
Marketing Analytics and Big Data

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Office hours: by appointment

Course Type: Compulsory

Credits: 4 ECST

Term: 1st Term

Course Description

Nowadays, people generate more data and do so at a faster rate than at any other moment in history. From mere individuals and small communities to small and medium companies to large multinationals and government organizations and administrations, everyone's capacity to generate information rapidly grows every day.

We are constantly generating data, and this phenomenon is being boosted even further due to the Internet, cell phones, and the Internet of Things (which allows traditionally off-line devices such as electronic appliances or cars to connect to the Internet to send and receive data). Thanks to those technological advances, not only computers and Smartphones but also medical equipment, and even electronic appliances generate millions of data every second, data waiting to be used as information.

Companies are already aware that the correct analysis and understanding of the available data, both internal and external, is the key to find competitive advantages. In the fields of business and marketing, all the talk about data is focusing more and more on consumer trends, the planning of new products, and other market insights.

Working with traditional statistical techniques, explorative analysis, and data mining, marketing professionals will have to face the new challenge of interpreting this vast amount of data and incorporating it into their decision-making processes.

From a marketing perspective, the advantage of using data is not limited to the possibility of offering better content or applications to consumers. By relying on data, it is also possible to improve the products and services brands provide, or to facilitate the process of making certain marketing decisions beyond what traditional market research would allow.

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Objectives

- Understanding the new challenges that marketing professionals have to face when, to improve an organization's products and services, they use technologies and documented principles to extract and analyze information out of large volumes of data, they access and disseminate information on cell phones, and they gain presence in social networks.
- Understanding the importance of databases and knowledge bases to manage and reach the company's goals.
- Understanding the concept of 'Key performance indicator,' its design, and its applications as a measurement tool of marketing management.
- Learning how to integrate the company's internal and external information efficiently.

Learning to use Business Intelligence (BI) by familiarizing oneself with the appropriate tools and data analysis techniques.

Methodology

Students are expected to participate in class, to work in groups, and to use the Internet actively.

In-person activities to be conducted in theory sessions:

- Theory classes.
- Project presentations.
- Debates and discussion around marketing cases.
- Seminars taught by collaborators (professionals in the field...).

Autonomous learning:

- Preparation of group/individual projects
- Resolution of cases
- Research on topics related to the course
- Group dynamics involving topics discussed in class
- Individual and group tutorial sessions

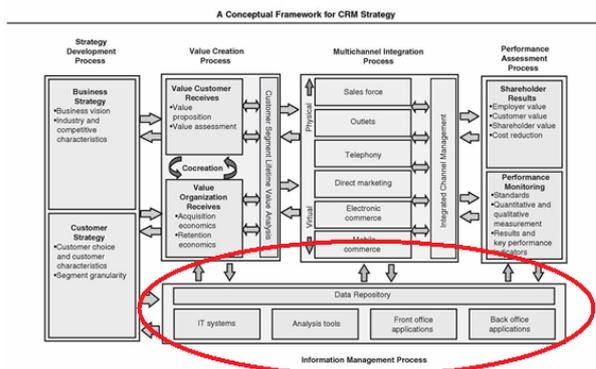
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- Final exam

The Payne and Frow framework, Journal of Marketing (2005)

We will rely on the conceptual framework by Payne and Frow and, specifically, we will focus on the information management process and its five components (see figure 1 below):

1. Data repository
2. IT systems
3. Analysis tools
4. Front office applications
5. Back office applications



Competencies to Acquire

CE2. Decide between the main market research methodologies and consumer insights acquisition for decision making together with market research companies.

CE9. Apply the models and methodologies for monitoring and updating both strategies and marketing tactics, as well as the portfolio of products and customers, to reach the management objectives set.

Learning Outcomes

CE2.

R1. Methodologically differentiate market research options.

R3 Discriminate between the advantages and limitations of each of the methodologies

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R2. Differentiate the usefulness of the information from the implementation of each of the methodologies.

R4 Perform the complete planning of a market study.

CE9.

R1 Differentiate between the models and monitoring methodologies available

R2 Choose between the models and monitoring methodologies available

R3 Apply the analyzes performed to support or maintenance decisions or divestment of brands and / or products.

Evaluation criteria

- In-class participation and activities: 20%
- Resolution of cases and group projects: 40%

Final exam: 40%

Important:

In courses that feature a final exam, a minimum grade of **4 out of 10** in the final exam is necessary for the other evaluation criteria to be taken into account when computing the student's overall grade for the course. Therefore, students who obtain less than a 4 out of 10 in the final exam will fail the course automatically. Those students will have to take a remedial exam (more details below).

Courses in the Program will generally include group assignments (case studies, projects etc.). At the end of each term, and in order to disincentivize free-riding behaviors, students will have the opportunity to evaluate the involvement of the rest of their team members in all group assignments that took place within the term. Students who obtain sufficiently poor evaluations from their team members will be penalized. The penalty will involve a reduction in the overall group assignment grades of **all** courses that include group assignments (max penalty: 20% reduction of those grades). More details on the topic are available on eCampus.

STUDENTS WHO FAIL TO DELIVER ALL THE ASSIGNMENTS WILL NOT BE ALLOWED TO TAKE THE FINAL EXAM.

All the activities that are submitted past the deadline or that do not follow the submission instructions in terms of content, format, etc. will be considered as 'not submitted'. Students will be informed about the submission and presentation dates the first day of class.

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Note: This document is for informational purposes only. Course contents and faculty may change.

Students are required to attend 80% of classes. Failing to do so without justified reason will imply a Zero grade in the participation/attendance evaluation item and may lead to suspension from the program

Students who fail the course during the regular evaluation are allowed ONE re-take of the evaluation, in the conditions specified above. If the course is again failed after the retake, the student will have to register again for the course the following year.

In case of a justified no-show to an exam, the student must inform the corresponding faculty member and the director(s) of the program so that they study the possibility of rescheduling the exam (one possibility being during the “Retake” period). In the meantime, the student will get an “incomplete”, which will be replaced by the actual grade after the final exam is taken. The “incomplete” will not be reflected on the student’s Academic Transcript.

Plagiarism is to use another’s work and to present it as one’s own without acknowledging the sources in the correct way. All essays, reports or projects handed in by a student must be original work completed by the student. By enrolling at any UPF BSM Master of Science and signing the “Honor Code,” students acknowledge that they understand the schools’ policy on plagiarism and certify that all course assignments will be their own work, except where indicated by correct referencing. Failing to do so may result in automatic expulsion from the program.”

Reading Materials/ Bibliography/Resources

- Manyika J., Chui M. et al.; "Big data: The next frontier for innovation, competition, and productivity," The McKinsey Global Institute 2011
- Payne and Frow, "A Strategic Framework for Customer Relationship Management", Journal of Marketing, Vol 69, October 2005
- Big Data Now. O'Reilly Media. Septiembre 2011.
- Big Data: The next frontier for innovation, competition, and productivity. McKinsey Global Institute, McKinsey & Company. Mayo 2011.
- Brad Brown, Michael Chui, James Manyika. "Are you ready for the era of 'Big Data'?", Global Institute, McKinsey & Company. McKinsey Octubre 2011.
- Brandl, Bernd; "Big data in macroeconomic forecasting: On the usefulness of knowledge discovery in databases"; PROCEEDINGS OF THE 22ND INTERNATIONAL CONFERENCE ON MATHEMATICAL METHODS IN ECONOMICS 2004; 2004
- Chen, Hsinchun; Chiang, Roger H. L.; Storey, Veda C., "BUSINESS INTELLIGENCE AND ANALYTICS: FROM BIG DATA TO BIG IMPACT"; MIS QUARTERLY; Pages 36-4; 2012
- Chui M, Löffler M, Roberts R, , "The Internet of Things", and Roger, McKinsey Quarterly 2010 Number 2
- Competing through data: Three experts offer their game plans. McKinsey Global Institute. Octubre 2011
- Davenport, Thomas H.; Barth, Paul; Bean, Randy; "How 'Big Data' Is Different"; MIT SLOAN MANAGEMENT REVIEW; 54-1; 2012
- Dearstyne, Bruce W.; "Big Data's Management Revolution"; HARVARD BUSINESS REVIEW; 90-12; 2012
- How strategic is our technology agenda? Business Technology Office, McKinsey & Company. Octubre 2011.
- Ignatius, Adi; "Big Data for Skeptics"; HARVARD BUSINESS REVIEW; 90-10; 2012
- Karlgaard, Rich; "Surfing the Big Data Wave EMC's Joe Tucci"; FORBES; 188-4; 2011

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- Lavallo, Steve; Lesser, Eric; Shockley, Rebecca; Hopkins, Michael S.; Kruschwitz, Nina; "Big Data, Analytics and the Path From Insights to Value"; MIT SLOAN MANAGEMENT REVIEW; 52-2; 2011
- McAfee, Andrew; Brynjolfsson, Erik; "STRATEGY & COMPETITION Big Data: The Management Revolution"; HARVARD BUSINESS REVIEW; 90-10; 2012
- McClure, D., "Startup Metrics for Pirates: AARRR!!!", <http://www.slideshare.net/dmc500hats/startup-metrics-for-pirates-long-version>
- Mouncey, Peter; "Wrestling with 'big data'"; INTERNATIONAL JOURNAL OF MARKET RESEARCH; 54-4; 2012
- Rosenthal C, "Big Data in the age of the telegraph", McKinsey Quarterly 2013
- Russom Philip, "Big Data Analytics", TDWI Research (The Data Warehousing InstituteTM). Octubre 2011.
- Sheppard B, Chui M, Löffler M, Roberts R, "Putting Big Data to Work: Opportunities for Enterprises", GIGAOM. Marzo 2011. "Big Data: Cómo la avalancha de datos se ha convertido en un importante beneficio", paper de TICbeat.
- The Data Warehouse Institute, <http://tdwi.org/Home.aspx>

Bio of Professors

Manuel Guerris Larruy: Lecturer of operations, logistics, industrial management and business strategy at UPF- Barcelona School of Management, UPF-ESCI, Universitat Politècnica de Catalunya (UPC), and IQS – Universitat Ramon Llull. MBA awarded by IESE, MSc in Economics and Management Research awarded by IQS, Industrial Engineering degree awarded by UPC. Has been President of the 'Comisión de Internacionalización de la Asociación Profesional e Industrial de Ingeniería'. Ample experience as a Consultant working for private and public European companies. Has founded a new company in the sector of e-health. Partner of Neo Consulting BCN, consulting company specialized in operations and internationalization processes and that helps other companies expand their internal and external borders.

Mohammad Ghaderi is an Assistant Professor at Universitat Pompeu Fabra and a Barcelona GSE and UPF-BSM Affiliated Professor. He obtained his PhD (cum laude) from ESADE in 2017. His doctoral dissertation has received the ESADE best thesis award and the URL Extraordinary Doctoral Dissertation Award, Doctoral Dissertation Award from the European Doctoral Association in Management and Business Administration, and has been named among the top 3 doctoral dissertations for the biennial award by the MCDM International Society. His research focuses on quantitative marketing, choice modelling, and convex optimization. He has published in the leading business analytics journals such as European Journal of Operational Research, Omega-the International Journal of Management Science, and Computers and Operations Research.

Alberto Lempira Guevara is a Marketing & Business Development Consultant. He is a Ph.D. in Business candidate at the Barcelona University (Spain), MSc. In Marketing from Pompeu Fabra University (Spain), he has a Postgraduate degree from Tecnocampus-UPF (Spain) in Digital Marketing, two Postgraduate degrees from INESDI Online Business School (Spain) in Inbound Marketing, Transmedia Storytelling/Branded Content and he has a Bachelor's degree in Production Engineering by Metropolitan University (Venezuela).

Alberto worked in Political Marketing for more than five years. He has also been working on user acquisition, CRO, digital strategy, and advertisement for the last eight years. He has worked as a consultant for the past years and is re-launching the consulting agency BoostingOut. He is the host of the @NotYourMarketer podcast.

Alberto is currently the academic coordinator of the Master of Science in Marketing at the Pompeu Fabra University.

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