CHAPTER 10

The Sharing Economy, Collaborative Consumption, and Efficient Markets through Tech

10.1 Introduction

Learning Objectives

1. Recognize firms often categorized as part of the “sharing economy” or participating in “collaborative consumption.”
2. Gain a sense of market size, impact, investment, and business valuation in these sectors.

In recent years, technology has enabled staggeringly diverse groups of product and service providers to connect with consumers, offering far greater reach and efficiency than traditional markets. Many of these new tech-fueled marketplaces are allowing millions of users to turn to private individuals—in effect, strangers instead of corporations—to meet some kind of demand. These efforts are also enabling a generation of “citizen suppliers” to go into business for themselves. Product owners are becoming providers of rentals, offering up their rooms (Airbnb), cars (Turo), boats (Boatsetter), and power tools (Zilok). Others are empowering a whole new class of micro-entrepreneurs with possessions and skills to provide personal services. Car rides (Uber, Lyft), pet sitting (Rover), meal prep (Feastly), home services (Care.com, Angie’s List, Handy), freelance business services (Upwork), and errand runners (TaskRabbit) are just some of the segments getting a high-octane, tech-fueled boost. Some firms are buying inventory and renting it out (Rent the Runway with dresses, Zipcar with autos, Chegg with textbooks). These firms are moving whole categories of products from something an individual owns outright to something that is “collaboratively consumed,” wherein an individual takes possession of an item for a period of time, then returns it for use by others. Consumers are even collaborating as financiers, pooling capital to back projects (Kickstarter, GoFundMe, Indiegogo) and provide loans (LendingClub, Prosper, Kiva). Most of these Internet-enabled market makers can trace their roots back to once-pioneering, now massively influential firms like eBay and craigslist, which empowered all sorts of individual sellers and service providers.[5]

Author Rachel Botsman coined the term “collaborative consumption” to describe these efforts.[6] Economist Thomas Friedman, author of The World Is Flat, prefers the phrase “sharing economy.”[7] Still others may refer to the “collaboration economy,” “peer-to-peer commerce,” or even “re-commerce.”[8] Many have lamented that these terms lack clear definitions.[9] Trying to bring pre-
cision to the term, Boston College sociologist Juliet Schor says the sharing economy can involve the recirculation of goods, increased utilization of durable assets, exchange of services, or the sharing of productive assets. A great start, but even this is tricky. Is a public library part of the sharing economy? Airbnb is a poster child for the effort, but why don’t traditional bed and breakfasts get the same respect? Tech analyst Dan Schutzer adds that much of what we call “sharing economy” standouts differ from earlier efforts in that their efficiency is enhanced through streamlined coordination and broader reach by leveraging the Internet. Even as we struggle for a precise definition, it’s worth examining what’s happening across this group of provider-pooling, tech-powered marketplaces. These firms fuel more efficient matching of supply and demand, lower costs, enable more efficient resource use, and provide a level of reach and services heretofore unavailable.

Today, billions of dollars in commerce is flowing through these marketplaces. Some are currently addressing smaller, niche markets. For example, the market for hourly car-sharing services (e.g., Zipcar or Turo) is thought to be just one-sixtieth the size of the market for traditional car rentals (e.g., Hertz, Enterprise, and Zipcar parent Avis). However, others are building Goliaths. For example, as of 2018, taxi-alternative Uber was far larger than any cab firm on the planet, operating in over 630 cities in 76 countries, and fast-growing Airbnb had more than five million property listings in 81,000 cities, far more than Hilton, the biggest hotel chain on earth, has hotel rooms. Given the potential for disruption, some very deep-pocketed investors are placing massive bets on the upstarts. Several sharing economy firms have gone public (e.g. Care.com, Chegg, Grubhub, HomeAway, LendingClub). Zipcar went public and was acquired by Avis, also for about half a billion dollars. Profitable Airbnb has raised $4.4 billion and is valued at $31 billion. The number two car sharing service, Lyft, has raised $4.3 billion at an $11 billion valuation, $1.5 billion in 2017, alone. In a sign of a changing future for traditional car makers, General Motors backed Lyft with more than half a billion dollars, as has Google parent Alphabet (especially noteworthy since Google was an early backer of Uber). Lyft will need it. Industry-leader Uber has raised more than $21 billion, although its recent woes led to a “down-round,” valuing the firm at $48 billion, down from $70 billion—a figure still more than double the value of the entire rental car market. China’s Didi Chuxing and consumers are solidly on board with the revolution. Some 44 percent of US Internet users have participated in the sharing economy, while 22 percent have offered goods or services.

Despite the excitement, not all marketplaces are raging successes. There has been an inevitable consolidation of smaller players as leaders reach for scale. Boatbound was acquired by Boatsetter, DogVacay was rolled into Rover. And many others never got the traction required for a market to become efficient and a truly useful alternative. We’ll look at what makes a good marketplace and why many seemingly good ideas have struggled.

Some Examples of Firms Often Characterized as Part of the “Sharing Economy” or “Collaborative Consumption”

- **RGoods:**
  - Pre-owned: eBay, craigslist (peer-to-peer supplied); thredUP (firm-owned inventory).
  - Loafer products: Zilok (peer-to-peer supplied); Rent the Runway, Chegg (firm-owned inventory).
  - Custom products: Etsy, CustomMade.
- **Services:**
  - Professional services: Upwork, crowdSPRING.
  - Personal services: Angie’s List, Handy, TaskRabbit.
  - Delivery: DoorDash, Grubhub, Instacart, Postmates (self-employed drivers for restaurant or grocery delivery), Drizly (drivers and alcohol inventory owned by suppliers).
• Transportation:
  • Transportation Services: Uber, Lyft, Didi (cars supplied by drivers).
  • Loaner vehicles: Turo (peer-to-peer supplied), Zipcar (firm-owned inventory).
• Office space:
  • Office space: LiquidSpace, ShareDesk (peer-to-peer supplied inventory).
  • Places to stay: Airbnb, HomeAway, Couchsurfing (peer-to-peer supplied inventory).
• Money and finance:
  • Money lending: LendingClub, Kiva, Prosper (peer-to-peer loans).
  • Crowdfunding: Kickstarter, GoFundMe, Indiegogo (peer-to-peer capital).

**Key Takeaways**

• The sharing economy is allowing firms to pool resources, products, and services in ways that create new markets and market opportunities.
• Citizen suppliers are offering services and renting out their own goods, while other firms are taking possession of inventory to organize resale or rental markets.
• Definitions of the sharing economy are imprecise, but a common set of dynamics, which we’ll explore in this chapter, underpin market competition and growth.

**Questions and Exercises**

1. Which firms are the biggest players in the sector often referred to as “the sharing economy” or “collaborative consumption”? Have you used any of these firms? What was your experience like? Would you use them again or recommend them to a friend? Why or why not?
2. Research this segment and identify firms that should be considered part of the sharing economy but that aren’t mentioned. What do you think of the prospects for the firm or firms you’ve identified? Why do you think they’ll succeed or fail?

**10.2 Boom Times and Looming Challenges in the Sharing Economy**

**Learning Objectives**

1. Identify the factors that have contributed to the rise of the sharing economy.
2. Understand the competitive factors that influence success in marketplaces that support collaborative consumption.
Share On! Factors Fueling the Rise of Collaborative Consumption

Several factors have come together to create a perfect storm for market disruption in market making. A prolonged, worldwide economic recession and stagnant wages have boosted consumer interest in low-cost alternatives to conventional products and services, and it encouraged a whole new class of laypeople to try their hand at offering services for hire. Need money? Rent out your spare room, your truck, the belt sander in your basement, find a market for your crafts or handyman skills, or run an errand in your free time.

While inviting strangers into your home, lending them your stuff, or hiring them for personal services might creep out an earlier generation, apps and social technologies help allay fears by collecting and sharing ratings (of both buyers and suppliers), ensuring payment, and offering increased scheduling convenience. Many of the services also have an environmental benefit by fostering reuse and diminished consumption.

Winning in Electronic Markets

All of these efforts are two-sided markets, and network effects are in effect. Showing up early gives firms a head start in the race to create a critical mass of buyers that will attract sellers and vice versa. Early players gain scale, brand, and financial resources to help expand and reinforce assets for competitive advantage. Want to start a sharing economy marketplace? As in any market effort, understand that value needs to be realized on both sides of the transaction equation. Suppliers without buyers or buyers without suppliers is a lopsided recipe for failure.

As an example of the benefits of an early lead, consider Uber vs. Lyft. Uber started in 2009, Lyft in 2012. Early on, late-moving Lyft struggled to gain the required critical mass of drivers to attract riders, and vice versa. While Uber’s troubles have provided a boost to Lyft, the pink-logo’d ride-hailing service is still far behind Uber. The #deleteUber protests lifted Lyft from 10 percent to 19 percent of the US market, but Uber remains comfortable at an 81 percent share. Without Uber’s constant negative press, it’s unlikely that Lyft would have seen comparable growth.
Marketplaces are especially attractive to citizen-suppliers who want to make use of expensive items they’ve purchased but that are not regularly used. Technology allows exchange operators to coordinate a peer-to-peer supply, substituting information for real estate and other types of expensive inventory that traditional firms usually own outright. Airbnb doesn’t own its hotel rooms; Uber and Lyft don’t own cars. And in most cases, citizen-suppliers have already paid for the assets they use to earn money in the sharing economy. Capital investment, utilities, and maintenance are just some of the costs that sharing economy upstarts save over their competitors.

For some marketplaces, end users simply can’t be relied on to consistently manage inventory and logistics. In these cases, successful “collaborative consumption” efforts own inventory to ensure quality and gain more control over the customer experience. Rent the Runway meticulously oversees its dress inventory, packing product for delivery, running a massive in-house garment cleaning effort, and retiring dresses that are noticeably worn. The goal is to ensure that an experience with the firm will bring customers a “Cinderella moment” filled with delight, rather than disappointment. While some startups have attempted to allow women to rent dresses to others, none has achieved anything close to the scale of Rent the Runway’s nine million members. And used clothing marketplace thredUP started as a peer-to-peer firm where consumers sold to each other similar to eBay, but it has since evolved into an online consignment store that curates and warehouses inventory, provides high-quality photography of items for sale, and attentively packages goods for delivery. All this is meant to raise the bar and create a used-clothing purchase experience that rivals new item retail while saving customers big bucks.

Highly fragmented markets are especially ripe for rollup in electronic marketplaces. Lots of suppliers in a traditional market mean customer search costs are high. But ratings in marketplaces help you quickly size up high-quality providers and make a lower-risk choice. Why look at the Yellow Pages when Handy can show you five-star plumbers, all vetted in background checks with insurance verified? Once a critical mass of buyers turns to a market as a first choice for shopping, the supply side knows they’ve got to show up, but suppliers can also use these markets to lower
other costs. Directories like Angie’s List and Etsy also take the place of conventional advertising, marketing, or storefronts, so suppliers reduce overhead and marketplaces offer margins that traditional firms can’t match.[20]

In highly fragmented markets, marketplaces oftentimes extend the value chain by getting between suppliers and customers that would otherwise connect directly. This is contrary to what we think of when disintermediation removes organizations from the distribution channel in order to increase efficiency, but if the network offers value through search and discovery, use of otherwise under-utilized assets, scheduling, payment, reputation management and more, then a longer value chain can be a more efficient one. Publicly traded Care.com screens fragmented networks of providers of child care, elder care, pet care, and home upkeep services. Alcohol delivery app Drizly doesn’t actually employ any drivers, nor does it take possession of any hooch (saving it from liquor industry regulation). Instead it simply connects thoselooking for a booze delivery with an existing yet underutilized network of drivers working for independent (and highly fragmented) liquor stores.[21] While not quite a network of citizen-suppliers, the same economics are at work here. The fragmented, small, independent suppliers are brought together by Drizly’s market-making app to create what looks like a unified national brand, and this brings in new customers who seek the app-tap convenience of adult beverages brought right to their doorstep.

While Drizly rolls up the fragmented market for booze, ClassPass founder Payal Kadakia built her firm to do much the same for fitness classes. Customers pay a cancel-any-time monthly fee and can choose and schedule yoga, spin, Pilates, and more from a host of over 8,500 providers in fifty cities worldwide. Customers get choice, while providers bring in new customers and get a cut of ClassPass revenue while helping keep instructors and facilities full. By mid 2016, ClassPass, the leader in this space, was generating $150 million in revenue, was valued at $400 million, and poached a VP from Amazon.com to be the firm’s CTO.[22]

Social Media for Virality and Trust Strengthening

Word of mouth sharing and the virality offered by social media accelerate the growth of sharing economy marketplaces. Firms that can turn customers into brand ambassadors can see lower advertising and customer acquisition costs. One survey reported that 47 percent of participants in the sharing economy learned about the services they used via word of mouth.[23] Uber has proved inherently viral. Every seven riders attracts one new Uber user.[24] The firm regularly offers customers discounts for sharing Uber coupons to attract friends as new riders. Such programs aren’t simply a subsidy to recruit customers, they are a trust-conveying social proof endorsement from an acquaintance that states “getting rides from a stranger isn’t scary—I do it and here’s money so you can try it, too!” Another factor that fuels virality? A satisfied customer base. One study found that 91 percent of sharing economy participants would recommend the last service they used to a friend or colleague.[25]

Lyft provides another good example of using social media to instill trust between drivers and customers. Both parties link to Lyft through their Facebook accounts.[26] Profile photos pop up as part of ride requests, so you know who you’re going to be meeting. And both drivers and passengers rate each other. Drivers can skip fares with deadbeat ratings, while passengers get an endorsement that they’re not about to step into a car driven by a sketchy rip-off artist, or worse.[27] Payment is guaranteed through the app. Consumers get an audit trail to call out any driver who tries to scam
them or makes them feel uncomfortable, while drivers are ensured a fare won’t pull the “no-cash dash,” leaving them without pay for services. By leveraging technology this way, a service like Lyft can offer both parties in a transaction the kind of security that goes way beyond what one would get from a conventional taxi operation.

Online provider ratings can provide a lot more insight than you’d get when stepping into a conventional cab, or responding to a Yellow Pages ad, but online ratings aren’t perfect. Boston College’s Juliet Schor, who studied the sharing economy for the MacArthur Foundation, discovered evidence that some highly rated TaskRabbit suppliers leveraged the corresponding large volume of service requests to farm out their work to subcontractors, while taking a cut for themselves (such market-making within the market is against TaskRabbit terms of service).[28]

Crowdsourced ratings can also reflect the crowd’s bias and reinforce discrimination. Allegations in an Uber driver forum suggest that college students rate older drivers lower, male riders give lower ratings to female drivers who don’t respond to their flirtatiousness, drivers with disabilities also experience lower ratings, and black drivers have a lower acceptance rate than whites. A working paper published by Harvard researchers reports bias in Airbnb, claiming that after controlling for factors like location, rental characteristics, and quality, non-black Airbnb hosts in New York City were still able to charge 12 percent more than their black counterparts,[29] and black hosts received a larger penalty for having a poor location when compared to comparable non-black hosts.[10] Fighting this bias is tricky. Lyft doesn’t track race or gender out of “a desire to be non-intrusive,” but the firm will monitor things like request denials. To prevent drivers from denying rides to minority neighborhoods, many ride-sharing firms also don’t share passenger destinations until the passenger has accepted the ride or even is in the vehicle.[31]

Share Everything? The Myth of the Market for Your Neighbor’s Power Drill

An Airbnb founder once praised the model of rental firm Zilok, stating: “There are 80 million power drills in America that are used an average of thirteen minutes. Does everyone really need their own drill?”[32] A compelling argument that was often repeated in the media during the early years of the sharing economy, but it turns out there were a lot of problems when it came to actually building a business on neighborhood rentals.

Maintaining liquidity in the market—meaning a reliable supply of goods at a fair, market-rate price, requires a critical mass of both providers and consumers. These participants only show up if there is a strong value proposition—usually involving clear convenience and price advantages. Is there enough pain in buying a power drill? It’s not that expensive, you know where to get it, and owning one can be a time saving for last-minute needs like furniture assembly or picture hanging. You can get a drill on Amazon for $30 and, in many markets, get it delivered in an hour. Does that trump tracking a product down, traveling to meet a stranger, and having to return it? Could there be a better model conveying more convenience (e.g., stop at the local hardware store and rent select items from their inventory)? And are there cultural implications, as well? Does renting to the person down the street make you seem stingy, given that neighborhood culture may be to just lend items?

It seemed that lots of people liked the elevator pitch idea, but not enough people used it. SnapGoods and NeighborGoods had more suppliers that wanted to offer rental products than consumers interested in renting them. Focus also seemed a problem. SnapGoods had some successful categories (e.g., photo equipment, electronics) but not enough to become known as the go-to-place when you need “that thing.”[33] Oftentimes hearing that you’ve got a “good idea” isn’t enough to build a good business. Verification of product-market fit (see the Rent the Runway chapter) is critical for all innovators—from large corporations to garage startups.
Can You Share Nice? Challenges of Safety and Regulation

Instilling trust doesn't mean that firms are without safety issues, and participants in the sharing economy are continuing to evolve their policies as a result. Airbnb has had rare incidents where guests have trashed homes or otherwise misbehaved, and Uber comes under criticism in those extremely rare circumstances where drivers commit crimes or get into injurious or even fatal accidents.

Participating in the sharing economy raises questions for insurers. Will firms pay out if there is a “sharing economy” incident with a supplier, or will they try to refuse, saying, in effect, “your policy doesn’t cover operating a business.” Homes, cars, and other insured items will experience more use, wear, and tear, likely a greater risk for the insurer, than if the insured item was only for personal use. Some sharing economy firms offer service providers additional coverage and protection guarantees, but the environment is still fluid. Some governments have explored additional insurance regulation for sharing economy participants. Attempts to further regulate the industry could arise from legislator concern, or lobbying from the insurance industry or entrenched incumbents threatened by sharing economy competition.

Many local firms also benefit from taxes and regulatory fees from industries threatened by the sharing economy, and groups opposed to new, rival efforts can represent very powerful lobbies. Firms usually pay for the right to operate a cab service within a municipal district. In New York City, companies need a so-called medallion, an operating privilege that can cost over $1 million for a single vehicle. Firms that have made this kind of investment don’t want to see new competitors, especially if newcomers don’t have to shell out for the same expenses. Thousands of cab drivers in major European cities snarled traffic to protest Uber and other ride-sharing services, and Seattle’s city council has voted to limit ride-sharing services. Most large cities also tax and regulate hotels and other industries that these new models threaten. Airbnb has actually offered to pay $21 million in annual taxes to New York City, and has even sponsored a NY state bill to allow it to collect taxes. But opposition threatened by sharing economy firms is strong. Taxi and hotel owners represent powerful lobbies, and they’d love to see competition from the sharing economy go away. Hotel unions fear the growth of non-union jobs. Neighborhood associations are concerned that family homes are now located side-by-side to operating commercial properties that bring a large group of unknown, non-neighbors into their apartment buildings, condo complexes, and neighborhoods. Tenant lobbies worry that Airbnb encourages buying apartments as investment properties, contributing to a lack of affordable housing (San Francisco passed legislation to limit Airbnb-style short-term rentals to properties owned by permanent residents, and for no more than 90 days a year). Similar rules are in place in many other popular cities, including Paris, Seattle, and New York, prompting Airbnb to voluntarily limit.

The road to citizen-led finance has also been filled with obstacles. Leading peer-to-peer lending sites Prosper and Lending Club shut down for a period of time to work with the SEC and develop an oversight plan, which eventually involved securitizing loans made on the site so that they could be bought and sold on the open market and requiring both companies to make their financials public, even when they were privately held. It’s also worth noting that a good thing for consumers might be a great thing for institutions, as well. While Prosper and Lending Club were founded on the vision of peer-to-peer finance fueled by an army of citizen lenders, the reality is now that much of the money in these systems comes from hedge funds, other big institutional investors, and the wealthy.

Another major concern for firms in the sharing economy is uncertainty around the ability of these firms to continue to consider their workers as independent contractors and not employees. An administrator for the US Deptment of Labor wrote: “When employers improperly classify employees as independent contractors, the employees may not receive important workplace protections such as the minimum wage, overtime compensation, unemployment insurance, and work-
ers’ compensation. Misclassification also results in lower tax revenues for government and an uneven playing field for employers who properly classify their workers. The CEO of Homejoy shut down the sharing economy home cleaning firm, claiming that pending lawsuits had made it difficult for his firm to raise additional capital (the firm had already raised over $40 million from investors, including Google Ventures). Other sharing economy firms, including Instacart (grocery delivery) have moved to reclassify independent contractors as employees. The issue has gained the attention of state and federal agencies and presidential candidates, and raises the specter of class action lawsuits. Any move from independents (so called 1099 workers after the US tax form they fill out) to firm employees (that are issued a W-2 form) won’t come cheap. A reclassification could raise wages by 20 percent, add upwards of 14 percent more for workers’ compensation premiums that employers are required to pay, and employers will need to provide health care contributions.

Not all authorities are opposed. Boston’s mayor has voiced support for Uber, seeing it as a safe and popular service among citizens and city visitors. Boston-area mass transit has reached out to Uber to improve transportation for people with disabilities, saving the state a potential $47 million a year, and the city entered a data-sharing agreement with Uber to gain insight on travel patterns to support transportation policy and city planning goals. Colorado and California have passed legislation largely supportive of ride-sharing services, while requiring some regulation to ensure public safety. With a mixed regulatory reception in many markets, sharing economy innovators should recognize that even though they can build “an app for that,” it doesn’t mean that technology efforts will be allowed to circumvent incumbent protections, and we’re likely to see a wide variation in support and regulation for years to come.

WePay Winning Big: Processing Payments and Taming the Crowd through “Social” Security

 Bringing together buyers and sellers can seem like a great business, but dealing with payment collection can cause migraine-inducing challenges. Credit card firms often take 3 percent or more from any transaction that accepts plastic, so many firms view payments as a despised, margin-narrowing expense. Firms that run their own payments platforms also risk attack from hackers, vulnerabilities from software bugs and security crises, a complex regulatory environment, and more. Payments are rarely a source of competitive advantage in a marketplace—everyone needs to collect money—so firms are anxious to shed payment responsibility if they can.

On top of all this, processing payments in marketplace environments can prove especially challenging. Suppliers want to get up and running, accepting payments right away, but fraud is common. Crooks have been known to set up bogus storefronts or service providers and use stolen credit cards to “buy” from their own fake shops, in effect laundering money through these marketplaces. New merchant verification can be a slow, multistep process and has often resulted in inappropriately frozen merchant accounts (a complaint frequently made against payment leader PayPal).

WePay is a firm that has stepped up to offer simple payment solutions that specifically target the challenges of buyer/seller platform operators. The firm’s hundreds of clients include sharing economy standouts like service provider Care.com, goods marketplace CustomMade, and crowdfunding site GoFundMe. WePay combats challenges in several ways: first, the firm’s Veda fraud-fighting technology analyzes social profiles to get clients up and running with payments in a streamlined process, far faster than rivals. By linking to social media accounts (Facebook, LinkedIn, Yelp, TripAdvisor), WePay can gain a fast read on whether founders and businesses are legitimate. It’s extremely difficult to fake any history accrued over time. WePay has also been processing payments since 2008 and has transaction history from hundreds of thousands of customers currently sending billions of dollars a year through the firm’s systems. Each transaction adds to the firm’s “big data” smarts used to separate the stand-up vendors from the sketchy. The firm’s machine learning technology continually update the firm’s fraud models to adapt to new patterns it uncovers, spotting fraud with two to three times more efficiency than using a rules engine of known fraud types. WePay makes adding payment capabilities to any site as easy as embedding a YouTube video, with a cut-and-paste of pregenerated code. The firm initially started as a group payments tool where clubs and friends could pool cash for purchases, but servicing
businesses proved a much more lucrative market, with less support and other overhead needed for a focused group of high-volume clients. That pivot proved a winner. WePay now powers payments on eight of the top fifteen crowdfunding sites and is seeing growth balloon as new US regulations make crowdfunding more attractive. Early on, founders Bill Clerico and Rich Aberman took WePay through the elite Y Combinator accelerator program (where the Airbnb team also gained mentors and connections). The duo have been named to BusinessWeek’s Best Young Tech Entrepreneurs list, and their firm has been named a “Top Five” financial technology company by Forbes. WePay’s growing model and marketplace smarts led to its acquisition by JP Morgan Chase in a deal that can ultimately be valued above $400 million. 

Key Takeaways

• Recession, wage stagnation, social media, environmental concerns, and the proliferation of smartphones are some of the factors that have helped fuel a rise in collaborative consumption.
• Two-sided network effects are at work in collaborative consumption marketplaces, and in order to be successful, firms must offer value to both buyers and suppliers.
• Firms that move early may get a jumpstart on the creation of key assets, such as network effects, brand, scale, and financial resources.
• Marketplaces allow suppliers to leverage underutilized assets, while marketplace operators can reduce overhead associated with conventional transactions by eliminating storefronts, utilities, staff, capital expense, and more.
• Some firms may choose to take control of inventory to maximize quality and customer experience.
• Fragmented markets are especially well-suited for rollup in electronic marketplaces.
• While we often talk about disintermediation that shrinks a distribution channel, channel-extending intermediaries such as sharing economy exchanges, can position themselves between buyers and sellers, but add value for both parties. Suppliers gain reach and encourage discovery at a lower marketing spend, consumers see search costs lowered, and both sides can benefit from services such as scheduling and payment. Consumers see dramatically lowered search costs.
• Virality can lower advertising and customer acquisition costs, increase reputation, and lower the perception of risk.
• While crowdsourced participant ratings and social profiles can help improve trust, this technology can also reinforce bias and discriminatory tendencies of the crowd. Some firms audit data to try to uncover and address bias. Others hold back key information, such as destination information, if rides to a minority neighborhood might cause some suppliers to deny service to certain customers.
• Although incidents are rare, safety of the public and safety of service providers remains a concern in the sharing economy.
• Insurers may be reluctant to cover individuals or assets (homes, autos, or other high-value possessions) if they are being used commercially, instead of for standard, personal use as specified in most policies. As a result, some sharing economy firms have stepped up to offer their own supplemental insurance and safety coverage.
• Many entrenched interests will challenge the legality of the sharing economy and lobby for its regulation or curtailment.

Questions and Exercises

1. Consider sharing economy markets like ridesharing and home rental. Have you or friends used the leading firms in these industries? Have you used firms that aren’t the leaders? Why or why not?
2. Make a list of products that many people own, but that are underutilized. Are there sharing economy startups for these categories? If so, conduct some research to try to determine how they’re doing. If not, do you think a market should be established? Why or why not? What challenges might such marketplaces face?

3. Give examples of firms that provide supply through peer-to-peer efforts, and collaborative consumption firms that take ownership of inventory.

4. Why do some collaborative consumption firms choose to take possession of inventory rather than allow the “crowd” to provide it peer-to-peer style?

5. Why do many collaborative consumption marketplaces work well in fragmented markets? What advantages do they offer buyers and sellers over traditional mechanisms of dealing with fragmented markets?

6. It sounds counterintuitive to gain efficiencies by adding a firm to the distribution channel, but how are some collaborative consumption marketplaces thriving as channel-extending intermediaries? Give examples and discuss the value they add to both sides.

7. Why is social media important for many collaborative consumption efforts? Give examples of efforts that are effectively using social media for growth and success.

8. What sorts of legal risks are sharing economy firms exposed to? Conduct research online and identify examples of incidents that have put firms, customers, or suppliers at risk. Do you think these incidents will occur with greater or less frequency in sharing economy firms vs. traditional rivals? Why or why not?

9. Why do you suppose San Francisco passed a law to limit homeowners to cap Airbnb (and similar) property rental to 90 days or less?

10. What can sharing economy firms do to reduce safety risks? Give examples of best practices.

11. Social profiles and crowdsourced ratings can improve trust, but they can also create opportunities for fraud and discrimination. Give examples of where this technology may have negative ethical implications, and discuss how the provider of a sharing economy marketplace can minimize risks and discriminatory bias. Research the extent of this problem, firm attempts to address these problems, and whether you feel they have been successful or not. Is there more that firms or governments should do? If so, what ideas might help?

12. Give examples of the kinds of entrenched interests that will lobby against expansion of the sharing economy? Why are each of these groups opposed to sharing economy efforts?

13. How do crooks try to use sharing economy marketplaces to commit fraud? How can social media help combat online fraud?

### 10.3 Future Outlook: Established Players Get Collaborative

#### Learning Objectives

1. Identify and give examples of how large firms are investing in, partnering with, and building their own collaborative consumption efforts.

2. Gain insight into the advantages of collaborative consumption firms for traditional industry players, and enhance brainstorming skills for identifying possibilities for other firms.

While the sharing economy has risen more rapidly than many expected, larger firms have also stepped up with investment, partnerships, and experiments of their own, underscoring a broad belief in the power and importance of the space. The following are some examples.
Google parent Alphabet has invested over a quarter of a billion dollars in Uber,\(^5\) and $1 billion in rival Lyft.\(^6\) Toyota has made a strategic investment in Uber and struck a leasing deal. GM has invested half a billion dollars in Lyft, Volkswagen has invested $300 million in ride-sharing firm Gett, and Apple has invested $1 billion into the “Uber of China,” Didi Chuxing\(^5\) (a move made just a short time before Uber sold its China business to Didi). Sharing economy standout, Rent the Runway, has also scored an investment by Condé Nast, the publisher behind Vogue, Lucky, Glamour, and other designer-friendly media properties, and the firm has collaborated with Neiman Marcus,\(^6\) underscoring its evolution into an important industry partner. While some designers were originally worried that the service would cannibalize sales, many now realize that Rent the Runway has opened up a whole new tier of customers. An affinity with a designer gained from renting a more daring dress for a special occasion often translates into purchasing a staple, like a black cocktail dress, at a later date. Rent the Runway’s social media engagement of its customer base also provides partners with valuable insights they’d otherwise not have access to.\(^6\)

Other innovative partnerships include Walgreens and TaskRabbit, which have worked together on drug store deliveries.\(^6\) TaskRabbit’s army of odd-job soldiers was seen by Ikea as such a match for its assembly-required furniture that it bought the company.\(^6\) IBM also has also worked with collaborative commerce firm, Deliv. IBM offers software that powers many large retailers, and it works with Deliv to make same-day delivery services available to its clients, as well.\(^6\) A W Hotel in New York City has partnered with the workspace sharing site Desks Near Me to offer business traveler guests access to places to work while in Manhattan.\(^6\) And Marriott is hoping for a bit of the Airbnb magic with its homesharing partnership with London-based Hostmaker.\(^6\)

Some experiments will fail to achieve desired results. General Motors canceled its OnStar-enabled partnership with car-sharing service RelayRides (now called Turo). But other automakers continue to explore their options. GM and Toyota give discounts on new-car purchases to Uber drivers; Mercedes Benz has invested in car-sharing service, car2go,\(^6\) and Avis saw enough value in Zipcar to acquire the firm.

And expect some firms to enter as outright competitors. Amazon Home Services marketplace will put licensed professionals as well as small-time citizen service suppliers within the same massive discovery engine where millions search for physical products.\(^6\)

While just a few years old, the sharing economy has accelerated in a wave of network effect–fueled technology efficiency and service enhancement that will impact industries for years to come. Hopefully this chapter has helped expose what’s happening, why, and how managers can think about planning for a space where new electronic marketplaces empower and shift power from smartphone to supply chain.

**Key Takeaways**

- Google and Condé Nast are among the large firms that have taken an investment stake in collaborative consumption startups.
- Ikea, Walgreens, IBM, and the W Hotel are just a few firms that have enhanced customer offerings by partnering with sharing economy pioneers.
- Firms as diverse as auto manufacturers and Amazon are plotting independent collaborative consumption efforts as well.

**Questions and Exercises**

1. Which collaborative consumption firms have Google, Ikea, and Condé Nast invested in? Why are these firms potentially attractive to their corporate investors?
2. Give examples of traditional firms that have partnered with collaborative consumption players. What does each hope to gain from the partnership?
3. Name traditional firms that have experimented with their own collaborative consumption efforts. Conduct additional research online. Are these efforts successful, failed, or is it too early to tell? What do you think of future prospects?

10.4 Airbnb—Hey Stranger, Why Don’t You Stay at My Place?

**Learning Objectives**

1. Understand how Airbnb has built a multibillion-dollar sharing economy firm.
2. Recognize the appeal the firm has for suppliers and consumers.
3. Identify sources of competitive advantage and additional challenges as the firm continues to grow.
4. Understand how technology can build trust, even in an area as sensitive as selling stays in private homes.

Brian Chesky, a graduate of the Rhode Island School of Design, had recently moved in with a friend in San Francisco and he couldn’t make rent. Brainstorming on ideas, Chesky and his roomie, RISD classmate Joe Gebbia, realized an industrial designers conference was in town, and that all of the hotel rooms were booked solid. Sensing opportunity, the two inflated three air mattresses and offered each one up for $80 a night. The duo earned enough to cover rent, and in the process, took their first step toward the creation of a multibillion-dollar hospitality industry empire.

Airbnb is now the poster child for the sharing economy. Put a single room or your entire property online, and you can become a citizen hotelier. A third cofounder, Nathan Blecharczyk, joined as CTO, the team gained admission to the elite Y Combinator startup finishing school, and Airbnb has since attracted several rounds of capital to fuel its meteoric growth. The firm’s backers include Sequoia Capital, the storied Silicon Valley venture firm that invested in Apple, Cisco, Google, Oracle, and YouTube, among many others. Airbnb has raised over 4.4 billion dollars so far, is valued at more than $31 billion, is profitable (earning an estimated roughly $100 million in 2017), and Forbes declared the firm’s founding triumvirate as “The First Sharing Economy Billionaires.”

A guest checks into Airbnb every two seconds, and over 200 million have stayed with Airbnb so far. The guest-to-listing ratio is eleven to one. With listings in 81,000 cities and 192 countries, there is no other single hotel group that approaches the firm’s worldwide reach.

Airbnb has rallied the sharing economy to produce the longest accommodations tail in the lodging industry. According to founders, the firm’s listings include over 600 castles, dozens of yurts, caves, tepees, water towers, clock towers, private islands, lighthouses, trains, environmentally friendly “green” homes, igloos, glass houses, and more. Some of the exotic, high-end tree houses listed on Airbnb have six-month or more waiting lists for occupancy (but browse around, there are hundreds of tree houses offered through the site). Want to stay in a home Charles Dickens, John Steinbeck, or Jim Morrison used to live in? Airbnb can set you up.
Airbnb adds big value to both the supply and buy side of a transaction, and it’s one of the few large players that can take a cut on each end of the deal. It charges guests a fee that varies by property and other factors that can scale from zero to 20 percent, and hosts a 3 percent fee, paid after the first night.[77] During major events when hotels are booked to capacity, private citizens have turned on a money spigot courtesy of Chesky, Gebbia, and Blecharczyk, simultaneously saving travelers bacon at political conventions, festivals, inaugurations, Olympics, and more. Airbnb was the largest short-term rental site of its kind in China before it even had any staff there. Such are the viral and ultralean dynamics of winning sharing economy marketplaces. You might even consider Airbnb a platform that nurtures an ecosystem of sharing economy value-added services. All sorts of citizen-suppliers are finding work, from before an Airbnb listing is posted to after guests leave. This includes listing photographers, key-exchange coordinators, in-home chefs, house cleaners, and taxi-replacing ride-sharing services.[78]

Trust is essential for the sharing economy to work, especially on a service based on the intimacy of inviting strangers into your home. As a result, no one is anonymous on Airbnb. Guest identity is verified via a two-step process. The site is integrated with Facebook, and users can also share their LinkedIn profiles. Airbnb examines the length an online profile has been up and makes sure it matches additional information provided by the user, such as a driver’s license and passport. IDs are only used to verify identity and the site stores this data securely. Verified identities should also discourage bad apples, who are booted out of the system from trying to reapply with new accounts.[79] Transacting parties are otherwise on their own to work out the exchange of keys and other access information, but communication has to happen through Airbnb. Airbnb also arranged for high-quality photography of many early listings (in some cases the founders showed up to photograph sites themselves, using the opportunity to further interview property listers for feedback on their service). Chesky has even lived out of Airbnb rentals full time to gather more field intelligence.[80] Collective insight helped hone the firm’s product-market fit in a way that delighted both renters and customers and gave the firm an early edge, and sometimes that’s all you need to get the dynamo of two-sided network effects churning in your favor. As Inc. magazine reports, “improvements and refinements helped Airbnb do something previous sharing companies hadn’t managed—to acquire an aura of style, respectability, safety, and trustworthiness.”[81]

Negative incidents have occurred, and they’ve gotten the firm lots of unwanted press. Some hosts have returned to find their homes trashed after guests threw raucous parties, a terms-violat-
At Airbnb, Big Data is a Big Deal

Data also plays a critical role in Airbnb’s success, and as an early mover with worldwide reach and climbing customer base, Airbnb has an incredible trove to mine. The firm tracks more than 15 billion events through website and apps and handles over 15 petabytes of data each day. The firm has over 150 employees working on the data science team. Says the firm’s chief data scientist: “Airbnb is a data informed company. We think data is the voice of our customers.”

Data helps in helping hosts set prices and tweak offerings for optimal occupation. It helps guests find the best match and mines their input for new products and offerings. Many insights happen through machine learning, where software builds technology models and reveals insights that might not be readily apparent to the analyst. More on the impact of big data and machine learning will be covered in the “Data Asset” chapter, highlighting the application and impact of additional concepts introduced in that chapter in the callout titled: “Airbnb: Better Pricing Through Data.”

A Phenomenal Start, but Not Without Challenges

It’s worth noting that in many areas where Airbnb operates, providers of the service are breaking the law. Many municipalities prohibit people from running a business, hostel, or hotel in a residential area or property not zoned for business. Health and safety laws governing hotels usually require things like sprinkler systems, exit signs, and clean towels. And of course, many Airbnb rentals exchange services outside conventional lodging taxes that hotel guests pay. Malibu, New Orleans, and San Francisco are among the cities that have investigated Airbnb for violations. Barcelona has fined the firm. The New York state attorney general claims Airbnb’s unpaid tax bill tops $33 billion. New York City has sued owners of the site’s highest volume listers, going after them for running illegal hotels out of apartment buildings they owned.

Despite operating outside the law, it looks like many cities are looking to rewrite legislation for efforts that ultimately offer many benefits, including added income for local property owners,
additional capacity during major events and the high travel season, a bulwark against hotel price
gouging, and a mechanism to widen travel and ultimately bring in the economic benefit of more
tourist dollars. Portland, Oregon, and San Francisco (home town of Airbnb) are among the cities
that have already legalized sharing economy property listings in exchange for tax revenue and
other concessions.[88] Competition looms and includes the publicly traded HomeAway as well as a host of interna-
tional copycats. Several hotel firms have also experimented with homesharing, including Marriott,
Accor Hotels, and Hyatt, and travel sites like Booking.com and TripAdvisor now incorporate home-
stays into their search.[89] While hotel firms can integrate loyalty programs into their offerings and
help skittish first-time renters feel more comfortable by working with a familiar firm, helping new-
bies get online may ultimately help Airbnb grow its market. Airbnb has that ultimate marketplace
advantage: a two-sided network effect keeps property listers and guests coming back to an experi-
enced, trusted source likely to offer more choice than competitors.

Key Takeaways

• Airbnb empowers citizen hoteliers who make rooms, properties, or other accommodations
  available online.
• The firm has arranged over 200 million guest stays in some 81,000 cities and 192 countries.
  Many accommodations are truly unique, offering consumers a long tail of lodging options.
• The firm verifies the identity of both parties, monitors all communications between property
  listers and guests, provides twenty-four-hour support, and additional insurance coverage, all
  in an effort to reduce transaction friction stemming from a lack of trust.

Questions and Exercises

1. How do Airbnb’s total number of accommodations compare to the room count for Hilton?
2. How does Airbnb ensure safety and encourage trust among transacting parties? What role
does technology play in trust assurance?
3. How does the firm limit the likelihood that it will be ripped off by unscrupulous operators?
   List the pros and cons of allowing Airbnb or other property-sharing services to operate in
   your city. Would you allow these services? Why or why not? If you would approve the ser-
   vice, would you extract concessions or write laws that force some changes that impact how
   Airbnb and its partners do business?
5. Visit Airbnb and browse properties at a vacation destination you’d like to visit and listings in
   the area where you live. Would you rent a stay through Airbnb? Why or why not? Would you
   make your own property available? Why or why not?
6. How might Airbnb be considered a platform? Diagram the ecosystem that would surround
   an Airbnb transaction and identify various sharing economy firms that could provide services
to help property listers or their guests. Could Airbnb create additional businesses by facilitat-
ing these transactions? Do some additional research—does Airbnb partner with any specific
sharing economy firms?
10.5 Uber's Wild Ride: Sharing Economy Success, and Lessons From a Fallen Founder

Learning Objectives

1. Understand the appeal of Uber both to drivers and consumers.
2. Discuss how Uber leverages technology to radically improve on the service and cost structure of traditional cab and limo services.
3. Understand the implications of executive behavior and harmful corporate culture on the firm, its hiring prospects, investors, and customers.
4. Recognize how technology also empowers a data-driven enterprise that crafts strong and deepening competitive advantage over time.

Just four years after Travis Kalanick cofounded Uber, the San Francisco-based car service was operating in 633 cities in 76 countries worldwide. How's that for productivity achieved in what is basically the time it takes to earn an undergraduate degree? The firm has already offered a high-end “black car” service, the passenger-sharing Uber Pool, the low-end taxi-competing UberX and an SUV service (UberXL) and has experimented with all sorts of promotions. At times over the past few years you could order a helicopter ride via the Uber app, call over a boat, arrange for Christmas tree delivery, cool off your home with an air conditioner delivery, order an ice cream truck, or summon forth a car full of puppies for a cuddle fix. Uber had raised over $21 billion so far and boasts a private valuation of over $70 billion. Uber did publish 2017 revenues, a figure that came in at about $7.5 billion—a figure large enough that if Uber were a public company, it'd rank 367 on the Fortune 500 list. Still, even though Uber keeps about 20 percent of each transaction, the firm lost $4.5 billion that same year. States Bloomberg’s Eric Newcomer, “There are few historical precedents for the scale of its loss.”

From Rebel to Revulsion: When Uber Behavior Became Hostile and Required Big Change

In Silicon Valley, a place known for lionizing the brash disruptor, Uber was perhaps the firm seen as most brazenly pugilistic. The firm defied local laws in many cities where it launched, and Uber founder Travis Kalanick (known as TK inside the firm) talked trash to many who challenged his legitimacy. Uber was a godsend to customers who often felt underserved and mistreated by a far-less-than-reliable taxi industry. So early missteps were often tolerated or ignored by the Uber-loyal.

Problems began piling up, with strikes by drivers, protests by the taxi industry, and aggressive political push-back, among them. Horrendous cases of driver-perpetrated sexual assault hurt a firm often seen as much safer than taking a conventional taxi. Dishonesty began to be seen as an Uber cultural trait. This included accusations of the theft of self-driving car tech by an Uber employee who previously worked at what is now Waymo, the division of Google-parent Alphabet thought to be the leader in this space. Rival Lyft also accused Uber of unethical behavior, including calling and canceling Lyft rides to crater the efficiency of its smaller rival. Uber has also been the subject of a US Justice Department investigation of its “Greyball” software, which detected and canceled rides from investigators and regulating authorities, and an additional investigation focused on bribing officials abroad in violation of the US Foreign Corrupt Practices Act.
An employee’s blog post detailing a culture hostile to women and minorities and her personal experiences dealing with unwanted sexual advances from a manager (who was not seriously disciplined) made Uber seem, to many, like a testosterone-fueled bad frat with funding. Some employees wondered if Uber’s bad rep would become a career liability, while prospective employees would think twice about whether this kind of environment was really a smart career move, and the kind of workplace where they’d feel valued and given a chance to thrive.

A brash, take-no-prisoners attitude was helpful early on. But at some point an ethically challenged subculture emerged, and brashness crossed into harassment. Kalanick became a liability. As the face of Uber, his became the face of arrogance, hubris, and offensiveness. A dash cam recording showing him berate a driver made him look like an over-privileged one-percenter dismissive of the drivers that ultimately deliver on the promise of a push-button ride.

The firm hired the law firm of former US Attorney General Eric Holder to investigate Uber’s toxic culture and to provide a blueprint for change. Twenty employees were fired as a result of separate investigations of harassment, discrimination, and retaliation. Board member Arianna Huffington was increasingly called on to show the firm was taking allegations seriously. Kalanick announced he was taking an indefinite leave of absence. Shortly after, he formally relinquished his role as CEO. After an exhaustive search, where apparently several candidates (including highly-sought-after female executives) turned down the position, Uber eventually hired the former CEO of travel site Expedia, Dara Khosrowshahi. Yet the firm’s woes continued when, just months after Khosrowshahi’s appointment, it was revealed that Uber had been hacked a year earlier, exposing personal data on 57 million riders and drivers, that it paid $100,000 to the two hackers in exchange for them destroying the data, and it revealed information about the breach to potential backer Softbank at least a month before revealing the information to the public. Softbank did invest in Uber, but the ride-sharing firm’s torrent of troubles significantly shifted buying power, with Softbank eventually investing at a 30 percent discount over Uber’s prior valuation, although Uber’s valuation months later was back up to $72 billion.

It’s unclear just how damaging the fallout has been in markets where Uber was already dominant. In the US, Lyft still remains very much in Uber’s rear-view mirror (even at Lyft’s generous 35 percent self-estimate, let alone the 19 percent others have arrived at). Employee and investor concerns may have proven even more significant in tilting Travis from the CEO chair. Network effects may make customers stick with a firm, even if they’d rather not remain, but talent and the fundraising wallet may be far stronger in pushing a firm to recognize and deal with repellent behavior.

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**Softbank Acquires Stake in Uber at Discounted Valuation**

Panel discusses the large investment discount Softbank received when investing in Uber, following the firm’s multiple problems, and the new CEO’s delayed disclosure of a data breach.

View the video online at: //www.youtube.com/embed/1WjgP8lmA?rel=0
Uber also wants you to know it’s a job creator. The firm has claimed it is minting over 50,000 new jobs a month (nearly all are drivers, who are considered independent contractors and not Uber employees). The bar for drivers is high—each undergoes a rigorous county, federal, and multi-state background check that looks back the maximum length of time allowed by law. And while cars are supplied by drivers, only certain late-model cars are allowed in Uber’s fleet, and only then after a company inspection (no smoke-billowing clunkers here). Those who make the cut can do much better than their conventional taxi industry counterparts. It was once reported that the median annual salary for a San Francisco-based UberX driver working at least forty hours a week was $74,191; in New York City the figure was $90,766. The average Big Apple cab driver makes just $30,000 a year. Some have questioned whether average driver earnings are really that high, and study results vary widely, but with taxi drivers paying $70 to $140 a day in fees even if they earn no fares, estimates consistently show that Uber drivers make more. Further, job satisfaction among Uber drivers hovers around 80 percent. Nearly half of Uber drivers have a college degree (about two times that of the overall work force), with most drivers reporting that they use Uber income to supplement earnings, not as their primary salary. Uber claims it’s also improving the environment, reducing DUI rates and making cities more appealing by reducing parking and road congestion, although other studies claim Uber is actually clogging streets and stealing customers from public transportation.

Uber isn’t just taking away the current taxi market; it’s expanding the overall market for metered consumer transportation. Many people who would not otherwise take a cab are now out on the town in an Uber. This is an effort that grows the economic pie. An Uber-commissioned study claims the firm’s impact on the US economy tops $2.8 billion a year.

While Uber services are often comparable to conventional cab rates, the real draw is trust and convenience. Instead of standing in potentially bad weather, competing with curb-straddling rivals trying to hail a cab for an indeterminate length of time, or phoning a surly human dispatcher who may or may not answer the phone after putting you on hold, Uber customers simply summon their ride with the tap of a smartphone app. A map shows the cab’s approach and an alert tells you when your driver has arrived, so you can stay sheltered until it’s time to leave. Riders can also set their pickup and dropoff destination to get a fare quote for their trip, eliminating the fear many travelers have that an unscrupulous cab driver will overcharge them on an unnecessarily scenic route to their destination. Out of cash, fearful your driver can’t make change, or worried that the credit card machine or fare meter in the cab might not work? No problem with Uber. All payment is handled through the app. The app even allows fare-splitting among passengers who share a ride. Says one Uber driver, “No one ever gets in my car and says, ‘Gee, I wish I were taking a cab.’” Drivers use their own app to screen and accept fares. Drivers and riders rate each other, keeping both sides of the two-sided market satisfied. City drivers prefer Uber’s phone-delivered dispatches to the taxi alternative of having to hunt for fares by driving around, scanning sidewalks. Entrepreneurs would describe Uber as a stellar example of product-market fit, the magic that happens when market need, weaknesses, and pain-points are satisfied by a customer-embraced solution far superior to what is currently being offered. Chapter 2 "Strategy and Technology: Concepts and Frameworks for Understanding What Separates Winners from Losers" discussed that brand is built through customer experience. From a service perspective Uber beats conventional cabs on almost all metrics (with big advantages offered to both drivers and passengers). Alternatives simply cannot compete. For example, in January 2016 San Francisco’s largest taxi company filed for bankruptcy. Prior to Uber and other ride-sharing services, this taxi company was a municipal monopoly that faced no competition.

Uber runs a lean cost of doing business by eliminating human dispatchers, eliminating the capital cost of a fleet (cars are owned by drivers, not Uber), and working around the expensive “medallion” system that grants cab rights in major cities worldwide. In addition to the firm’s own screening techniques, customer feedback also reduces the cost associated with auditing driver quality and provides a continual evaluation of performance. Drivers who fall below 4.7 stars on a five-point scale risk being fired.
Customers do regularly complain of one downside—surge pricing. Uber pricing operates on a supply and demand scale. If there's a big event in town or some other condition where driver supply doesn't meet demand, Uber will raise prices using a “surge pricing” multiple. One particularly bad New York City snowstorm caused the surge pricing multiple to shoot as high as 8.25 times the normal rate. You'll see this before summoning your car, so riders shouldn't be surprised by a big bill. The firm states the goal isn't to gouge the consumer, rather it's to send a signal to potential drivers to hop in their cars, satisfy pent-up demand, and make a quick buck. Price setting occurs where supply and demand meet, so more drivers should lower prices. If you leave the stadium after the game gets out, don't expect a standard Uber fare, but if you can grab a drink and wait a few minutes, you'll likely see prices fall closer to normal over time. Dynamic pricing helps Uber's first customer commitment—to offer a reliable service (i.e., make sure you've got a ride). Competitive pricing is important, but first up is making sure there are enough rides for those willing to pay for the service. Without surge pricing, the real alternative is no service. Uber has since agreed to cap surging during emergencies at a price that is below the highest-priced non-emergency days during the preceding two months. During record snowfall in the northeast, this resulted in major city price caps just below three times the normal rate, but it remains to be seen if this will be enough to put drivers on the road when they are most needed. Uber has also stated that during a disaster or state of emergency, the firm will donate all of its proceeds earned in the area during that period to the American Red Cross.

Tragedy, but Tech Raises the Safety Bar

No system can keep out all negative incidents in a worldwide firm this big, and a company that grows so quickly with such public fascination will likely see an amplification of any bad press. While a criminal cabbie or taxi-caused pedestrian fatality would likely not gain worldwide media attention, all eyes are on Uber and any negative incident seems to make headlines. And there have been horrendous incidents: accusations of price gouging during an Australian hostage standoff, a rape in India, a kidnapping and sexual assault in Boston, a driver hitting and killing a child in San Francisco. All horrific, and certainly not incidents to be shunted aside as a cost of doing business. But amidst tragedy, a closer look shows that technology actually helps Uber keep a high safety bar, and to continue to raise that bar even higher. Committing a crime and taking risks as an Uber driver is incredibly stupid. The app knows who you are at all times, knows who you've picked up and where you took them, and these digital eyes are always on you, with bad performance exposed and customers (and drivers) empowered to shine a spotlight on what might have been previously hidden. Collectively, this offers a safety bar conventional cabs simply don’t offer. Uber continues to invest in new technologies, exploring voice recognition and biometrics to further strengthen driver verification, and implementing a panic button linked to emergency services, and a setting that allows loved ones to monitor your ride.

Driven by Data

While participants in the sharing economy drive Uber cars, data drives Uber's growth and success. To pull off the firm’s goal of getting you a ride within minutes of an app tap, Uber employs a team of mentally muscular mathematicians who have earned PhDs in data-crunching fields that include nuclear physics, astrophysics, and computational biology (true to cliché, some members of the data team have had prior careers and training as actual rocket scientists). The staff constantly optimizes algorithms powering a whole host of activities: determining how many drivers the firm needs, identifying when and how to alert drivers of projected demand, pointing a subset of drivers to locations to best meet demand, setting dynamic pricing, and more.

Uber's founder has called this "really fun, sexy math." The firm supplements its own rich and growing trove of data with traffic-influencing feeds such as weather forecasts, and staff in each city closely track special events that could impact expectations (conventions, parades, large university
commencements, a packed stadium for the home team). The latter, human element is vital, since even the best math and richest data set can’t predict with perfect accuracy.

A visitor to an Uber office may get a glimpse of the “God View,” a software system showing tiny car icons crawling around a map of the city, and little cartoon eyeballs scattered about, representing every location where a customer is looking at the Uber app. Uber also produces “heat maps” of demand, using mathematical precision to coax additional demand from its driver pool. Information is offered in targeted release; you don’t want to give this to every driver at once, or you’ll create an imbalance as too many cars rush to cash in on surge pricing, leaving the rest of the city underserved. Data even helps the firm expand into new cities. Each time a user opens an app, even if it’s in a location Uber hasn’t operated in before, data is collected showing user interest. According to the firm, “we take this into account when we’re working out which cities to dominate next.” And the firm is prepared when they arrive, stating “we can build a prediction of where our cars need to be before we even get there.”

FIGURE 10.5 Uber’s “God View”

Uber’s so-called “God View” shows every Uber car operating in a city, and every user looking at the Uber app.


Uber’s massive data haul allows it to cut prices and attract drivers to power continued growth and expansion. Some markets have seen as many as six Uber price cuts in two years. One effort made simultaneous price cuts in 48 cities, while also offering income guarantees for drivers (they need to keep both sides of the two-sided network happy). Uber can make these kinds of bold moves because its massive database reliably reveals supply and demand curves at different price points, demonstrating price elasticity and pointing strongly to how markets behave as pricing changes. Uber upped the ante even more when it introduced Uber Pool, a car pooling service that gives you a cheaper ride if you share the car with someone else who’s also headed in the same direction. Cheaper fares mean users will ride more, and even at lower prices, drivers will come out ahead if demand keeps them busy and constantly earning.
APIs to Expand Reach

One way of making Uber appear as if it’s everywhere in the physical world is embedding Uber everywhere in the digital world. Uber offers an API (application programming interface) that is essentially a published guideline on how other developers can embed Uber into their own apps. The service launched with eleven partners, including OpenTable, United Airlines, TripAdvisor, and Hyatt Hotels. Made a dinner reservation? Summon an Uber. Flight arrived? Skip the airport cab line and take an Uber with a United app tap. A new initiative, Uber Health, offers APIs for integration into health care products allowing, for example, a doctor’s office to schedule a ride for a patient at the time they make an appointment—a big deal for providers given that no-shows top 3.6 million a year and can be as high as 30 percent in some areas. Other ride-sharing services can do this, too, but if you’re a firm looking for a partner, you’re going to choose the top firm rather than clog your app with every available choice. Once again, network effects help solidify a firm as a winning platform. And as we’ve pointed out earlier, data and the algorithms that refine their accuracy are improved over time, so as an early player, Uber simply has more smarts than anyone else operating in this space. Strategists, be aware that the firm that uses tech to build assets for competitive advantage early may also see these assets significantly strengthened over time.

How Big Can This Thing Get?

Analysts differ on whether Uber is worth its current valuation. That’s not uncommon. Facebook, Google, and other tech giants have had their fair share of pundits and analysts who cried “bubble.” But Uber’s dominance is by no means a given. Regulatory concerns, the maintenance of a quality service, and the uncertainty of expanding in global markets where competitors exist are all challenges the firm will face. The firm’s bubble-crying doubters include the data experts at the well-known FiveThirtyEight blog (known for their poll-besting accuracy in US presidential election predictions). The Uber true believers include Business Insider, which claims Uber is on its way to being “the next $100 billion company.”

Uber’s mission statement is “Transportation as reliable as running water, everywhere for everyone.” The firm is doubling in size every six months with its current offerings, but the firm is looking to a future with expansion way beyond taxi rides. Uber’s former CEO has stated that he sees the firm as essentially a “software platform for shipping and logistics.” Uber investor Shervin Pishevar describes the firm’s potential, saying: “Uber is creating a digital mesh—a power grid which goes within the metropolitan areas. After you have that power grid running, in everyone’s pockets, there’s lots of possibility of what you could build like a platform. Uber is incorporated in the empire-building phase.”

The firm has experimented with several offerings, including a bike messenger service, a restaurant delivery service, and a same-day retail delivery service. In addition to Google’s big investment in Uber, another backer is someone else who knows a lot about serving customer demand by getting things from one location to the other, Amazon founder and CEO Jeff Bezos. The Google investment (now, really an Alphabet investment, but Google was the firm’s name when it first backed TK) has become more interesting, as several Uber moves seem as if they may point to areas where the firms might compete. Uber is expanding same-day delivery even as Google does the
same through Google Express. While Uber is incorporated into Google maps, Uber also bought the mapping firm deCarta, a company once used by Google, and which has sold services to major industry players including BlackBerry, Verizon, OnStar, eBay, and Samsung. And while Google famously has a self-driving car initiative (now known as Waymo) that has seen several generations of test vehicles put thousands of miles on the road, Uber has begun to test its own self-driving car technology developed at Uber’s Advanced Technology Center in Pittsburgh, partnering heavily with advanced robotics experts from Carnegie Mellon University. The relationship was further strained with accusations that an Uber employee stole Waymo intellectual property and brought it to Uber. While no one would call Google and Uber direct rivals today, it is an interesting development given the history of Google’s former close partnership with Apple, and its unraveling. Android caused then-Google CEO Eric Schmidt to leave Apple’s board, Siri favored Bing, Apple created its own Maps and dropped YouTube from the pre-installed iPhone apps. And Uber’s experiments have it reach for the sky, literally. The firm has shown a prototype vertical take-off and landing vehicle that’s a cross between a helicopter and prop plan. Bullish plans are for tests in 2020, commercial deployment in 2023, and autonomous piloting in a decade.

**First Look at UberAir**

A look at plans for UberAir, including current vehicle prototypes and animations of the hoped-for end product, as well as an interview with CEO Dara Khosrowshahi discussing autonomous vehicles in the wake of a recent, fatal crash, and reshaping firm culture following a string of negative events.

View the video online at: http://www.youtube.com/embed/-XFbyWALwp4?rel=0

As for fighting regulation, San Francisco provides just one example of the Uber leader’s iron-willed determination. When the city’s transportation agency sent the firm, then known as UberCab, a cease-and-desist letter, stating it was running an unlicensed taxi service, the firm dropped ‘Cab’ from its name, but vehemently argued that it was simply a software firm that connected drivers and riders. Uber continued offering rides to a largely tech-centric following, a constituency San Francisco pols don’t want to alienate if they want to remain in elected office. The California Public Utilities Commission eventually voted to create a permanent category of “Transportation Network Companies,” encompassing Uber and rivals. Uber is also threatened by governments worldwide that are pressuring the firm to reclassify its drivers from contractors (also known as 1099 workers, for the US tax form used by the self-employed) to firm employees (who file a W-2 tax form). The change would be a big deal for Uber, and many other sharing economy firms. Recode estimates that reclassifying its drivers as employees would cost Uber an extra $209 million in California alone, roughly 10 percent of the company’s net revenue.

When you have such loyal customers and strong product-market fit, you can enlist an army to help you bend legislators to make way for progress. Uber fans have firehosed Washington, DC,
officials with more than 50,000 e-mails in support of allowing the service to operate in the nation’s capital. In Denver, an Uber rally attracted hundreds of supporters.

In markets as varied as Chicago, Mexico City, Paris, and Delhi, cabbies have protested, and many governments have been antagonistic toward the firm. While Uber has flouted regulation, effectively operating illegally in many markets, it has also worked with local officials to be legitimate and has a stated goal of becoming explicitly legal everywhere it operates. Uber has improved in areas of concern such as making sure that wheelchair-accessible vehicles are available (a standard taxi firms are held to). The firm went legit in New York City by complying with restrictions imposed by the local Taxi and Limousine Commission, even as it tries to change local rules. And on top of claims that Uber boosts the economy and quality of life, the firm can also offer big data insights to cozy up as a government ally. An Uber partnership with the city of Boston provides data analysis to better understand commuting patterns and inform decisions on road construction and street maintenance. Pothole got fixed? Maybe you’ve got Uber to thank.

Uber’s global expansion leverages corporate-provided technology, learning, and data insights, but teams in new markets act as ground-floor entrepreneurs. Kalanick says the firm’s growth teams are “parachuting in with machetes,” doing what needs to be done to attract drivers, raise customer awareness, kickstart usage, work with local legislators, and otherwise build the supply and demand side of the market from scratch. Uber is growing, but the world’s two most populous markets present challenges. In China, local competition already had an estimated 90 percent of the market. To compete, Uber has paid Chinese drivers more in bonuses than they collect in fares, trying to subsidize their way to a strong network effect. In China, Uber also faced a nation with strict regulation often considered among the hardest for US tech firms to crack (Google left, eBay was crushed, and Facebook still hasn’t been allowed in). In August 2016, Uber threw in the towel on a business estimated to be losing $1 billion a year, announcing that it was backing out of China, selling its in-country business to Didi, the nation’s largest ride-sharing service. As a business subject to two-sided network effects, the lead firm in a market is almost certainly to continue dominance. All else equal, app users favor a service with more drivers, while drivers need more app users to make more money. Kalanick had spent a lot of time in China, and the firm’s retreat from the market is likely a disappointment, but it may not be a loss. The deal made Uber the largest shareholder in Didi’s business, Uber gets a Didi board seat, and Didi gets a seat on Uber’s board, plus invests $1 billion in Uber’s global business outside China.

In India, Uber’s second-biggest market in terms of cities served, the firm faced an outright ban in Delhi. Said the firm’s head of expansion in India, “We have no intention of stepping away.” Indian growth during this period had been climbing at a rate of about 40 percent a month, with huge additional promise in a nation with low car ownership and a rising middle class. Expansion continues with customized local products, including one targeted at three-wheeled auto-rickshaws popular throughout South Asia. While resisting shutdown, Uber has simultaneously applied for an official radio-dispatched-taxi license and has been in repeated talks with authorities drafting national legislation for ride summoning services. Still, India is behind local leader Ola, which operates in over three times as many cities as Uber India. Gaining brand, scale, and network effects are easy when you show up first. But arrive late and local rivals may have built advantages leaders enjoy elsewhere.

The map of relationships and alliances in ride-sharing is pretty complicated: Didi first invested in and partnered with Uber-competing Lyft. Uber’s largest investor, Softbank, has also invested in Didi (China), Grab (Singapore/SE Asia), Ola (India), and 99 (Brazil), and Uber continues to compete heavily with the later three firms.
Who Is Competing with Uber?

This video looks at ride-sharing around the world, including regional leaders and the complicated web of inter-firm investment.

View the video online at: http://www.youtube.com/embed/g1dTjROL8Uc?rel=0

(Under)estimating the Market for Disruption

Figuring out how big Uber will be, and how much it’s worth, is a challenge. Uber has been hemorrhaging cash, even as it expands worldwide. Management claims that this is wise spending as the firm engages in a marketshare land-grab that may cement the leadership of the eventual winner. While the firm has a low cost structure, startup costs are high, including heavy ad campaigns, efforts to subsidize new drivers to keep them on the road until customer growth catches up, and a fare war with competitors has also hurt the bottom line. Still, Uber says it has been profitable in the US and Canada, and that it deliberately diverts profits to promising markets to fuel growth. [154]

Many have suggested Uber is way overvalued because investors think it’s worth more than the entire taxi industry. [155] Uber may indeed be overvalued—time will tell—but comparing Uber to the historical taxi industry misses key points about how a novel and disruptive new player grows the market with increased demand. A cheaper service with faster car arrival times (five minutes or less) and assured payment, trust, and convenience are causing expansion into markets underserved by conventional taxis, and are prompting users to ride with Uber far more than they did with taxis or limos. Uber investor Bill Gurley points to several examples prompting increased usage: Uber replacing Mom’s minivan to shuttle kids to practices and events, Uber helping adult children transition elderly parents to give up driving but not give up on being able to get about town, Uber becoming the smart choice for a couple that wants to enjoy a bottle of wine with dinner, and Uber creating a genuine alternative to car ownership in cities and suburbs. [156]

A blog post by Professor Angel Lozano of UPF in Barcelona provides a powerful historical example of failing to see a bigger market when none existed previously: “In 1980, McKinsey & Company was commissioned by AT&T (whose Bell Labs had invented cellular telephony) to forecast cell phone penetration in the United States by 2000. The consultant’s prediction of 900,000 subscribers was less than 1 percent of the actual figure: 109 million. Based on this legendary mistake, AT&T decided there was not much future to these toys. A decade later, to rejoin the cellular market, AT&T had to acquire McCaw Cellular for $12.6 billion. By 2011, the number of subscribers worldwide had surpassed 5 billion and cellular communication had become an unprecedented technological revolution.”[157]

Is the firm on a luxury lift to a $100 billion future, or is it an overvalued expectations wreck-in-waiting about to hit the wall of reality? Leverage what you’ve learned about network effects and the sharing economy to make your own predictions. Buckle up—it’s sure to be a wild ride!
Key Takeaways

- Uber has garnered the largest single investment in tech startup history and by mid-2018 had been valued at over $70 billion. Investors include Google, which has incorporated Uber’s service into Google Maps. Later estimates have the firm valued at $50 billion.

- Uber’s toxic culture and a series of negative incidents garnered press attention but hadn’t led to mass customer defection. However competition for talent became more challenging as some wondered if Uber was a career liability. Investor pressure eventually led Kalanick to step down, highlighting the importance of auditing firm behavior and culture and acting with improvements before more harm is done.

- Uber’s woes led to the firm raising funds at a far less favorable rate than earlier investment rounds.

- Uber’s advantages over traditional taxi services include scheduling, service speed, reliability, increased trust, ease of payment, and car availability.

- The firm’s disruptive model is creating growth that is outpacing the size of the taxi industry. Despite bad press, Uber’s technology should offer far more safety and security than the conventional taxi industry, and the company continues to invest in furthering safety initiatives.

- Surge pricing is controversial, but surge prices are clearly communicated before users commit to a ride. Surge pricing is used by Uber to help maintain supply/demand equilibrium. It is hoped that higher surge prices attract more drivers to the Uber system, and that prices will eventually flatten out.

- Uber leverages data to power the firm’s operational model, alert drivers, improve service, set pricing, and even identify possible cities to enter.

- APIs have allowed Uber to become a platform, expanding its reach through partnerships that make Uber available in other apps and software products.

- Expansion to large markets such as China and India are complicated by regulations and by early-moving local rivals. Showing up late allows competitors to create assets such as brand, scale, and network effects that are difficult to overcome.

- Analysts differ on Uber’s valuation, but some speculate the firm may be laying the groundwork for expansion into a variety of logistics businesses.

Questions and Exercises

1. What do you think Google sees in Uber? Do you think the firm should have invested in Uber? Why or why not?
2. Is Uber good for the economy or bad? Justify your answer.
3. How might Uber impact cities? Impact car ownership? Should municipalities embrace Uber? Ban it? Regulate it? Have local authorities acted on ride-sharing services like Uber? Do you think their action was appropriate? Develop recommendations for your region and present it to the class.
4. Lyft has tried to compete with Uber by undercutting the firm’s surge pricing. Will this tactic work? Why or why not?
5. How does Uber ensure rider and passenger quality? As a rider or passenger, how would you feel about these efforts? How does this change the service dynamic compared with traditional cab rides?
6. How does Uber cut costs compared with traditional taxi and limo fleet operators?
7. How does Uber leverage data in its service? What aspects of the firm’s operations are improved through data analytics? Does this provide the firm with sustainable competitive advantage? Why or why not?
8. What is uberPOOL? What will need to happen for this to be a “win” for both customers and drivers? Why does Uber management think it can pull this off?
9. Uber has been described as creating a “mesh” that may serve as a utility for urban areas. If Uber is able to grow to scale, what other kinds of businesses might Uber expand into?
What firms would be threatened by this, and which firms might consider Uber to be a good partner?

10. If you haven’t already, watch the video in this chapter on UberAir and feel free to conduct additional research. What do you think of this idea? What are the factors that will make this difficult? What use-cases might find this useful? Would you bet on UberAir being available by the firm’s 2023 predicted launch? Do you think there will be autonomous flying vehicles by 2028?

11. What do you think of Uber’s plans for autonomous vehicles (self-driving cars)? Would you feel safe riding in one that did not have a backup human driver? Do you think autonomous vehicles will make roads more or less safe? Why?

12. Why do some think Uber deserves a valuation in excess of the entire taxi and limo market? Do you feel this is justified? Why or why not?

13. Why has Uber received bad press? Is the coverage fair? What could the firm have done to prevent some of this coverage? Is the firm doing enough? Why or why not? Do you feel safe riding in an Uber or Lyft? Do you feel more or less safe in a traditional taxi?

Endnotes

49. A. Vaccaro, “Highly touted Boston-Uber partnership has not lived up to the hype so far,” Boston.com, June 16, 2016.