

# Sharing Economy -A Service Enterprise Engineering Perspective

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## What is the Sharing Economy?

The sharing economy is a general term used to describe economic activity involving peer-to-peer exchange of goods and services through community-based online transactions. Newer ventures also include business-to-business (B2B) transactions via online marketplaces. Alternate names for such activities include shareconomy, collaborative consumption, peer economy, and Uberization (after Uber, one of the pioneers of such activities). The rapidly growing relevance of the underlying tenets presents many potential opportunities for engineers, including applying these new business models in existing companies.



Bike-sharing is an example of the sharing economy, where the public usage of these bikes for a fee is a service engineering business model.



### How Did It Proliferate? What Are Its Drivers?

Traditionally, business models were built around the manufacturing and selling of solid tangible products, such as consumer goods and automobiles. The same logic could be applied to home ownership as well. However, the changing behavioural characteristics among consumers, especially millennials, have led to the development of new business models where temporary access of these goods is enabled in exchange for a rental fee. This has proven successful in the case of many services such as Airbnb for renting temporary residences, Uber for taxis, and Zipcar for rental cars. Some of these trends are the following:

- Increasing mobility People are more likely to move between places and shift homes.
- Less stable work environments People are far more willing to switch jobs. Additionally, many jobs are now on a remote basis.
- **Decreasing purchases of conventional goods** Causes of this shift are increasing costs and lifestyle changes, caused by a more transient economy. This is apparent especially in newer industries such as the technology industry. To professionals in these industries, permanent ownership of products like cars and homes, and the accompanying buying and selling, is inconvenient.
- More value on experiences as compared to previous generations Companies are taking advantage of this trait in quite unexpected ways. Many services have recently been started to "bring the tycoon lifestyle within the reach of some." Examples of these services include NetJets to hire private jets, UberYacht to rent yachts, UberCopter (Brazil) and BLADE (New York City – Long Island) to rent helicopters and GetMyBoat for all kinds of boats.

Another major contributor to this economy is the increase of internet use to enable such services. *Increasing adoption of the internet leads to greater sharing of information,* which is crucial to many of the industries served by these economies. Almost every sharing service requires a central database to maintain a list of choices for the consumer, which is easy thanks to the internet. This has expanded recently, particularly because of increasing security and authentication services required online. Before widespread adoption of the internet, security in any transaction made was not guaranteed. However, as more and more businesses began offering such services, security has increased. In addition, easy access to information on the internet has helped build the reputation of such businesses.





Uber: A convenient service commonly accessible to anyone with a smartphone.

While the internet led to an initial boom in the sharing economy, the recent explosion of mobile computing power and mobile apps has been a major driver in the sharing economy. Today, smart phones are ubiquitous. Technologies like 4G LTE have accelerated this trend, better user interfaces have made for higher-quality user experiences, and vast amounts of information are now instantly accessible. This has led to powerful platforms that make use of multiple sources of information essentials in the sharing economy.

As with any industry, the pressure to contain costs is constant to retain one's competitive edge. This is a powerful incentive for companies to pursue such business models.

Despite the moniker of a sharing economy, consumers are not powerfully influenced by the sharing rhetoric provided. Consumers view this economy as a service provided by a neutral third party. *Convenience, quality of service, first-mover advantage, and price are much bigger influences than the social element to such economies.* This is one of the many reasons cited as to why Uber has a much larger market share than its rival Lyft.



### What Business Models Are Adopted by this Industry?

According to "What's Mine Is Yours – The Rise of Collaborative Consumption," by Rachel Botsman and Boo Rogers, there are three types of models adopted that serve this economy:

- i. **Product Service Systems** These allow members to share multiple products that are owned either by companies or other individuals. An example of this is Zipcar for car rentals.
- ii. **Redistribution Networks** Here, peer-to-peer matching or social networks allow the reownership of a product. An example of this is the online platform Neighborgoods.com.
- iii. Collaborative Lifestyles People with similar interests or unique skills help each other out, sometimes for money. One well known example is the service TaskRabbit, where people can be hired to perform a variety of services, ranging from fixing electrical devices to composing articles for a wedding, among many others.

### How Would Companies Adapt to this New Economy?

While new companies and services are rapidly growing to best serve this new economy, companies with an existing business model, resources, and product portfolio can adapt to this economy as well. What would be the optimal strategy to achieve this? A good summary is provided by Matzler et al.: "Instead of buying and owning products, consumers are increasingly interested in leasing and sharing them. Companies can benefit from the trend toward 'collaborative consumption' through creative new approaches to defining and distributing their offerings." This is directly in relation to our economy increasingly becoming serviced-focused. Hence, as opposed to buying and selling products, it is increasingly the norm to provide temporary usage of these products as a service.

Hence, new companies often have the innovative ideas and energy required to build and launch such a model. However, they generally lack the industry expertise, resources, and customer relationships that benefit legacy companies. Sometimes, we also see collaborative efforts between complementary entities, leading to a successful business venture. One such example is the collaborative effort between Geek Squad and Best Buy, which is described more fully later in this section. There are instances where exiting companies with industry leadership positions have acquired newer companies in the shared economy. One such example is the 2013 acquisition of Zipcar by Avis Budget. AB management touted the significant synergies in costs, asset use, and revenue growth between the car sharing and car rental businesses in justifying a significant purchase price premium. However, five years post-acquisition, they have yet to deliver a meaningful improvement in asset turnover, although revenue growth has outpaced their major traditional competitor, Hertz.



## A few ways are suggested by Matzler et. al to help companies further adapt towards such business models:

- i. **Promote the Act of Selling the Product Rather than the Product Itself** This would work with many product service systems. One interesting example is the power tools company Hilti, which started a fleet management service to temporarily rent tools. In addition, they also provide maintenance and repair for such tools, making for a smooth experience for the consumer.
- ii. Support Customers in their Attempts to Resell Products This may seem counterintuitive to a company's bottom line as the company buys back older products from consumers for a marginal price or a "trade-in value." However, there are several hidden benefits to this model. Customer satisfaction is high, due to this being an environmentally friendly activity. Such practices lead to good public relations for the company, thereby increasing brand retention and brand loyalty. In addition, such practices give consumers some of the required capital and "space" to purchase newer company products. In the case of Patagonia, "space" refers to closet space, while it refers to physical house space in the case of Ikea.
- iii. Take Advantage of Unused Capacity and Resources This is beneficial for products that have a seasonal usage. One example is Maschinenring, a German company that rents out machinery for forestry and agricultural purposes. Due to the success of this venture, they have expanded to the leasing of personnel for such activities as well, as labour demand is seasonal for such industries. Another good example of capacity management is LiquidSpace, a venture similar to Airbnb but for office spaces.
- iv. Provide Auxiliary Services such as Maintenance and Repair This was already seen in the case of Hilti's fleet management service. As rental services increasingly promote the use of products, the need for repair and maintenance increases more and more. This is a driver for profit. Such models could potentially see collaboration between two complimentary core competencies. In the case of Best Buy and Geek Squad, for example, Best Buy sells electronics and has an established network of stores across the country, and Geek Squad provides a team of experts who maintain and repair electronic devices. Hence, when these two entities combine, it is advantageous for both parties. Best Buy benefits from customer satisfaction and retention due to these repair services, and Geek Squad gains a bigger market thanks to Best Buy's large customer base and market presence.
- v. Find Novel Business Models that Work Only as a Result of the Sharing Economy There are always new and creative ways to extend traditional business models. One such example is kuhleasing.ch, a service that lets consumers rent cows for an entire season. In exchange, consumers get reduced rates on products that come from the cow, such as milk and cheese.



## Strengths of the Sharing Economy

The sharing economy is extremely efficient from the perspective of resource allocation. This is apparent in the case of ridesharing services such as Uber, as opposed to traditionally owning a car. Normally, cars have a low utilization (Only about 10-15 percent) and are sitting idle for the rest of the time. This is drastically improved through services such as Uber.

One primary reason for consumers' adopting the sharing economy is lower costs, achieved because existing resources are used more efficiently. From the provider's perspective, lower costs increase profit margins as well. From the user's perspective, costs are lowered especially for those with a low use of such services. For instance, an AirBnB makes much more sense to a frugal user who only needs basic amenities, as opposed to an expensive hotel where the cost may include other facilities, such as a jacuzzi, that the consumer may not want.

In addition, the sharing economy often gives consumers a feel-good factor because using such services is usually more environmentally friendly than traditional services. This is especially the case with scenarios such as Patagonia's and Ikea's trade-in models.

In certain business models, the sharing economy often represents a useful additional income stream, especially for middle-class families. This is apparent in the case of services such as Uber and Airbnb. The strongest market for such services is in progressive global cities such as Amsterdam, Paris, and London. According to Airbnb's Middle Class Economic Report, the average Airbnb host earns about \$7,000 per year for renting out their personal space. For a middle-class family that earns \$50,000 per year, this is equivalent to a 14 percent raise in income.

This labour is also flexible, as participants are independent contractors who determine their own hours. This is vital for those who rely on the sharing economy for essential income. Similarly, with assets such as houses, owners have the control to decide when to rent.

In the case of collaborative sharing economy ventures, companies can often outsource business activities outside of their core competencies. This is observable in new food delivery providers such as Deliveroo, Foodora, and UberEats. Restaurants can stick to food preparation and presentation, while these parties focus on logistics. In such systems, users can track their food and have a greater choice of food (as more restaurants would be willing to offer delivery services if they can partner with such delivery services).

From the worker's perspective, one often finds that there is little to no bureaucracy or hierarchy. People are usually rated and paid on the basis of their performance only. It is usually not cumbersome for such workers to enter the market as well.

For consumers, this economy means that highly personalizable work is possible. This is seen in the case of ventures such as TaskRabbit. Very specific services are provided through the gig economy as well, such as the MetroButler service to hire butlers.

Better feedback on the quality of products and services delivered is often possible with the sharing economy, as many services offer instant feedback through a ratings system. This ensures that the customer has a greater say in the services delivered.



Many workers in these economies also enjoy the social dimension of these types of work. Many Uber drivers are not motivated to work financially, but by the prospect of meeting and interacting with new and different types of people. Participants in these economies tend to skew towards the younger generation. While a 2016 Pew Research study (see below) showed that 8 percent of all Americans participated in the sharing economy, this figure rose to 16 percent among Americans aged 18-29 and 10 percent among Americans aged 30-49.



Data Sourced from "Gig Work, Online Selling and Home Sharing" – Pew Research Center



## Weaknesses of the Sharing Economy

There are a few risks that such systems bring about. One is the effect of these economies on existing systems and infrastructure. Such changes could affect many parties. A classic case is of Airbnb in San Francisco, where several landlords forcibly evicted tenants on their leases to rent out their houses full time to Airbnb. Airbnb has caused rental prices to rise in localities across several cities as well. Hence, adequate laws should be set up to protect third parties that would be affected by these systems.

The sharing economy is also not easy to break into for a new business. First, mover advantage is prevalent in these systems. In addition, third parties usually offer aggressively low rates in their initial runs to gain a consumer base. Therefore, companies that operate in this economy need high use of their systems to remain profitable.

*Many of these services do not pay taxes to local governments*, which is an issue of contention. Uber, for example, achieves this by registering itself as a technology service rather than a taxi provider. Traditional taxi providers claim that this is inherently unfair, as this means that Uber can price themselves much more aggressively towards consumers and gain a higher market share. Additionally, as these companies only own platforms, they can be offshored much more easily. Companies like Uber often take advantage of this by registering themselves in tax havens such as Bermuda, where corporate taxes are low to nonexistent. While this is not unique to companies in the sharing economy (for example, Apple is registered in Ireland for the same reasons), companies in the sharing economy are particularly prone to such behaviour thanks to the nature of the services they offer. As almost all such businesses are registered as technology companies, there's little need for them to show physical assets that could potentially be subject to tax in the country of operation.

*There are few prospects of career growth for workers* in these kinds of economies as well. This means that worker retention in this industry is low and worker turnover is high.

*Hidden charges are common* as well. A *New York Times* report in 2015 found that it was not uncommon to see premiums of up to 30 percent over restaurant charges for food delivery services (that maintain independent third-party logistics) such as UberEats.

*Security is a major concern with such economies*. Security concerns are twofold: First, the vast amounts of data stored by businesses in this economy could potentially be used for nefarious purposes. For instance, Uber routinely collects location data of its customers, as is required for their services. However, if it is known that somebody is using these services at regular intervals and locations, this information could be used against the person. Second, the ease of entry of workers into such economies could pose security concerns. A well-documented instance of such an occurrence was the rape of a woman in 2014 by her Uber driver in New Delhi, India. Considering the speed with which such economies expand, vetting of workers can be difficult. Nevertheless, it is extremely important to do so to protect consumer safety.

As mentioned earlier, there are two kinds of workers employed by the sharing economy – those who are financially motivated and those who aren't. According to a Pew Research survey, 56 percent of such workers surveyed are financially reliant on this work, while 42 percent of workers surveyed have other motivations to work in such industries. Social benefits are enjoyed only by those who are not financially motivated to work in this industry. A lack of worker unions means that this industry is prone to practices such as sudden wage cuts. These changes adversely affect those who are financially reliant on their work in this industry.



## Reputation, Data, and the Sharing Economy

Two characteristics vital to the sharing economy are the reputation of individual users in the sharing economy and the data collection on both the consumer and provider end. Reputation is particularly unique to this economy. Historically, personal reputation mattered greatly as most products were sold through individual merchants and family-owned businesses. The better the reputation, the more likely the merchant was to be profitable. However, this waned with the Industrial Revolution and the rise of big companies and brands. With the advent of the sharing economy, this seems to be reversing. One would naturally tend to use an Uber driver with a high personal rating or a highly rated Airbnb rental. We can observe some trends with reputation in these economies:

- i. Reputations are fragmented across different platforms – Hence, if a driver provides excellent service on Uber, this fact would be known only to users within Uber.
- ii. As a result, high-quality users tend to be locked on to specific platforms. These platforms tend to be the biggest ones of their kind because a lot of time and effort are required to build one's reputation in just one platform.
- iii. This affects consumers as choices are restricted for them, and the candidate pool for goods and services is reduced as a result.
- iv. This ultimately hurts the platform that supports this economy as they miss out on potential transactions and new customers.
- v. Quite often, reputations are not fully transparent. For example, Amazon bans users that return too many items from Prime membership. While it is in the company's best interests to take such actions on misbehaving customers, it may be the case that this was an unwarranted action. A consumer who is mistakenly flagged as aberrant would not be able to use these services, through no fault of their own. A more transparent rating system would solve such issues, making it easy for customers to clarify such discrepancies. While Amazon is not strictly part of the sharing economy, it is one of the most used platforms in the world.

#### A couple of possible ways to improve this situation are listed below:

- i. A company with a larger userbase such as Airbnb could make its reputation database open source by means of an API. However, this would be highly unlikely as there would be little incentive or benefits for a company to do so.
- ii. Companies that have already gathered large amounts of such data on customers could sell this information to other third-party services in exchange for a fee. However, great care has to be taken to ensure that the customers to whom this data is being sold to are trustworthy. Moreover, companies must make it explicit to customers that such data is being sold before customers avail services. Otherwise, it would be unethical on the companies' part to do so.
- iii. An alternative would be for a third party to manage this sort of reputation data, akin to how credit scores are maintained by agencies such as TransUnion and Equifax. Currently there is no such party performing these services, hence providing a possible opportunity to do so. The main issue to be considered with such situations is security, as this data would be quite sensitive and must be protected from being altered by anyone with malicious intent.



Reputation is heavily tied to data, as measuring a user's reputation would involve the collection and analysis of large amounts of data. In today's increasingly data-driven world, being able to harness the power of big data would be crucial to obtain a competitive advantage.

Large amounts of data are crucial to identify and enable the apt connections required for optimal sharing in a sharing economy. A classic example would be Uber. UberPool would not be possible without collecting and coordinating data from various sources. A few examples of the data used are driver and user locations, driver and user reputations, routes desired for multiple passengers, and budgets for each passenger. The sharing economy falls without data, as it is then equivalent to a single-stage game. Each party solely would aim to maximize their own profit. This could often occur to the detriment of the platform on the whole. Consider Airbnb as an example.

To increase potential profits, a prospective landlord would tend to exaggerate the amenities and services offered in a residence. When the user finally enters the residence and finds that it is not to expectations, the user would tend to distrust Airbnb as a service overall. If multiple such incidents occur, a platform like Airbnb would collapse despite no mistake on its part. This could be alleviated through the use of reputation data.

Data promotes transparency across the system and helps point out parties such as spurious renters, sellers, and drivers. This would decrease their future earning potential. Even if this data is not fully publicly available, just the knowledge that this type of data is being collected is a sufficient deterrent to negative behaviour by both service providers and users. Present systems are, however, not perfect and still have several drawbacks:

- i. The system would not work as long as acquiring a new reputation is quick, easy, and low cost. In such cases, poor reputations can be discarded easily. eBay suffers heavily from users exhibiting this sort of behaviour.
- ii. New users are in a sort of slow adoption process. This gives little incentive to their entry into a system. A service provider cannot usually gain a reputation without serving many users. However, users would not seek the services of a provider with a poor reputation.
- iii. The recording of undesirable behaviour of a service provider is usually isolated within a single system.

#### These drawbacks could potentially be alleviated through analytics and better tracking of users. Some further techniques that could be used by businesses include the following:

- i. Increase data transparency to both potential customers to a platform as well as existing customers.
- ii. Collect data in a comprehensive manner and expand input from users beyond mere satisfaction surveys, which are usually not very effective.
- iii. Improve methods of identifying potentially malicious users. Hence, if a potential service provider were to attempt to enter a system, they would have to provide more comprehensive data than just a username and personal name. This would make it difficult for one person to possess duplicate accounts, making the system more secure.
- iv. Consider making all reputation data publicly available to any user within the platform.





Leveraging the use of data is key to gaining a competitive edge in today's sharing economy

#### Platforms, Networks, and the Sharing Economy

An integral component that has led to rapid development in the sharing economy is the emergence of platforms. *A technology platform is an infrastructure maintained through the internet with the aim of supporting products and enabling services for a company*. While platforms have historically existed as auxiliary services meant for secondary functions such as customer support, they've gained importance over the past few years, to the extent of them dictating fortunes of entire industries.

A classic example is that of the mobile phone industry. In 2007, 90 percent of the market share was held collectively by Nokia, Samsung, Motorola, LG, and Sony Ericsson. Apple did not even exist in the market until the launch of the iPhone in 2007. Eight years later in 2015, the iPhone alone accounted for 92 percent of the phones sold in the USA. While other factors such as better design and incorporation of better features are significant, the biggest reason behind the iPhone's success is the ecosystem associated with it. The iOS and the Apple App Store were the biggest drivers of the success of the iPhone.





Platforms leverage the use of apps to make a big impact in the sharing economy

The example of Apple and iOS highlights how platforms have supported products and have maximized their impact. A newer phenomenon is when the platform itself is the reason behind the success of a company, where the company itself does not own any tangible assets. This is the basis behind the sharing economy as seen already and is apparent in the success stories of Uber and Airbnb, among others. How have platforms been able to disrupt industries and established business models so rapidly?

With any platform, the key assets are the information stored within the platform and the interactions created on the platform. When combined, these lend a competitive advantage to the owner of the platform and are the source of created value for the company. Platform adoption has been rapid as a result of the proliferation of information technology (IT) in key business processes across various industries.



#### IT has helped create a pipeline for traditional businesses to transition to platform-based systems.

Through IT, the need for physical infrastructure and assets is greatly reduced. IT also makes building and scaling up infrastructure much cheaper than what was previously possible. Critically, IT allows frictionless participation of various players that strengthen networks effects, a key component of platforms. IT also enables a platform to capture, analyse, and extract vast amounts of data, critical to network growth and the value of the platform.

#### According to Alstyne et. al, there are four players in any platform:

- i. **Owners:** They control intellectual property related to the platform and are responsible for governance across the entire platform. They usually formulate key business decisions. For example, the platform Android is owned by Google.
- ii. **Providers:** They provide the interface with users. These are intermediate entities between the producers and consumers who enable interactions to take place and serve the interface with users. For example, mobile devices are providers on the Android platform.
- iii. Producers: They create offerings on the platform. These offerings may be services rendered or products sold. On the Android platform, producers would be mobile apps and the creators of these apps.
- iv. **Consumers:** They are the buyers or users of these offerings; the end customer being served by the platform.

A key differentiator for platform-based systems is the effect of networks. A traditional business usually is represented by a value chain where value is added to the product along each level of processing. In traditional businesses, economies of scale exist on the supply side. As the scale of operations becomes larger, costs for the company are lowered, allowing the company to price its products more aggressively. This in turn leads to higher market share and higher scale of operations, creating a feedback loop. From such environments, monopolies can arise.

Platforms have been seen to disrupt this loop as the network effects of platforms use economies of scale on the demand side. Networks help create efficiencies in social network, leading to aggregation in demand. Hence, the focus here is to achieve a higher average value per transaction as opposed to a lower cost per transaction. As the scale of the network increases, more participants engage in the network. This leads to the dual effect of increasing transactions and interactions as well as attracting even more users. The larger the network, the more and richer the interactions observed. Hence, increasing the scale of a network improves both the quantity and quality of transactions in a network.



In platform-based systems, the traditional value chain is heavily augmented by the features of the platform. The platform increases profitability for the product and adds much more value than a single process. How do companies adopt to such systems? Three key transitions are noted by Alstyne et al.:

- i. **Transition from resource control to resource orchestration:** Rather than extensively managing resources themselves, it is increasingly becoming the focus to effectively manage the interactions between resources at hand. This is due to the fact that the chief asset of such a business is the network rather than the resources themselves, as is exemplified with cases such as Uber.
- ii. Transition from internal optimization to external interactions: It is increasingly important to facilitate interactions between external producers and customers who are not under the direct control of the business. This helps shed the variable cost of production. Hence, emphasis shifts from dictating processes to persuading participants to interact on such systems. This makes the governance and management of ecosystems a valuable skill.
- iii. **Transition from a focus on customer value to a focus on ecosystem value:** Traditional systems maximize value to customers who sit at the end of a linear process. Ecosystems try to maximize the total value of the entire system. This is achieved through circular, iterative, and feedback-driven processes.

There have been many recent platform successes such as Alibaba and Uber. However, even industry stalwarts such as Apple and Google have encountered failures when trying to launch new platforms. As mentioned, platforms can bring together producers and users in an efficient exchange of value. However, their success can depend on several factors. According to Alstyne et al., platforms can fail in the following cases:

- i. A failure to optimize openness: There is a fine balance to the degree of openness of a system. Openness is the ease with which a platform engages users, both new and existing. If a platform is too closed, the number of participants in a platform are limited and the network effects of the platform are negated. An example of this was Apple in the 1980s, when Steve Jobs charged developers for the toolkits required to develop software on Apple's software platform. Bill Gates did not place any such limitations on his platform, leading to Microsoft thriving as a personal computer platform at the expense of Apple. Alternatively, if a platform is too open, it can lead to poor quality of interactions on the platform. In addition, there would be too little control over misbehaviour of participants on this platform. An example of this was in the early days of implementing the Android mobile OS, when this market was extremely fragmented. Due to the heavily open source nature of early versions, Samsung created its own proprietary Android Skin, which cannibalized a large section of the market from native Android systems.
- ii. A failure to engage developers: Ideally, developers should get feedback to design and innovate products and services on a platform. They must be provided adequate resources to build and develop on the platform and should be rewarded appropriately upon building successful products. An example for this is Johnson Controls, which in 2013 invited developers to collaboratively build Panoptix, an energy efficiency platform for buildings and office spaces. This was a revolutionary platform with a lot of market potential. Yet, Johnson Controls shut down Panoptix in 2015. This was because they had failed to attract enough developers to make Panoptix a viable and profitable venture.



- iii. A failure to share surplus: Profits generated through the platform must be shared as equally as possible among owners, providers, and producers. Too heavy an emphasis on one of the parties leads to dissatisfaction in other parties, which can be a detriment to the system. An example of this was in 2000 when Covisint was an online marketplace that aimed to match suppliers and buyers with automotive parts. However, this system's structure and ownership format heavily favoured buyers (automotive manufacturers such as General Motors and Ford) and led to fierce competition among the component suppliers. Disgruntled, suppliers abandoned the system, and Covisint was disbanded in 2004 for a fraction of its initial valuation. Hence, a good philosophy for platform owners would be to "take less value than you make and share value fairly among all participants."
- iv. A failure to launch the right side: When launching and performing the early implementation of a platform, one must make sure that the platform is targeted and tailored towards the appropriate party. Hence, initial focus must be towards either attracting consumers or attracting producers. An example of where this went wrong was with the launch of Google Health. Google Health was a platform by Google intended to consolidate health information between patients (consumers) and doctors and insurers (producers). However, Google Health worked towards consolidating users rather than providers. While such strategies have worked well for some of Google's most successful products such as Gmail, it did not apply here. Without presence of many doctors on the platform, consumers were apprehensive about sharing personal information without any providers to engage with. As a result, the platform collapsed.
- v. A failure to put critical mass ahead of money: One must look at long-term profitability and market growth when implementing market strategy. Focus on short-term goals could lead to the eventual demise of a company in a particular product segment. There are several examples of companies that failed to capitalize on their core competencies and consolidate themselves in established markets. Some include Hewlett-Packard for calculators, Garmin for satellite navigation systems, and Sony for Walkmans. In each scenario, the company decided to focus on developing the product itself rather than the platform. A few years later, all these functionalities have been replaced by the smart phone itself.

### The Future of Platforms and the Sharing Economy

Many of the biggest success stories of the sharing economy have been recent players. Yet, this segment has grown aggressively in this short time frame. A report by the Harvard Business Review in 2016 concluded that already, 8 percent of workers in the American workforce are employed by the sharing economy. Therefore, this trend only looks to be an increasing one towards the future. PricewaterhouseCoopers estimates that by 2025, this economy could represent \$335 billion in revenue worldwide. McKinsey also estimates that the market for third-party food delivery alone would reach 20 billion euros by 2025.

*Platforms represent the next generation of services.* An interesting development that has arisen due to platforms is the partnership between traditional businesses that have established industry presence and resources along with newer participants that have grown thanks to platforms. Some examples include partnerships between General Motors and Lyft and between Instacart and Costco. Hence, the shift in platform adoption is that platforms represent more than just services. They also represent partnerships.





*UberEats: An example of traditional functions of the service industry such as food delivery being disrupted by platforms.* 

*The sharing economy is still underdeveloped.* Even in developed cities such as New York City, only approximately one third of its inhabitants are aware of services such as Airbnb. In addition, Airbnb's Middle Class Economic Report revealed that when one learned that Airbnb rentals could usually pay for a year's worth of groceries, 51 percent of the middle-class members surveyed were willing to give up personal space in exchange for the extra income, while 59 percent of those surveyed were "intrigued by the idea." This shows that there is still much room for market growth.



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