketing Research or Marketing Management, Econometrics, and Statistics.

Course Software

For statistical analysis and econometric modeling, we will use software R. We do not expect you to know the program already (that is, however, an advantage). At the beginning of the course, we will cover the basics to get you started and going with R. The course will also include further in-class demonstrations on using R for specific analysis. However, R is only a tool for us (i.e., a means to an end), not the goal of the course.

Course Webpage

Course material will be made available on the Moodle system of the Humboldt-University Berlin. New uploads, changes, and other information will be announced through the Moodle page. Please make sure to set your Moodle settings such that these are forwarded to your email address.

We also encourage you to actively use the forum on the Moodle page for raising questions, asking for clarifications, or simply communicating with your peers and us.

Literature

This course bases in large parts on Chapman and McDonnel Feit (2019) and Palmatier and Sridhar (2017).

- Chapman, C., and McDonnell Feit, E. (2019). R for Marketing Research and Analytics (2nd ed.), Springer International Publishing. The book is accessible for HU students free of charge. Make sure you are connected to HU VPN while accessing the website (for details on HU VPN, click here)
- Palmatier, R. W., and Sridhar, S. (2017). Marketing Strategy based on First Principles and Data Analytics. Palgrave.

Additional help on methods and contents is provided by Malhotra (2009) and Lilien, Rangaswamy, and De Bryun (2017).

- Lilien, G. L, Rangaswamy, A., De Bryun, A. (2017). Principles of Marketing Engineering and Analytics (3rd ed.). DecisionPro, Inc.
- Malhotra, N. K. (2010). Marketing Research: An Applied Orientation (6th ed.), Prentice Hall.

For Conjoint Analysis and Discrete Choice Modeling, the following books and articles are very helpful:

- Rao, V. (2014). Applied Conjoint Analysis. Springer. The book is accessible for HU students (with HU VPN) free of charge.
- Train, K. (2009). Discrete Choice Models with Simulations. Cambridge University Press. The book is accessible free of charge on the authors website.
- Elshiewy, O., Guhl, D., & Boztug, Y. (2017). Multinomial Logit Models in Marketing - From Fundamentals to State-of-the-Art. *Journal of Research and Management*, Vol. 39, 32-49. The article is accessible for HU students (with HU VPN).

Some additional useful resources for R, Data Visualization, Reporting:

- Allerhand, M. (2011). A Tiny Handbook of R. Springer. The book is accessible for HU students (with HU VPN) free of charge.
- Healy, K. (2019). Data Visualiation: A Practical Introduction. Princeton University Press.
- Nussbaumer Knaflic, C. (2015). Storytelling with Data: A Data Visualization Guide for Business Professionals. Wiley.

Please note that most of the core books for this course are accesible for HU students free of charge. You do not need to buy all these books.

Course Grading

Your grade will be based on a portfolio exam, i.e., instead of one final exam, you will need to submit four (individual and group) assignments throughout the semester. For passing the course,

all four assignments need to be submitted. A failure to submit an assignment will lead to an automatic grade of 5.0 for the whole course.

As it is a portfolio exam, you need to register for the course exam much earlier, from November 1 until November 13. You can register for the exam via Agnes. Note that after registration, dropping out of the course will lead to an automatic grade of 5.0. However, you have around three weeks to decide whether this course is for you and is manageable given your other commitments.

Deadlines and Details on Grading of the Assignments

All assignments will be posted on the Moodle page.

Assignment	Type	Grading	Deadline
1	individual tasks	pass/ no-pass (0% of final grade)	November 19 (Friday) by 23:59
2	group tasks	25% of final grade	December 17 (Friday) by 23:59
3	group tasks	25% of final grade	January 21 (Friday) by 23:59
4	individual tasks	50% of final grade	March 11 (Friday) by 23:59

Assignments 2 and 3 involve working in a group of 2-4 students. We will give you the opportunity to form groups yourselves. However, if some students do not find groups by the set deadline, we will use random allocation to form groups.

Submission of the Assignments

This semester we will be trying the "Assignment" tool on Moodle. Therefore, all assignments must be submitted in PDF format by the specified deadline on the Moodle page.

Please make sure to name your files in the following way:

- `Name Surname_StudentID_Assignment[n]`, for assignments with only individual tasks (Assignment 1 and 4).
  E.g., `Narine Yegoryan_545454_Assignement1`

- `Group[i]_Assignment[n]`, for assignments with group tasks (Assignment 2 and 3).
  E.g., `Group1_Assignement2`

Formating

All assignment reports should comply with the following formatting rules:

- A4 paper format
- Page margins: 2.5cm on all sides
- Font: Times New Roman
- Font size:
  - Headings: 14-16pt according to the level of subdivision
  - Main text: 12pt
  - Tables: 8-10pt
- Line spacing:
  - Main text: 1.5 line spacing
  - Tables: 1.0 line spacing
- Use continuous page numbering on the lower right margin on all pages.
- Report your name, surname, student ID, and group number on the 1st page in the heading.

- All reports should comply with the page limit, specified in the particular assignment.
- Do not include a title page, content page, or appendix.
- You can include reference list, which will not be counted in the page limit.

Course Topics and Schedule

Week	Date	Meeting Type	Topic
42	20-Oct, Wed	Lecture (Live)	Introduction and Course Logistics
42	21-Oct, Thu	Lecture (Live)	Core Concepts and Tools in Marketing
43	27-Oct, Wed	Exercise (Pre-recording)	Data Analysis with R (Part 1)
43	28-Oct, Thu	Exercise (Pre-recording)	Data Analysis with R (Part 2)
44	3-Nov, Wed	Exercise (Pre-recording)	Data Analysis with R (Part 3)
44	4-Nov, Thu	Lecture + Exercise (Pre-recording)	Identifying Drivers of Outcomes
45	10-Nov, Wed	Lecture (Live)	Identifying Drivers of Outcomes: Applications and Discussion
45	11-Nov, Thu	Lecture (Live)	Introduction to Assignment 1 and Q&A
45	13-Nov, Sat	*Deadline*	*Deadline for registration on Agnes*
46	17-Nov, Wed	Lecture (Live)	Guest Lecture: Dr. Julian Runge "Use of Experiments in Advertising and Marketing Analytics"
46	18-Nov, Thu	Lecture + Exercise (Pre-recording)	Multidimensional Scaling
46	19-Nov, Fri	*Deadline*	*Deadline for Assignment 1*
47	24-Nov, Wed	Lecture (Live)	Multidimensional Scaling: Applications and Discussion Group formation
47	25-Nov, Thu	Lecture + Exercise (Pre-recording)	Factor Analysis (Exploratory and Confirmatory)
48	1-Dec, Wed	Lecture (Live)	Factor Analysis: Applications and Discussion
48	2-Dec, Thu	Lecture (Live)	Introduction to Assignment 2 and Q&A
49	8-Dec, Wed	Office hour (Live)	Feedback Session for Assignment 1
49	9-Dec, Thu	Lecture + Exercise (Pre-recording)	Clustering and Classification: Clustering
50	15-Dec, Wed	Lecture + Exercise (Pre-recording)	Clustering and Classification: Classification
50	16-Dec, Thu	Lecture (Live)	Clustering and Classification: Applications and Discussion Introduction to Assignment 3

Week	Date	Meeting Type	Topic
50	17-Dec, Fri	*Deadline*	*Deadline for Assignment 2*
		Christmas Break	
1	5-Jan, Wed	Lecture (Live)	Q&A on Clustering and Classification
1	6-Jan, Thu	Lecture (Live)	Choice-based Conjoint (CBC) Analysis
2	12-Jan, Wed	Office hour (Live)	Feedback Session for Assignment 2
2	13-Jan, Thu	Office hour (Live)	Feedback Session for Assignment 2
3	19-Jan, Wed	Office hour (Live)	Feedback Session for Assignment 2
3	20-Jan, Thu	Lecture (Live)	CBC: Econometric models (Part 1)
3	21-Jan, Fri	*Deadline*	*Deadline for Assignment 3*
4	26-Jan, Wed	Lecture (Live)	CBC: Econometric models (Part 2)
4	27-Jan, Thu	Lecture (Live)	CBC: Econometric models (Part 3)
5	2-Feb, Wed	Lecture (Live)	CBC: Advanced Topics
5	3-Feb, Thu	Lecture (Live)	Introduction to Assignment 4 and Q&A
6	9-Feb, Wed	Office hour (Live)	Feedback Session for Assignment 3
6	10-Feb, Thu	Office hour (Live)	Feedback Session for Assignment 3
7	16-Feb, Wed	Office hour (Live)	Feedback Session for Assignment 3
7	17-Feb, Thu	Lecture (Live)	Course wrap up and Q&A
10	11-Mar, Fri	*Deadline*	*Deadline for Assignment 4*