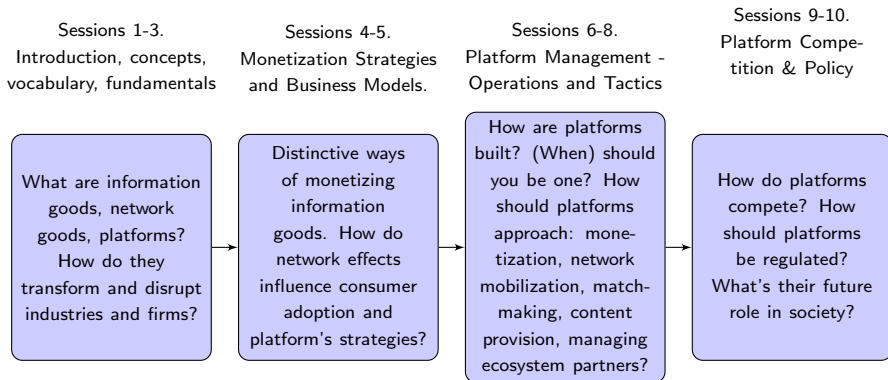


Syllabus: **MGx250: Technology Competition and Strategy, Winter quarter (Jan-Mar)**

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(Revised 01/05/2023; 12/14/2022; 12/11/2022; 11/01/2022)



- MGT 250 meets Wednesday (10 times), 1-4 pm starting Jan 11.
- MGT 450 meets Wednesday (10 times), 4:30-5:30 pm starting Jan 11.

A pre-course assessment worth 10% of the grade will be made available by Dec. 5, and must be completed (on Canvas) by Jan 6.

MGx250. Course Overview and Objectives

- Exponential progress in information technology components, for many decades, has caused business transformations at the individual, unit, firm and then cross-firm levels – and most recently at the industry, market and economy levels.
- This course gives you a framework for thinking about technology competition and strategy, and about a business revolution that we are in the middle of, a platform revolution. Platform-enabled marketplaces, and other Internet-based goods and products with digital components and network effects, produce over half the revenue for over half of the world's 100 largest companies (e.g., Apple, Facebook, Amazon, Google, American Express, Time Warner). Technology entrepreneurship is commonplace. But this class of goods has very different, almost weird, characteristics, with distinctive economic forces that affect supply (e.g., supply and cost structures), demand (e.g., how value is created) and markets (e.g., industry organization, alliances, and competition). Managing and responding to these forces requires distinctive competitive strategies. Conversely, strategic errors can be devastating. What are these forces? How do they impact market outcomes in technology industries? And how should firms shape their competitive strategy?
- The insights from this course are most relevant to information and technology goods (hardware, software, online information goods, Internet and telecommunications services, consumer electronics, entertainment and media products) and other industries that have digitization and network effects, such as health care, banking, services, biotechnology, transportation and energy. The course employs a mix of simple but rigorous analytical models, emerging theories, and plenty of real-world examples, cases and experiences.

Course Overview and Student Workload

Tasks	Sessions									
	1	2	3	4	5	6	7	8	9	10
Topics	Introductions, Platform Revolution	Anatomy of Network Goods	Anatomy of Platforms	Tactics for Monetizing Information Goods	Platforms: Business models and network mobilization	Roadmap: Creating a Platform Businesses	Platform-Complementor Co-dependence	Platform Power and Competition	Platform Power: success factors and dominance	The Future, and Wrap-Up
Individual Homeworks	1,2	3								
Group Homeworks			5,6	7	8			9	11, 12	
Quiz			Quiz 1		Quiz 2		Quiz 3		Quiz 4	
Case Discussion				Square		Intuit		WeChat		
Other					Guest Speaker 1		Guest Speaker 2		Guest Speaker 3	Guest Speaker 4

Learning objectives and Session Plan

- startup [10 min]
- introductions – getting to know each other, course, workload, syllabus details, context of technology goods (= information goods, network goods, platforms), grading etc. [60 min]
- How are information goods transformational and disruptive? Why do they require distinctive competitive strategy and create notable market outcomes? Ex. 1–2 [70 min]
- Questions and next steps [10 min]

Readings

- Varian; “High Technology Industries and Market Structure”.
- Barefoot et al.; “Research Spotlight Measuring the Digital Economy”
- Goldfarb and Tucker; “Digital economics”

Learning objectives and Session Plan

- What are network effects (and types - direct vs indirect)? [30 min] Why do network goods require distinctive competitive strategy and create notable market outcomes? Ex. 3 [30 min]
- What economic elements are important in measuring and analyzing network effects? How do network effects influence adoption decisions, market demand, and competitive strategy? When are they most relevant, [60 min]
- Questions and Next steps [15 min]

Readings

- Eisenmann; “Platform-Mediated Networks: Definitions and Core Concepts”. [p. 1-8 (Networks) and Appendix B-C]
- Bhargava; “Platform technologies and network goods: insights on product launch and management”.
- **Optional:** Cusumano; “Platforms Versus Products: Observations from the Literature and History” (pp. 35–63).
- **Optional:** Duncan Gilchrist, *A dummy's guide to network effects*, July 2016 ([online](#))

Learning objectives and Session Plan

- Quiz 1 [10 min]
- What is the essence of platforms? How are they transformational and disruptive? Ex. 5. What are the key building blocks? [50 min]
- What do platforms do, especially to manage and leverage network effects? Ex. 6. [35 min]
- What are the key challenges in making successful platforms? Crucial decisions for a platform coordinator to leverage network effects. Mini-case: EVs as platforms (Tesla vs rest). [30 min]
- next steps [10 min]

Readings

- Eisenmann; "Platform-Mediated Networks: Definitions and Core Concepts". [p. 8-23 (Platforms and Appendix A)]
- Van Alstyne, Parker, and Choudary; "Pipelines, platforms, and the new rules of strategy".
- Hagiu; "Strategic Decisions for Multisided Platforms"
- Anderson et al.; "Electric Vehicles Are a Platform Business: What Firms Need to Know".
- Sangeet Paul Choudary, "The Core Interaction: What Platforms and Marketplaces can Learn from Super Mario Bros", 2018. (online)
- Steve Jobs on iPhone openness, <https://youtu.be/pqrCk7gpTsA> (online)

Learning objectives and Session Plan

- Monetization challenges and tactics in dealing with heterogeneous consumers
 - ▶ Product and price differentiation, segmentation, versioning and bundling (for durables); one-time vs recurring revenues for consumables, ex. 7 [55 min]
 - ▶ Adapting tactics for information and network goods - *Square* case (Ex. 13) [70 min]
- next steps [10 min]

Readings

- Bhargava and Gangwar; “Pricing Strategy for Service Start-ups: How to Employ Access and Usage Fee?”
- Needleman; “From ‘Call of Duty: Black Ops Cold War’ to ‘Fortnite,’ Here’s How Videogame Pricing Works”
- Bhargava; “Monetization Tactics for Information and Network Goods”.
- **Case discussion:** Markovich et al.; “Hip to be Square: Disruption in the U.S. Mobile Payment Market”.

Learning objectives

- Quiz 2 [10 min]
- Alternative business models for platforms - Ex. 8, PayPal [40 min]
- Guest Speaker: Todd Storm, match.com [50 min]
- Monetization tactics for network goods and platforms. [40 min]
- Questions and next steps [10 min]

Readings

- Van Alstyne, Parker, and Choudary; “6 Reasons Platforms Fail”.
- Eisenmann, Parker, and Alstyne; “Strategies for Two-Sided Markets”
- Bhargava; “Monetization Tactics for Information and Network Goods”.
- [Paypal history](#) ([online](#))

Learning objectives

- Building a platform business - how do MSPs form? do you build multiple sides in sequence vs big-bang? [20 min]
- Platform from product? **Intuit** case discussion (Ex. 14) [70 min]
- next steps [10 min]

Readings

- Edelman; “How to Launch Your Digital Platform: A Playbook for Strategists.”
- Eisenmann and Hagiu; “Staging Two-Sided Platforms”
- Zhu and Furr; “Products to Platforms: Making the Leap”.
- Hagiu and Altman; “Intuit QuickBooks: From Product to Platform”.
- Read the [Amazon story \(Forbes\)](#). ([online](#))

Learning objectives

- Quiz 3 [15 min],
- Platforms and developer communities in Software (Guest speakers: Sam Ramji / BryanKirschner (Google, DataStax, Microsoft)) [50 min]
- Platform design and ecosystem scale [30 min] ; Managing (and competing with) platform communities and "givers" [30 min]
- next steps [10 min]

Readings

- Reeves et al.; "How Business Ecosystems Rise (and Often Fall)".
- Bhargava; "The creator economy: Managing ecosystem supply, revenue sharing, and platform design".

learning objectives and session plan

- platform-complementor co-opetition
- Apple vs Microsoft (Ex. 9) [15 min]
- Building platform power through ecosystem strategy: how platforms should manage (and motivate, and possibly compete against) communities and complementors [50 min]
- Case discussion: **WeChat** and Tencent (Ex. 15) [60 min]
- Dealing with threats of platform envelopment, creating platform defense and lock-in - [20 min].
- next steps [10 min]

Readings

- Yoffie and Kwak; "With friends like these: The art of managing complementors."
- Birkinshaw, Ke, and Diego; "Innovation and agility at Tencent's WeChat".
- **WeChat's Ascendancy** ([online](#))

learning objectives and session plan

- Quiz 4 [15 min]
- **Guest speaker: Darin Laframboise (Auth0, Facebook, Atlassian)**
- what is the evidence of platform dominance (Ex. 12)? and what factors explain its timing (Ex. 11)? [60 min]
- What are the drivers/predictors of winner-take-all markets (in-class exercise) [20 min]
- How should platforms be regulated, and is the classic lens (abuse of monopoly power against competitors or against consumers) effective and appropriate? [40 min]
- next steps [10 min]

Readings

- Kif Leswing, **House antitrust subcommittee: Apple has 'monopoly power'**, Oct. 2020. ([online](#))
- Eisenmann; "Winner-Take-All in Networked Markets".
- Hemant K. Bhargava, **Google antitrust case suggests Apple should be in the Department of Justice's crosshairs too**, The Conversation, Oct. 2020.
- Bhargava, Evans, and Mani; "The Move to Smart Mobile and Its Implications for Antitrust Analysis of Online Markets". ([online](#))

Learning objectives

- Tech entrepreneurship: **Guest Speaker: Tim Csonotos - (TaxiMagic, Concur)** [50 min]
- Establishing an immersive gaming platform: being the DoubleClick or Switzerland of In-Game Advertising **Guest speakers: Cary Tilds, Jon Troughton (FramePlay)** [50 min]
- Online course evaluations [15 min]
- Course Wrap-up and Future of Platforms. [30 min]

Readings

- Cusumano, Yoffie, and Gawer; "The Future of Platforms".

Optional Calvano and Polo; "Market power, competition and innovation in digital markets: A survey"

Readings I



Hal R. Varian. "High Technology Industries and Market Structure". *Federal Reserve Bank of Kansas City Proceedings* (2001). URL: <https://people.ischool.berkeley.edu/~hal/Papers/structure.pdf>.



Kevin Barefoot et al. "Research Spotlight Measuring the Digital Economy". *Survey of Current Business* 99.5.13 (2019).



Avi Goldfarb and Catherine Tucker. "Digital economics". *Journal of Economic Literature* 57.1 (2019), pp. 3–43.



Thomas Eisenmann. "Platform-Mediated Networks: Definitions and Core Concepts". *Harvard Business School* (2007).



Hemant K. Bhargava. "Platform technologies and network goods: insights on product launch and management". *Information Technology and Management* (2014).



Michael A Cusumano. "Platforms Versus Products: Observations from the Literature and History". *History and Strategy*. Ed. by J Kahl Steven, S Silverman Brian, and A Cusumano Michael. Vol. 29. *Advances in Strategic Management*. Emerald Group Publishing Limited, Jan. 2012, pp. 35–67. URL: <https://ebookcentral.proquest.com/lib/ucdavis/reader.action?docID=1019355&ppg=58>.

Readings II



Marshall W Van Alstyne, Geoffrey G Parker, and Sangeet Paul Choudary. "Pipelines, platforms, and the new rules of strategy". *Harvard business review* 94.4 (2016), pp. 54–62. URL: https://www.nonprofitjourney.org/uploads/8/4/4/9/8449980/pipelines_and_the_new_rules_of_strategy.pdf.



Andrei Hagiu. "Strategic Decisions for Multisided Platforms". *MIT Sloan Management Review* (Jan. 2014). URL: <https://sloanreview.mit.edu/article/strategic-decisions-for-multisided-platforms/>.



Edward G Anderson et al. "Electric Vehicles Are a Platform Business: What Firms Need to Know". *California Management Review* 64.4 (2022), pp. 135–154.



Hemant K. Bhargava and Manish Gangwar. "Pricing Strategy for Service Start-ups: How to Employ Access and Usage Fee?" *Forbes India* (2017). URL: <http://www.forbesindia.com/article/isb/pricing-strategy-for-service-startups-how-to-employ-access-and-usage-fee/48097/1>.



Sarah E. Needleman. "From 'Call of Duty: Black Ops Cold War' to 'Fortnite,' Here's How Videogame Pricing Works". (Sept. 2020). URL: <https://search.proquest.com/newspapers/videogame-pricing-gets-more-complex/docview/2439556183/se-2?accountid=14505>.



Hemant K. Bhargava. "Monetization Tactics for Information and Network Goods". *working paper* (2021).

Readings III



Sarit Markovich et al. “Hip to be Square: Disruption in the U.S. Mobile Payment Market”. *Harvard Business School* (Feb. 2014).



Marshall W Van Alstyne, Geoffrey G Parker, and Sangeet Paul Choudary. “6 Reasons Platforms Fail”. *Harvard Business Review* 31.6 (2016), pp. 2–6. URL: <https://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=118685972&site=ehost-live>.



Thomas Eisenmann, Geoffrey Parker, and Marshall van Alstyne. “Strategies for Two-Sided Markets”. *Harvard Business Review* (Oct. 2006). URL: <https://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=22316862&site=ehost-live>.



Daniel Edelman. “How to Launch Your Digital Platform: A Playbook for Strategists.”. *HBS Blog* 93 (4 Apr. 2015). URL: <https://hbr.org/2015/04/how-to-launch-your-digital-platform>.



Thomas Eisenmann and Andrei Hagiu. “Staging Two-Sided Platforms”. *Harvard Business School* (2007).

Readings IV



Feng Zhu and Nathan Furr. "Products to Platforms: Making the Leap". *Harvard Business Review* 94 (4 Apr. 2016). URL: <https://web.p.ebscohost.com/ehost/results?vid=0&sid=83df5492-44a7-4fdb-a2af-8be98f6cb3dc%40redis&bquery=%28S0%2B%28Harvard%2Bbusiness%2Breview.%29%29AND%28DT%2B2016%29AND%28TI%2B%2522products%2Bto%2Bplatforms%2522%29&bdata=JmRiPWJ0aCZ0eXB1PTEmc2VhcmNoTW9kZT1TdGFuZGFyZCZzaXRlPWVob3N0LWxpdmU%3d>.



Andrei Hagiu and Elizabeth J. Altman. "Intuit QuickBooks: From Product to Platform". *Harvard Business School* (Dec. 2013).



Martin Reeves et al. "How Business Ecosystems Rise (and Often Fall)". *MIT Sloan Management Review* 60.4 (2019), pp. 1–6. URL: <https://sloanreview.mit.edu/article/how-business-ecosystems-rise-and-often-fall/>.



Hemant K Bhargava. "The creator economy: Managing ecosystem supply, revenue sharing, and platform design". *Management Science* 68.7 (2022), pp. 5233–5251.



David B Yoffie and Mary Kwak. "With friends like these: The art of managing complementors.". *Harvard business review* 84.9 (2006), pp. 88–98. URL: <https://web.p.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=1&sid=1fc00f7a-61e3-46e7-b6f0-25f6e4c56ee4%40redis>.



Julian Birkinshaw, Dickie Liang-Hong Ke, and Enrique de Diego. "Innovation and agility at Tencent's WeChat". *London Business School* (Aug. 2019).

Readings V



Thomas Eisenmann. “Winner-Take-All in Networked Markets”. *Harvard Business School* (2007).



Hemant K Bhargava, David S Evans, and Deepa Mani. “The Move to Smart Mobile and Its Implications for Antitrust Analysis of Online Markets”. *Business Law Journal* (Jan. 2016). URL: <https://blj.ucdavis.edu/archives/vol-16-no-2/BLJ-16.2-Bhargava-Evans-Mani.pdf>.



Michael A Cusumano, David B Yoffie, and Annabelle Gawer. “The Future of Platforms”. *MIT Sloan Management Review* 61.3 (2020), pp. 46–54. URL: <https://sloanreview.mit.edu/article/the-future-of-platforms/>.

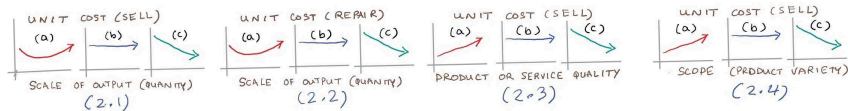


Emilio Calvano and Michele Polo. “Market power, competition and innovation in digital markets: A survey”. *Information Economics and Policy* 54 (2021), p. 100853.

Exercises I

Individual Effort

1. Pick a “traditional” product (e.g., bicycle, wooden toy, prosthetics, paint, car, prescription eyeglasses, leaf blower, shoes, ski jacket, furniture, etc.) - and a corresponding specific brand and company that makes it.
 - 1.1 State, about 25-50 words, the essence of this business ... what is it's purpose, how does it achieve it?
 - 1.2 Why might the firm want to do all this at large scale, and what must it do to operate at large scale?
 - 1.3 What are some pitfalls in scaling up?
2. Pick a “digital” or information good (movie, book, software app, operating system, streaming service, game, information service, search engine, research report, etc.) - and a corresponding brand. For this, digital good, and similarly for the product you chose in Ex. 1, examine:



- 2.1 which panel (a / b / c) best captures how “unit cost” (comprising production, marketing, distribution and other activities) changes with scale or number of units?
- 2.2 which panel (a / b / c) best captures the unit cost of fixing defective units (e.g., product recall) or upgrading them?
- 2.3 which panel (a / b / c) best captures how unit cost varies with the “quality” level of the product, or the utility it provides to buyers.
- 2.4 which panel (a / b / c) best captures how unit cost varies with “product variety” - e.g., compare unit cost if making 1000 units of the same product vs 10 units each of 100 variations of it.

Exercises II

3. **Business analysis:** Pick a common product (like in Ex. 1 - and a specific brand/item to make the analysis concrete), then thinking as a consumer what this product is worth to you, answer the following questions. And do the same thing again with one of these: Waze, YouTube, SnapChat, Tik Tok, Amazon, iPhone+iOS+AppStore (or, Android-Play Store), Airbnb, Uber. Display your answers for the two cases side by side (two-column table format).
- ▶ what aspects of the good make it valuable to you? (hint: think about variation in what features will change how much it is worth to you?)
 - ▶ who in the supply chain controls or decides these factors and quality levels?
 - ▶ generally, how does the product quality (i.e., its worth to you) change over time and with use?
4. **Course Summary and Wrap-up:**
- ▶ What are your top 3-5 learnings or insights from this class?
 - ▶ Was there something you found difficult to follow? Or, did anything impede your learning?
 - ▶ List 1-3 students who contributed the most to your learnings through their contributions in class discussions.

Exercises III

Group Homework Assignments

5. **Business analysis for a platform good:** Consider a platform good (such as a video on TikTok or YouTube, a place to rent on Airbnb, a ride on Uber, traffic information on Waze, an app on App Store or Play Store, a news feed on Facebook, etc.) - and think also of a counterpart traditional product (e.g., a show on HBO, a room at a hotel, a taxi ride) or even a product from Ex. 1. For both of these, answer: what is the flow of businesses involved in getting this product to you?

As an example: if I picked a “wrench”, then my answers might be: a) \$15, b) grip, reliability, versatility, c) manufacturer, d) wrench designer + (Raw materials suppliers → Steel makers, grip makers) → manufacturer → distributor → retailer → me. Materials or value flows from left to right, payment flows from right to left.

6. For each company/product in EACH of the two lists below (pick as many companies as group members), identify any standalone benefit or intrinsic value in the product. Then, if there are direct and/or cross-sided network effects, a) explain which kind, b) what is the network(s) that define the network benefit, c) how the network contributes to value, and d) what the platform or company can do in order to amplify the network benefit. List 1: Nextdoor, Atlassian, eBay, Salesforce, iOS, Stack Overflow, American Well, Zelle, Netflix. List 2: Venmo, PatientsLikeMe, Lime (or Bird), Slack, Substack, Spotify, Android. Be precise in answering, and provide your short responses in the form of a table like below.

Exercises IV

Company, Standalone Benefit	Type of Network Benefit	The Network(s)	How the network enables value	How to intensify it
Dropbox (a place to store files)	Direct	Users	Sharing files among users	Good search capabilities, good UI for setting sharing privileges, file editing Good authentication and access methods
	Cross-side	(Users, Connected Tools)	Seamless import/export from external tools (eg PDF writer) into Dropbox	
...				

7. **Monetization tactics:** Using one or more company as an example (Ford, Ikea, Kraft Foods, Boeing), explain how they use each of these tactics to better monetize the market they serve, i.e., to extract higher prices from buyers: a) bundling, b) vertical product differentiation (versioning), c) horizontal product versioning, and d) recurring revenues.
8. **Business Models:** For the companies/products matching your team number, make a 3-minute video summarizing what is their key product/service, who are their users/customers, and how they make money (mention years and numbers if appropriate - eg show a time-chart of revenues and/or user base): 1) Whatsapp, PatientsLikeMe, Match.com, 2) Doordash, Atlassian, Spotify, 3) OpenTable, Kyruus, TikTok, 4) CreditKarma, Armoire (<https://unlimited.armoire.style/>), Fortnite, 5) Overleaf, Amwell, Clash of Clans, 6) FramePlay, LinkedIn, Substack.

9. **Apple vs Microsoft Platforms** (Mini-Case): Compare - highlight the critical differences or similarities in - the *Apple and Microsoft approaches* to competing in the personal computing market (break your answer roughly into 2 parts, \approx 1980-2000, 2000-2015). Discuss, among other things, the two firms' success (or failure) in leveraging network effects, their choices in dealing with "ecosystem partners," and their choices to be "open vs closed," systems. Include a visual comparison of the financials of the two companies, in the two time periods.
10. DROPPED
11. 1) Plot the operating margin (%) and ROA (return on asset %) for two of these companies (Apple, Facebook, Google/Alphabet, Microsoft, Netflix, Amazon, eBay) over the past 20-30 years (or the life of the company, whichever is smaller). 2) Plot revenue, total operating expense, and research & development expense, for the company. Then 3) repeat this exercise for two of these companies (General Motors, Chevron, Pfizer, Proctor & Gamble, Citibank, IKEA, Boeing), and 4) Write half to 1 page summarizing what insights you get from the comparison. To build the plots, you can go to a website like <https://www.gurufocus.com/financials/XYZ> where "XYZ" is the ticker symbol of the company (just Google this to get the symbol) and pick the right metrics and time period. You can also try [macrotrends.com](https://www.macrotrends.net/stocks/charts/AAPL/apple/revenue) (e.g., <https://www.macrotrends.net/stocks/charts/AAPL/apple/revenue>).

- Platform power:** Identify the top 10 firms in terms of “market capitalization” now, and 10 and 20 years ago (find and use a suitable source, see e.g., https://en.wikipedia.org/wiki/List_of_public_corporations_by_market_capitalization). Classify these firms by industry sector (e.g., telecom, banking, oil and gas, computers). Present this data in a compelling and clear visual manner, ideally which demonstrates the changes across these 20 years.

Exercises VII

Case Preparation and Analysis Although all teams should read the case and think through the questions in Background and Analysis (and any student can be name-called in class), your written submission should cover only the exercises corresponding to your team assignment (2 teams will do part (A), 2 teams part (B), and 2 teams will do part (C)). Use bullet points, graphics, etc. to enhance the clarity and precision of your responses (vs long paragraphs). Make sure every word matters. Gibberish, gobbledygook and obfuscation will earn negative points.

For part (C) - the Jeopardy activity - each team could prepare 3 categories. Collaborate so you're prepared to execute the Jeopardy session, so learn the technology and the systems ahead of time.

13. Square

(A) Square (Case Background ... submit at least one answer as a well-prepared engaging video)

- (1).A.1 Summarize the (financial payments) industry that Square entered in 2009 – the players, products (and costs), customer segments, and how they monetized them.
- (2).A.2 Draw a timeline of Square's evolution from 2009 onwards (what products were introduced, when), and visualize Square's business performance in terms of users, activity, revenue, etc.
- (3).A.3 For each of Square's major products since 2009 to now: identify (a) the market segment(s) Square targeted (include numbers such as size and revenue potential), (b) its competitors, and (c) how Square's product was different and innovative relative to prevailing competition.

(B) Square: Case Analysis

- (1).B.1 (1 slide) Analyze the merits of Square's pricing in its Reader segment (the \$0 for card; the \$0.15 per-transaction fixed fee; and the 2.75% rate). Explain - why these levels? what happens if you increase one and reduce the other?
- (2).B.2 (1-2 slides) As a newcomer in 2009 in an established market, where incumbents served certain segments and were a poorer fit for other segments: (a) analyze which segments Square should target with their product (explain pros and cons); and (b) given this choice and Square's pricing strategy, critique how Square created success (market share, profit) without eliciting a harsh competitive response or price war.

Exercises VIII

- (3).B.3 Now, look deeper and quantitatively into this market segment. (3 slides plus supporting analyses)

Profits from Transactions: Think of how Square might optimize the per-transaction fee (call it p per \$ run through the reader; e.g., \$0.03). To do this, suppose that if the number of merchants with the Square Reader is B , then a subset Be^{-bp} (with $b = 200$) would use it. What is the optimal value of p to maximize Square's profit? Assume an average (annual) transaction volume $T = \$20,000$ per merchant, and that Square's average back-end costs are $c = \$0.02$ per \$ of transaction.

Profits from Reader: Suppose that if Square sold the reader (which costs \$10 per unit) at price s , it would attract $B = Me^{-as}$ merchants (assuming they find the usage terms also attractive), where $a = 0.1$ and $M = 10$ million is the potential target market. What is the optimal s to maximize Reader profits?

Total Profits from Reader + Transactions: What would s be if you factor in the market for transactions?

- (4).B.4 Pricing with data monetization (1 slide)

If Square could monetize merchant data (i.e., earn \$ v per merchant) how would it affect pricing of the Reader and other products? Consider the likely Square user base, the nature of heterogeneity among users, the fixed and variable costs to Square, Square's existing competitors (their products, prices, and target segments), customer acquisition, retention, lock-in, and value of data.

- (5).B.5 Critique the pricing of Square Cash (1 slide): \$0 up to \$2,500 per week; 2.75% rate for larger business accounts.

- (6).B.6 Network effects (1-2 slides)

Which of Square's products have substantial network effects? Explain what types of network effects? what are the sides? in what way does the network create value for a user? How should the existence of network effects affect Square's pricing strategy?

(C) Square: Case Jeopardy

Prepare a set of rapid-fire questions (from the case) for the class to answer (8-10 minutes activity). Create suitable categories (e.g., Financials, Timeline, Products, People ...), and aim to cover (at least) the questions laid out in the Background exercises (A) for the case, and one question from Analysis (B).

14. Intuit

- (A) Intuit (Case Background ... submit at least one answer as a well-prepared engaging video.)

Exercises IX

- (1).A.1 Summarize Intuit's journey as a software provider (of Quicken, Quickbooks) - its customer segments, strengths in serving them, and level of financial success and growth rate.
- (2).A.2 What new business opportunities did Intuit's software products enable, i.e., what new value propositions could Intuit offer its customers on top of the data and transactions in its software products?
- (3).A.3 Develop a timeline comprising Intuit's evolution from a software product company to its later forms (including as an MSP) - cover its products, target markets, and financial success.

(B) Intuit: Case Analysis

- (1).B.1 (1-2 slides) What mechanisms or initiatives represent Intuit's transition from a software product company to a MSP? In each case, what are the networks and network effects Intuit created? What part of the Quickbook/Intuit business system was opened, what services did it offer network participants, and what were the technological elements underlying these services?
- (2).B.2 (2 slides) Evaluate the strategic merits of alternative business models for this transition (i.e., be an open marketplace, vs a limited curated marketplace, vs reseller) - do this separately for i) QBF and ii) Concierge.
- (3).B.3 (1-2 slides) How and where should Intuit draw the boundaries between being a "product provider" vs a "platform"? For instance, what sort of platform-level data should Intuit leverage solely vs. share with 3rd party providers? What new business services should Intuit keep to itself? Answer in terms of specific products/services, as well as general principles for making this choice.
- (4).B.4 (2 slides) Was it smart for Intuit to transition from a "product" model (i.e., leveraging all of its expertise and IP to make and monetize new products on its own) to a multi-sided marketplace platform model (allowing 3rd party providers to use Intuit infrastructure and reach Intuit's customers) a smart move for Intuit? What are pros and cons, strategic challenges, organizational and decision making culture (e.g., metrics and incentives), underlying these two directions? If possible, consolidate these into a mathematical/economic model (include things such as discovering new ideas, risks in implementing them, likelihood of success or failure of each, costs incurred, direct revenue or commission as platform operator, etc.).

(C) Intuit: Case Jeopardy

Prepare a set of rapid-fire questions (from the case) for the class to answer (8-10 minutes activity). Create suitable categories (e.g., Financials, Timeline, Products, People ...), and aim to cover (at least) the questions laid out in the Background exercises (A) for the case, and one question from Analysis (B).

Exercises X

15. WeChat

(A) Case Background

- (1).A.1 Develop a timeline comprising WeChat's evolution - cover its products, target markets, and financial success - and link this to new technologies (introduced and adopted) during this period.
- (2).A.2 What are the different business ventures of WeChat and briefly discuss each of their business models.
- (3).A.3 What are the different sides and network effects of the WeChat open platform?

(B) Case Analysis

- (1).B.1 (1 slide) A key strategy for WeChat was to branch from messaging to a host of other applications and services. Comment on pros and cons to be a specialist or a wide (and thin) generalist, keeping in mind also future evolution, future outcomes, and competitive response. Relate this to the lack of focus that killed the once-dominant Yahoo!
- (2).B.2 (1 slide) Explain and critique WeChat's ability to use product design to engender stronger network effects?
- (3).B.3 (1-2 slides) What lessons does WeChat's history provide you regarding staging and evolution of large-scale platforms? Specifically, address growth, monetization, transformation from one type of network good to another etc., and the wisdom of opening up the platform to external third-party firms.
- (4).B.4 (1-2 slides) Beyond WeChat's early success, critique what contributed to its future continued ascendance: was it the early success, market leadership and large installed base acting as effective barriers to competition? Or was WeChat's continued ascendance more driven by continuous innovation and strategic agility?
- (5).B.5 (1-2 slides) Evaluate the strategic and financial merit of WeChat's potential drive for global dominance. In what ways does WeChat's solid position in the China market help or hurt? What about spreading capital to create growth internationally vs. focusing to grow just in China.

(C) Case Jeopardy

Prepare a set of rapid-fire questions (from the case) for the class to answer (8-10 minutes activity). Create suitable categories (e.g., Financials, Timeline, Products, People ...), and aim to cover (at least) the questions laid out in the Background exercises (A) for the case, and one question from Analysis (B).

Class Rules and Support

- **Class Rules.**

- ▶ inform me asap about any needs that affect your learning experience.
- ▶ review syllabus and session details ahead of session 1, note any questions you have.
- ▶ be in class on time. or early.
- ▶ do all listed pre-class work and submit it ahead of class meeting (due dates on Canvas).
- ▶ never hesitate to ask questions or for help, in class or out (email professor or TA).
- ▶ respect all rules of academic integrity in homeworks, exams, and all around.

- **Covid Accommodation.** This is a difficult time, filled with uncertainty and unexpected stresses. If you have circumstances that prevent you from normal participation, please notify my TA **in advance** so we can help you. Your safety, health, and well-being are important.

- **Support.** UC Davis provides a **wide range of remote services** such as counseling, tutoring, academic advising, and community building and engagement for its students. If you feel like your performance in class is being impacted by circumstances outside of class, do not hesitate to let me know. I want to help you to the extent possible while meeting the learning objectives for this course.

- **Online Classes [if forced into].** My limited experience with Zoom teaching highlights some practices that can help make the best of this difficult, remote-learning, environment: 1) sign in 5 min before class, 2) test your equipment (wifi connection, camera, mic, speakers, etc.), 3) be familiar with Zoom features such as screen-sharing, raising hand, indicating emotions (like, dislike, claps etc.), 4) have your mic off (except when speaking), camera on (so we can have real engagement), 5) be ready for class by doing all assigned prep, and 6) be ready to participate like you would in an in-person class.

Team Tasks

- To reduce and distribute workload, students will do certain tasks in teams, and different teams will be assigned different tasks as laid out below. The goal is to let each of you pick what you are interested in or might excel at.
- Task groups:

	Square	Intuit	WeChat
Background	Teams 1, 2	Teams 3, 4	Teams 5, 6
Case Analysis	Teams 3, 4	Teams 5, 6	Teams 1, 2
Jeopardy	Teams 5, 6	Teams 1, 2	Teams 3, 4

Group formation will be done within Canvas. Please assign yourself to one of the pre-defined groups (of specific sizes), otherwise a default assignment will be made for you. It is your responsibility to check with group members whether they're committed to staying or likely to drop out.

- A team assignment works only when team members study the entire topic, then discuss and debate to form and describe the team's position. It does not work well if you simply partition the tasks and sub-divide between the team members.

Student Workload and Grading

Pre-Course Assessment	Individual HW	Group HW	Case Discussion	Class Participation	Quizzes and/or Exam
10%	15%	21%	24%	15%	15%

Grading Principles

Maintain a B by attending class, listening responsibly, making timely and effort-ful submissions. Shift lower by missing class, being late on assignments, or being disruptive (e.g., being late) or distracting (e.g., using social media). Improve to B+ or A- through high quality on assigned work. Get an A by demonstrating high level of understanding, analysis, and insight.^a

How to think about grades: [A] A cause for celebration; [B] Be happy, this is pretty commendable; [C] See what happens if you don't follow instructions?; [D] Do you really want to go there?

^aYou can't make up lost grade points for a missed class. To partially make up lost learning: read all notes, slides, do all assignments; then, spend 20 minutes each with 2 students to get their summary; then make a 1-2 page learning summary and share with the professor. In-class "surprise quizzes" will be added to motivate timely attendance.

- HW assignments (and Readings) aim to prepare you for class, will be graded on effort.
- Class participation: 0.5 for **punctuality**; 1.5 for **outstanding** contribution; 1 in the middle.
- 4 Quizzes (5 pt each), lowest score will be dropped.
- Individual HW 5 pts each; Group HW 3 pts each; Case prep 8 pts each.

University Guidelines and Information

Academic Integrity and Code of Conduct: All students are governed by the [Univ. of California's standards of ethical conduct for students](#). These sections set forth the responsibilities of students and faculty to maintain a spirit of academic honesty and integrity. You were given this code of conduct with explicit explanations of violations (e.g. plagiarism, cheating, unauthorized collaboration, etc.) and your responsibilities in regard to them during orientation, and you signed a statement affirming that you understand it. It is essential that you are aware of this code of conduct and the disciplinary actions that may be taken in the event of a violation. A copy of the Code of Academic Conduct may be found in your student handbook or at

<https://ossja.ucdavis.edu/code-academic-conduct>. If you are uncertain about what constitutes an academic conduct violation, please refer to the code linked above, contact your instructor, or refer to the Office of Student Judicial Affairs.

Principles of Community: All participants in the course, instructor and students, are expected to follow the UC Davis Principles of Community, which includes affirmation of the right of freedom of expression, and rejection of discrimination. The right to express points-of-view without fear of retaliation or censorship is a cornerstone of academic freedom. A diversity of opinions with respectful disagreement and informed debate enriches learning. However, in this course, any expression or disagreement should adhere to the obligations we have toward each other to build and maintain a climate of mutual respect and caring.

Statement on Accommodation: UC Davis is committed to educational equity in the academic setting, and in serving a diverse student body. All students who are interested in learning about how disabilities are accommodated can visit the Student Disability Center (SDC). If you are a student who requires academic accommodations, please contact the SDC directly at sdcc@ucdavis.edu or 530-752-3184. If you receive an SDC Letter of Accommodation, submit it to your instructor for each course as soon as possible, at least within the first two weeks of a course.

Safety and Emergency Preparedness: UC Davis has many resources to help in case of emergency or crisis. While reviewing campus Emergency Information, you may want to register for UC Davis Warn Me and Aggie Alert, which will give you timely information and instructions about emergencies and situations on campus that affect your safety. If there is an emergency in the classroom or in non-Davis locations, follow the instructions of your instructor.