Network Effects Aren’t Enough

The hidden traps in building an online marketplace

by Andrei Hagiu and Simon Rothman
SPOTLIGHT ON HOW PLATFORMS ARE REShAPING BUSINESS

ARTWORK Vin Rathod, Aura (series)
2012–2014, photograph
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BY ANDREI HAGIU AND SIMON ROTHMAN
In many ways, online marketplaces are the perfect business model. Since they just facilitate transactions between suppliers and customers rather than take possession of or full responsibility for products or services, they have very low cost structures and very high gross margins—70% for eBay, 60% for Etsy. And network effects make them highly defensible. Alibaba, Craigslist, eBay, and Rakuten are more than 15 years old, but they still dominate their sectors.

Little wonder that entrepreneurs and investors are rushing to build the next eBay or Airbnb or Uber for every imaginable product and service category. In the past 10 years, the number of marketplaces worth more than $1 billion has gone from two—Craigslist and eBay—to more than a dozen in the United States, including Airbnb, Etsy, Groupon, GrubHub Seamless, Lending Club, Lyft, Prosper, Thumbtack, Uber, and Upwork. And that number is expected to double by 2020, according to Greylock Partners, a Silicon Valley venture capital firm where one of us (Simon) is a partner.

Yet online marketplaces remain extremely difficult to build. Most entrepreneurs see it as a chicken-and-egg problem: To attain a critical mass of buyers, you need a critical mass of suppliers—but to attract suppliers, you need a lot of buyers. This challenge does indeed trip up many marketplaces. But even after a marketplace has attracted a critical mass of both buyers and sellers, it's far from smooth sailing. Our combined experience in evaluating, advising, and investing in hundreds of marketplace businesses (including several mentioned in this article) suggests that other pitfalls can derail marketplaces: growing too fast too early; fostering insufficient trust and safety; resorting to sticks rather than carrots to deter user disintermediation; and regulatory risk. In this article, we discuss how to avoid those hazards.

**Growth**

Once marketplaces reach a critical inflection point, network effects kick in and growth follows an exponential, rather than linear, trajectory. These network effects also create barriers to entry: Once many buyers and sellers are using a marketplace, it becomes harder for a rival to lure them away. As a result, entrepreneurs often mistakenly assume that they need to reach the exponential growth phase as quickly as possible. But a headlong rush to fast growth is often unnecessary and can even backfire, for several reasons.

The importance of first-mover advantage for marketplaces is overstated. Entrepreneurs should really focus on being the first to create a liquid market in their segment. The winning marketplace is the first one to figure out how to enable mutually beneficial transactions between suppliers and buyers—not the first one out of the gate. Indeed, many prominent marketplaces were not first movers: Airbnb was founded more than a decade after VRBO; Alibaba was a second mover in China after eBay; and Uber's UberX copied Lyft's peer-to-peer taxi business model.

Why does being the first mover provide less of an advantage than is commonly assumed? The reason is that chasing early growth before a marketplace has proved its value to both buyers and sellers leaves the business vulnerable to competition from later entrants. If either side's users do not derive significant value on a consistent basis, they will readily jump ship. But when buyers have access to a sufficient selection of products or services at attractive prices and sellers earn attractive profits, neither side has an incentive to go elsewhere, and strong network effects kick in rapidly: More buyers bring more sellers and vice versa.
Groupon and LivingSocial—platforms where retailers sell discounted offerings to consumers—provide a cautionary tale. Both companies expanded aggressively, attracting millions of users and thousands of merchants. Their success, however, was short-lived: Once merchants realized that Groupon and LivingSocial discounts did not bring repeat customers, they began to do business on many competing deal sites. As a result, Groupon’s value fell from $18 billion at the time of its 2011 IPO to less than $2 billion today; LivingSocial filed for an IPO at $10 billion in 2011, withdrew, and was acquired by Amazon. By the end of 2014, it was worth less than $250 million.

Growing too early puts stress on the business model. A start-up’s initial business model inevitably has flaws that must be fixed. But because growth for marketplaces can be so explosive, it puts much more pressure on the business model than does the more linear growth experienced by regular product or service firms, amplifying the impact of the flaws and making them harder to fix. Indeed, trying to change the model while growing very fast increases the risk of a catastrophic breakdown. Thus, premature growth can actually reduce the probability of reaching the inflection point that triggers exponential growth.

For these reasons, marketplace entrepreneurs should resist the temptation to accelerate growth before figuring out an optimal supply-demand fit—that is, when buyers are as happy to purchase the products or services as providers are to supply them. This may mean waiting much longer than conventional companies do to scale a new offering. For example, Airbnb took two years to figure out exactly how to allow individuals to rent their homes to complete strangers under conditions and at prices that satisfied both parties. (Recall that the initial service was an air mattress and a cooked breakfast. In most cases, this was either not what travelers wanted or not something hosts were willing to offer.)

The wrong type of growth can hurt performance. Many marketplaces find it tempting to grow through “power sellers”—those who have moved from selling as a hobby or source of supplemental income to running a full-time business on the marketplace. That’s because attracting a few power sellers is more cost-effective than attracting many non-professional sellers, and the former tend to be more efficient at carrying out transactions than the latter.

However, growth through power sellers can be undesirable. After building most of its early growth on power sellers, eBay discovered that their dominance forced it to make compromises that favored those sellers but hurt the buyer experience. For example, power sellers demanded the ability to do “bulk listings” (to automate the listing of many products), which was more efficient from the sellers’ point of view. This created problems for eBay: By skewing seller incentives toward commodity goods, bulk listings reduced the diversity of products offered for sale, crowding out unique products and causing the quality of the average listing to go down. Furthermore, bulk listings enabled power sellers
to negotiate lower per-listing fees from eBay. Over the years, power sellers came to dominate eBay’s supply side and made it difficult for nonprofessional sellers to compete.

Other types of marketplaces face a similar issue. In the case of Airbnb, multi-property hosts might show pictures of certain apartments on the site but switch travelers to different ones upon arrival to suit the hosts’ planning needs. Or hosts that bought property specifically to list on the site might not provide the authentic experience that travelers seek. As a result, Airbnb may have to place some limits on multi-property hosts, even though that would conceivably negatively impact growth in the short run.

The bottom line: Platforms should resist the temptation to use the industrialization of the supply side to boost growth.

Trust and Safety
By definition, an online marketplace does not directly control the quality of the products or services that are bought and sold on its platform, so it must put mechanisms in place to ensure that participants have little or no fear about conducting business on the site. The goal is to eliminate (or at least minimize) improper behavior, such as abusing rented property, misrepresenting products, and outright fraud.

Ratings-and-reviews systems have been the most widely used mechanism for engendering trust between marketplace participants ever since eBay’s first successful large-scale implementation of such a system, in 1998. Nearly all prominent marketplaces use R&R systems, which typically allow the two sides of the market to rate and review each other by awarding stars (1 to 5), providing text feedback, or both.

However, research shows that these systems rarely build sufficient trust or provide adequate safety on their own. Many online R&R systems suffer from significant biases: People who voluntarily rate a product or service tend to be either very happy or very unhappy with it. This severely undermines the value of the information provided and skews results.

For instance, a recent study estimated that more than 50% of eBay sellers have received positive feedback for 100% of the transactions rated by their buyers, and 90% of sellers have received positive feedback for more than 98% of the transactions rated by their buyers. There are several reasons for this. Many buyers want to be nice, so they leave exceedingly generous reviews. Some fear that sellers will harass them by e-mail if they leave negative feedback. Many unhappy buyers simply leave and do not return to the site. And a few take extreme (and comical) measures: A good example of an R&R system gone awry is the phenomenon of sarcastic reviews on Amazon’s marketplace. Fake reviewers take over the comments for a product or service, awarding 4 or 5 stars and then writing ironically scathing, often hilarious comments.

Even reliable ratings and reviews systems are not enough to overcome potential users’ fears that something bad might happen, especially when the stakes are high. It’s hard to imagine buying or renting cars or houses from complete strangers solely on the basis of positive user reviews. And when things go wrong, users often hold the marketplace at least partly responsible, even though technically it is merely an enabler of transactions. A buyer who has a bad experience may blame the corresponding seller and leave a bad review, but he or she may also blame the marketplace and never return, which hurts all other sellers.

To properly engender trust and overcome fears, marketplaces must go beyond R&R systems and accept some de facto responsibility for transactions. This can take several forms:

| PROVIDE INSURANCE TO ONE OR BOTH PARTIES IN A TRANSACTION. Turo (formerly RelayRides), a marketplace where individuals can rent their cars to other people, offers specially designed insurance policies that provide coverage to both parties. Airbnb now insures hosts against property damage of up to $1 million. Lyft and Uber provide insurance coverage to their drivers for damage done to others.

| VET AND CERTIFY PARTICIPANTS. Upwork (formerly Elance-oDesk) has developed hundreds of proprietary certification tests that it administers to freelance contractors on its platform to assure buyers that the workers they hire are qualified.

| OFFER DISPUTE RESOLUTION AND PAYMENT SECURITY SERVICES. Airbnb holds the money paid

## Table: How Platforms Are Reshaping Business

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<thead>
<tr>
<th>COMPANY</th>
<th>NUMBER OF ROOMS</th>
<th>FOUNDED</th>
<th>MARKET CAP</th>
<th>TIME TO 1M ROOMS</th>
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by the traveler in escrow for 24 hours after the traveler has checked in; Alibaba holds the money paid by the buyer in escrow until the buyer confirms receipt of the goods from the seller. And both Airbnb and Alibaba have comprehensive dispute resolution procedures that offer recourse to both sides of the market.

Disintermediation
Many marketplaces fear that once they facilitate a successful transaction, the buyer and the seller will agree to conduct their subsequent interactions outside the marketplace. This risk is greatest for marketplaces that handle high-value transactions (eBay Motors, Beepi) or recurring transactions (Airbnb, CoachUp, Handy, HourlyNerd, Upwork). But in our experience, entrepreneurs tend to overestimate the threat of disintermediation and choose the wrong approach to prevent it.

The instinct is often to impose penalties, such as temporarily suspending accounts, if attempts to take transactions off a platform are detected. The fact of the matter is that all marketplaces that facilitate high-value or recurring transactions suffer some disintermediation: Some hosts and guests take their transactions off Airbnb, as do some contractors and employers that first connected on Upwork. But we have yet to see a promising marketplace that has been severely hindered—let alone put out of business—by this behavior, and we’ve found that carrots are more effective deterrents than sticks. For example, algorithms for detecting transactions initiated online but completed offline are difficult and costly to implement and can create user resentment.

Participants usually prefer to conduct business in a “well-lit showroom” that reduces search or transaction costs and allows deals to be conducted securely and comfortably. As long as a marketplace provides value, there should be sufficient incentive for one or both sides to conduct all their transactions through the platform. If users find it onerous to do so, then either the marketplace does not create enough value or its fees are too high.

One company that has successful incentives to combat disintermediation is eBay Motors. It provides an automatic purchase-protection service against certain types of fraud (for example, nondelivery of the vehicle), facilitates car inspections through partner shops at discounted rates, and uses its bargaining power to help sellers obtain lower shipping costs.

Another example is Upwork. In addition to providing worker certifications, it allows employers to audit and monitor the work being done by contractors in real time. It also allows them to process online payments in many currencies at discounted exchange fees. As these examples show, some of the mechanisms that make transactions safer to conduct also help reduce the risk of disintermediation, killing two birds with one stone.

Regulation
Online marketplaces that provide radically new alternatives to conventional business models test the limits of existing regulatory frameworks almost by definition. They enable new types of transactions, such as peer-to-peer lending or property rentals. As a result, marketplaces face serious regulatory challenges much more frequently than traditional product or service companies do. Should homeowners renting out their properties be subject to hotel taxes? Under what conditions should individuals be allowed to sell rides in their cars? When should marketplaces for services be allowed to treat their service providers as independent contractors and when should they be compelled to treat them as employees?

With respect to regulatory risks, most entrepreneurs have one of two reflexes: ignore them or try to fix everything up front. Neither is a good idea. Unwinding a regulatory problem late tends to be much more difficult than preventing it early. Furthermore, ignoring regulations can generate bad press, which may alienate users. At the other extreme, attempting to clear all regulatory hurdles from the beginning is unrealistic. Regulatory time frames are too long for most young companies to work within, and it is very hard to gain clearance for a business concept that has not yet been proved in the market. (For a look at this problem from the incumbent’s perspective, see “Spontaneous Entrepreneur...
The right approach, not surprisingly, is somewhere in the middle: Strive to engage regulators without breaking stride or slowing down to the decision-making speed of governments. No marketplace we know of has dealt with all its regulatory challenges perfectly, but four interconnected guiding principles—developed by David Hantman, Airbnb’s former head of global public policy—can help.

1. Define yourself before your opposition or the media does. Marketplace entrepreneurs should develop a clear vision of their business model and find the most positive—yet accurate—way to describe it to the outside world. Then they should engage regulators and the media to ensure that they are understood on their own terms.

2. Pick the time and place to engage with regulators. Entrepreneurs operating in industries subject to heavy and national regulation should consult an industry attorney before launch in order to fully understand all relevant laws. As soon as their buyer-seller proposition is clear, they should initiate a dialogue with regulators in order to obtain either explicit legal clearance (ideal) or an implicit safe haven (second best) for continuing to develop the service.

The examples of Lending Club and Prosper, the two leading peer-to-peer lending marketplaces in the United States, illustrate the importance of smoothing regulatory frictions before they grind you to a halt. Prosper was launched first, in 2005, followed by Lending Club a year later. Lending Club, however, was first to tackle the difficult regulatory issues. Less than two years after its launch, it established a partnership with an FDIC-insured bank so that the loans it facilitated were subject to the same borrower protection, fair lending, and disclosure regulations as regular bank loans. In early 2008, it became the first peer-to-peer lending marketplace to voluntarily go through a quiet period during which it did not accept any new lenders and focused on completing its registration with the U.S. Securities and Exchange Commission (SEC) as an issuer of public investment products.

In contrast, Prosper ignored regulatory issues until scrutiny by the SEC forced it, too, to enter a quiet period. The results of these differing approaches were significant: Prosper’s quiet period lasted nine months, whereas Lending Club’s lasted just six. And Lending Club was allowed to continue to serve the borrower side of its marketplace during its quiet period; Prosper had to shut down both the investor and the borrower sides. Lending Club eventually overtook Prosper to become the largest peer-to-peer lending marketplace: In 2012, it made $718 million in loans, compared with $153 million for Prosper.

At the other end of the spectrum, marketplaces operating in spaces that are regulated lightly and only at the city or state level can afford to wait until they reach supply-demand fit in their first city before engaging with regulators. While regulatory issues at the national level are usually a matter of life and death for companies, local regulators are typically less powerful and can be more easily circumvented if necessary.

3. Don’t just say no; offer constructive ideas. When confronted with regulatory gray areas—an all-too-common occurrence—marketplace entrepreneurs have an opportunity to turn a potentially adversarial relationship with regulators into a partnership. For example, Getaround, the peer-to-peer car rental platform, preempted a collision by working directly with the California state government to enact a law that allows private individuals to rent out their cars to strangers under separate insurance coverage designed for this purpose. Getaround’s approach is remarkable because peer-to-peer car rentals were not explicitly illegal beforehand—meaning that the company incurred a significant risk by drawing regulatory attention to its service.

Even when existing regulations are merely inconvenient for new marketplaces, entrepreneurs should resist the temptation to ignore or thumb their noses at the relevant authorities and strive instead to find an area where their interests align. For example, a major concern for governmental bodies...
that regulate taxis is ensuring the safety of passengers and drivers. Ridesharing companies should want the same thing. The marketplaces could use their data on driver and passenger identity and on trip times and paths to work constructively with state regulators to create a safer environment than traditional taxi companies provide.

4. Speak softly and carry a big stick.
Entrepreneurs should avoid engaging in acrimonious disputes with regulators; at the same time, they should have effective weapons at their disposal to defend their position. They can use two means of leverage when fighting potentially adverse regulation. The first is the power of satisfied buyers and sellers, who are voters and taxpayers likely to resent government interference with a service they value. To harness the support of users, companies should develop a credible infrastructure for running lobbying campaigns in their own behalf: social media, dedicated websites, and so on. For example, Airbnb helped its San Francisco hosts organize rallies around city hall and testify in public hearings, which eventually swayed the city’s regulators to legalize short-term rentals in people’s homes in 2014 (the “Airbnb law”).

The second lever is tax revenue. Marketplaces that generate sizable revenues for local governments have some leverage in regulatory negotiations. For instance, as part of its ongoing efforts to persuade city governments to legalize its service, Airbnb has offered to collect hotel taxes from its hosts and remit them to local authorities in several cities worldwide. This offer, still pending approval, is clearly a powerful negotiating instrument: According to conservative estimates, the taxable revenue generated by Airbnb hosts was more than $5 billion in 2015. This is an interesting case, since few marketplaces have proactively offered to take responsibility for ensuring that their users pay taxes.

Sometimes, if regulatory uncertainty is unlikely to be resolved in the immediate future (a time frame measured in months for start-ups) and the repercussions of noncompliance are severe, then the right response is to comply with the worst-case scenario, even if that means incurring higher costs. One of the most serious regulatory issues now faced by service marketplaces concerns the legal status of their workers. Several prominent service marketplaces (Handy, Lyft, Postmates, Uber, and Washio) are currently contending with class-action lawsuits that accuse them of improperly classifying their workers as independent contractors rather than employees. The cost implications are substantial: Changing a worker’s status from independent contractor to employee increases costs by 25% to 40%. While the outcomes of the lawsuits and the corresponding regulation are still uncertain, some marketplace start-ups, including Alfred, Enjoy Technology, Luxe, and Managed by Q, have preempted the issue by voluntarily turning their workers into employees. Early stage start-ups that simply cannot afford to operate under uncertain regulatory status may need to do the same. In most cases, however, an intermediate status somewhere between employee and independent contractor would be the ideal approach.

**ONLINE MARKETPLACES** are profoundly changing the nature of work and of companies. Since the early days when marketplaces made it possible to sell and buy simple products like PEZ dispensers and handicrafts, the assortment and price range of goods available online has exponentially increased. Over the past five years, platforms for a remarkable variety of task-oriented services have arisen. New technologies such as 3-D printing and virtual reality will continue to open up opportunities for individuals and small firms to directly sell increasingly complex products and services previously provided only by large firms. The growing number of products and services available through online marketplaces will cause traditional corporate structures to gradually shrink and coexist with overlapping networks of independent workers who come together for limited periods of time to perform specific tasks. The result will be a much more fluid and flexible work environment that empowers both workers and customers. But the challenges of managing growth, building trust and providing safety, minimizing disintermediation, and shaping regulation won’t go away. The solution is not to follow the pack. It is to deeply understand the needs of customers, regulators, and society as a whole and, in a disciplined fashion, become an active player in shaping the future.

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April 2016 Harvard Business Review 9