

Strategy in Digital Markets

Updated Draft Syllabus Fall 2020

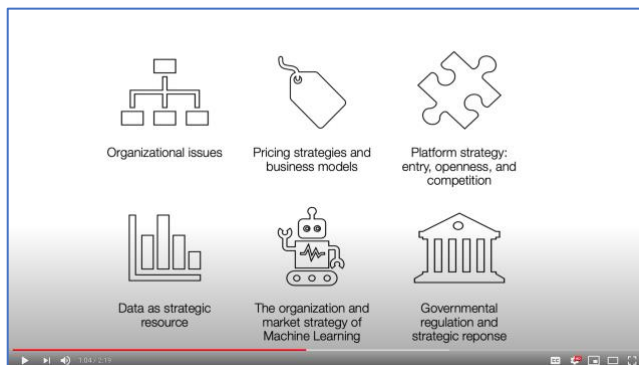
Instructor: Christian Peukert (christian.peukert@unil.ch)

Class meets: Wednesday, 14:15-18:00

Credits: 6 ECTS

Website: Moodle

Video description



<https://www.youtube.com/watch?v=53IJE5F7rCw>

Objective

We live in an increasingly digital economy. Information technology (IT) has transformed a large number of markets and advances in Artificial Intelligence will likely further lead to important changes throughout the value chain of individual firms and across a variety of sectors.

The course Strategy in Digital Markets introduces students to some of the fundamental concepts, and strategic challenges and opportunities of digitization. We will explore how digital technologies shape markets and corporate strategy.

We discuss organizational issues, such as whether firms should rely on inhouse IT or source these capabilities from the market. A central part of the course relates to pricing strategies and business models. Most prominently, we will discuss platform strategy from the perspective of entry, openness, and competition. We then focus on data as a strategic resource and the organization and market strategy of Machine Learning (ML) applications. Lastly, we discuss the role of governments in regulating digital markets and the strategic responses firms can take.

The overarching aim is to prepare students for careers in industry/consulting and/or dissertations in this field.

Format

This is a Project-Based-Learning course. Each unit is comprised of four types of interactions:

1. Theoretical input sessions
2. Case study discussions or guest speakers from companies
3. Presentation of group projects
4. Individual group coaching sessions

The course will be held online, in mostly synchronous format.

Learning goals

1. Knowledge and understanding:
 - a. Learn, apply and critically evaluate models of technology adoption
 - b. Identify the organizational trade-offs of technology adoption
 - c. Learn what makes platform markets different
 - d. Learn under which circumstances data and ML can be a useful resource
 - e. Learn about interactions between government regulation and strategy
2. Subject-specific skills:
 - a. Practice analyzing markets, firms and strategies
 - b. Practice reading and summarizing academic papers
 - c. Practice how to draw conclusions from data and econometric analysis
3. General skills:
 - a. Practice to develop hypotheses about general effects from observing examples
 - b. Practice working in teams
 - c. Practice presentation and clear communication of complex issues

Prerequisites

Econometrics, Competitive Strategy (it helps, but not mandatory)

Course structure

September 16 - Session 1: Introduction

September 23 - Session 2: Network effects, compatibility, lock-in, product strategy

- Readings:
 - o Case 1: \$19B 4 txt app WhatsApp...omg! (HBS 9-715-441)
 - o Paper 1: Kretschmer, T. and Claussen, J., 2016. Generational transitions in platform markets—The role of backward compatibility. *Strategy Science*, 1(2), pp.90-104.

September 30 - Session 3: Make or buy

- Readings:
 - o Case 2: Cloud Wars Go Global: How Amazon, Microsoft, Google and Alibaba Compete in Web Services (INSEAD)
 - o Paper 2: Weigelt, C. and Sarkar, M.B., 2009. Learning from supply-side agents: The impact of technology solution providers' experiential diversity on clients' innovation adoption. *Academy of Management Journal*, 52(1), pp.37-60.

October 7 - Session 4: Pricing and business models

- Expert speaker: Lasse Steiner (Pricing at immowelt.de)
- Readings:
 - o Paper 3: Aguiar, L. and Waldfogel, J., 2018. As streaming reaches flood stage, does it stimulate or depress music sales?. *International Journal of Industrial Organization*, 57, pp.278-307.

October 14 - Session 5: Multi-sided platforms

- Readings:
 - o Case 4: Port of Rotterdam: Booking.com for Container Transport (RSM)
 - o Paper 4: Seamans, R. and Zhu, F., 2014. Responses to entry in multi-sided markets: The impact of Craigslist on local newspapers. Management Science, 60(2), pp.476-493.

October 21 - Session 6: Launching a platform

- Expert speaker: Olga Motovilova (CEO at Inmodi)
- Readings:
 - o Paper 5: Zhu, F. and Iansiti, M., 2012. Entry into platform-based markets. Strategic Management Journal, 33(1), pp.88-106.

October 28 - Session 7: Platform design

- Expert speaker: Philipp Buss (Data innovation at Etventure)
- Readings:
 - o Paper 6: Claussen, J., Kretschmer, T. and Mayrhofer, P., 2013. The effects of rewarding user engagement: The case of Facebook apps. Information Systems Research, 24(1), pp.186-200.

November 4 - Session 8: Platform competition

- Readings:
 - o Case 5: Under Armour and the Sports Apparel and Footwear Industry in 2017 (INSEAD)
 - o Paper 7: Foerderer, J., Kude, T., Mithas, S. and Heinzl, A., 2018. Does platform owner's entry crowd out innovation? Evidence from Google photos. Information Systems Research, 29(2), pp.444-460.

November 11 - Session 9: The value of data

- Expert speaker: Imke Reimers (Northeastern University)
- Readings:
 - o As background for expert speaker: Reimers, I. and Shiller, B.R., 2019. The impacts of telematics on competition and consumer behavior in insurance. The Journal of Law and Economics, 62(4), pp.613-632.
 - o Paper 8: Neumann, N., Tucker, C.E. and Whitfield, T., 2019. Frontiers: How effective is third-party consumer profiling? Evidence from field studies. Marketing Science, 38(6), pp.918-926.

November 18 - Session 10: Using data strategically

- Expert speaker: Christian Essling (VP Analytics & Data Science at EON)
- Readings:
 - o Paper 9: Zhu, F. and Liu, Q., 2018. Competing with complementors: An empirical look at Amazon.com. Strategic Management Journal, 39(10), pp.2618-2642.

November 25 - Session 11: Automation

- Readings:
 - o Case 6: KUKA: Planning for the Future of Automation (IESE)
 - o Paper 10: Choudhury, P., Starr, E. and Agarwal, R., 2020. Machine learning and human capital complementarities: Experimental evidence on bias mitigation. Strategic Management Journal.

December 2 - Session 12: Organizing for Artificial Intelligence

- Readings:
 - o Case 7: Artificial Intelligence and Machine Learning Revolution in Finance: Cogent Labs and the Google Cloud Platform. (HBS 9-218-080)
 - o Paper 11: Conti, R., Gambardella, A. and Novelli, E., 2019. Specializing in generality: firm strategies when intermediate markets work. Organization Science, 30(1), pp.126-150.

December 9: Regulation

- Readings:
 - o Case 8: Telecommunications Regulation and Coordinated Competition in Romania (HBS 9-713-016)
 - o Paper 12: Adjerid, I., Acquisti, A., Telang, R., Padman, R. and Adler-Milstein, J., 2016. The impact of privacy regulation and technology incentives: The case of health information exchanges. Management Science, 62(4), pp.1042-1063.

December 16 - Session 14: Final session

- Contents:
 - o Recap
 - o Q&A

Evaluation

Class participation and case discussion

You are expected to contribute to the discussion in class. Your active contribution is essential for the quality of class discussion. In my experience class is more interesting for everyone when everyone participates. To be prepared for class, you need to read the material, i.e. case studies and research papers for that day before class. I will sometimes cold call and sometimes not call on those who are volunteering to encourage the right climate. If you are not prepared for a particular class, please let me know at the beginning of class. Things happen, and I don't need to know the reason, but I prefer not to embarrass you by exposing you as unprepared.

To make sure that everybody has the right incentives to prepare for class, there is a weekly assignment to be prepared individually, and a group assignment with presentations. The course closes with an open book final exam.

Individual assignments (25%): every week

Following along all semester will be crucial for learning success. However, I do understand that some weeks are busier than others. Therefore you can choose 10 out of 12 papers to read and answer questions about. This will be in the form of online quizzes that you complete before class. The quizzes will be such that it is not necessary to read and digest the paper in full detail (this is what the group assignment is for), but I expect that you carefully read the introduction, discussion and conclusion sections. If you cannot answer a question based on that alone, you can always go back to the paper and read more details.

Group assignment (50%)

Small teams will present a detailed discussion of the research paper, relating to the concepts discussed in class and beyond. The presentations must follow a tight structure that includes a motivation of the research question, method and data source, results, and a summary of the implications for managers and (potentially) policy. Each group presentation should run for no more than 30 minutes, including a short Q&A session. Teams must hand in a copy of presentation slides before class.

Group allocation and presentation dates (most likely 2 per group) will be assigned in the first week.

Final exam (25%)

The final exam will be open book. This is an individual effort over 60 minutes and involves a discussion of a case study using the theoretical concepts we have learned in class. The date will be announced.

Re-examination procedure: Students are required to redo failed assessments. The resits will be during the official resit examination period. A student who fails to deliver the required individual assignments can be re-evaluated in short oral exam; the readings will be the same. Failed group assignments can be redone in the same format as the initial assessments, albeit in a new group or individually. The final exam can be redone in the same format as the initial assessment. The grade will be calculated on the assessments that are not redone along with the assessments that are redone as per weighting scheme of original syllabus.

Note for PhD students

This course is open to PhD students. PhD students are strongly encouraged to actively participate in class, follow along all semester and read the assigned papers and case studies before each class.

The assessment for PhD students (100% of the final grade) is a research proposal of 15 pages, double-spaced, due four weeks after the last class. This research proposal should be deeply rooted in the literature that we have discussed in class (i.e. beyond the specific papers that we have discussed). Students need to develop hypotheses, describe (anticipated) methods, potentially provide some preliminary findings, and discuss the contribution to the literature and implications for managers/policy.

Re-examination procedure: Students are required to redo failed assessments. The assessment can be redone in the same format as the initial assessment. The resit assignment will be due four weeks after the instructor has informed the student about failing the assessment.