world development report 2016

BACKGROUND PAPER

Digital Dividends

Sharing is caring? Not quite. Some observations about 'the sharing economy'

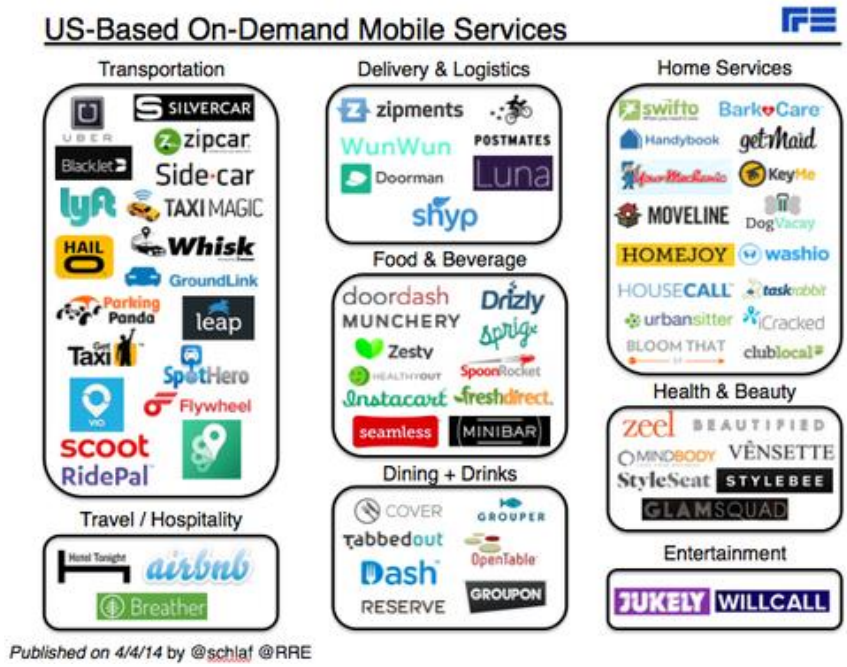
Desirée van Welsum
World Bank Group

Table of Contents

Introduction

Fast evolving cloud-computing platforms that enable new business models, combined with a rapid uptake in digital technologies by consumers and a change in consumer behavior and preferences have enabled the emergence of a so-called 'sharing economy'. With new start-ups offering all kinds of services springing up every day, there was soon talk of the 'Uber[1] of everything' or 'the uberification of the service economy' (figure 1).[2] But these technology enabled business models also raise a number of questions, such as what are we really sharing in the 'sharing' economy, who participates in it, who benefits from it, what are the barriers and the risks, and does it offer growth opportunities for developing countries?

Figure 1: The 'uberification of the US service economy

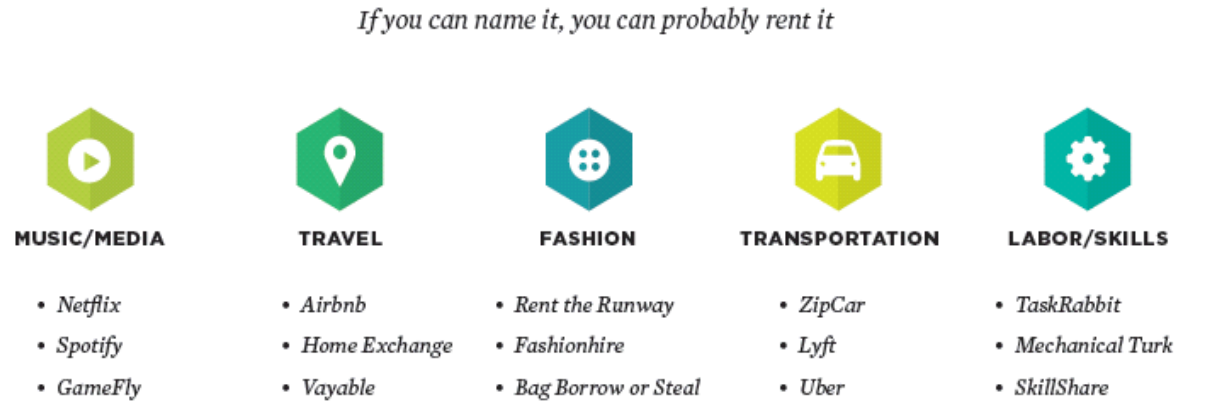


Definitions

The term 'sharing economy' is somewhat of a misnomer: what exactly is being shared, and is it really sharing if we pay to 'share' or is it just a form of renting (figure 2) or paying for a service? In reality, most of these new/digital economy services involve the more efficient utilization ('sharing') of physical assets (a house, car, physical space, machinery, tools, appliances, clothes, shoes, bags/accessories), or time (e.g. through tasks such as cooking, cleaning, assembly of furniture, doing DIY[3] jobs, running errands, etc.). It seems that for sharing economy users, access to assets is more important than ownership of such assets.

[1] https://www.uber.com/.
[2] http://schlaf.me/post/81679927670.
[3] Do-It-Yourself (DIY).

Figure 2: Sharing, or renting?



Source: http://www.gravitytank.com/pdfs/info_graphics/SharingEconomy_web.pdf.

In sharing economy transactions there is generally an exchange of money, as users/consumers are clearly willing to pay for this 'sharing', and often the creation of some form of employment. However, while the new platform based companies of the sharing economy create opportunities to generate income, they do not tend to share the wealth that is being created in the company as a result of the individuals' willingness to 'share'/ make their assets—car, house, time etc.—available.

Perhaps these new services providers are not that different from traditional 'brick-and-mortar' companies that share profits with shareholders but not necessarily with their employees. The term 'platform capitalism'[4] has been used to characterize the principle of the sharing economy. This can apply to the 'large' aggregator companies that provide the technologies and the platform, but also to the 'person companies'/ micro-entrepreneurs that they enable (e.g. people renting out their physical assets or selling their time on-demand). The 'on-demand economy' and 'the matching economy' have also been offered as alternative, and arguably more accurate, terms for the 'sharing economy'.[5] These alternative terms also reflect the increasing preference for consumers' instant gratification of their specific needs, anywhere anytime. However, economist Robert Reich argues that the 'share-the-scraps' economy would be a more appropriate term, fearing that rather than offering increased opportunities, the 'sharing economy' is actually 'hurtling us backwards'.[6]

It appears that what differentiates sharing economy type firms or services from traditional brick and mortar companies is that they act more like 'instant matchmakers', matching demand and supply for the use of physical assets and time. There are really two types of services provided by the 'sharing economy' platform based companies. The first category is comprised of those services that enable the sharing of physical assets. They match those looking for the 'time share use' of a physical asset with those supplying it. The second category is more of a matching service persé, matching those with time to do things with those who need the services of that time. Examples in

[4]http://www.spiegel.de/netzwelt/netzpolitik/sascha-lobo-sharing-economy-wie-bei-uber-ist-plattform-kapitalismus-a-989584.html.
[5] http://www.businessinsider.com/the-on-demand-economy-2014-7; http://conversableeconomist.blogspot.com/2015/05/the-sharing-economy.html?m=1.
[6] http://robertreich.org/post/109894095095.

this category include dog walkers, people who run errands, clean, or do furniture assembly and other DIY jobs around the house (e.g. Handy and TaskRabbit[7]). How is this different from what already existed? The new platform based services companies make the matching of supply and demand of these services easier and faster with the introduction of apps and online platforms, a convenient 'place' where producers and consumers of these services meet, connect and transact in one seamless process, available anywhere anytime on mobile devices. It has also allowed an even greater degree of 'on-demand' services, with ever-greater customization and specialization to the needs of customers.

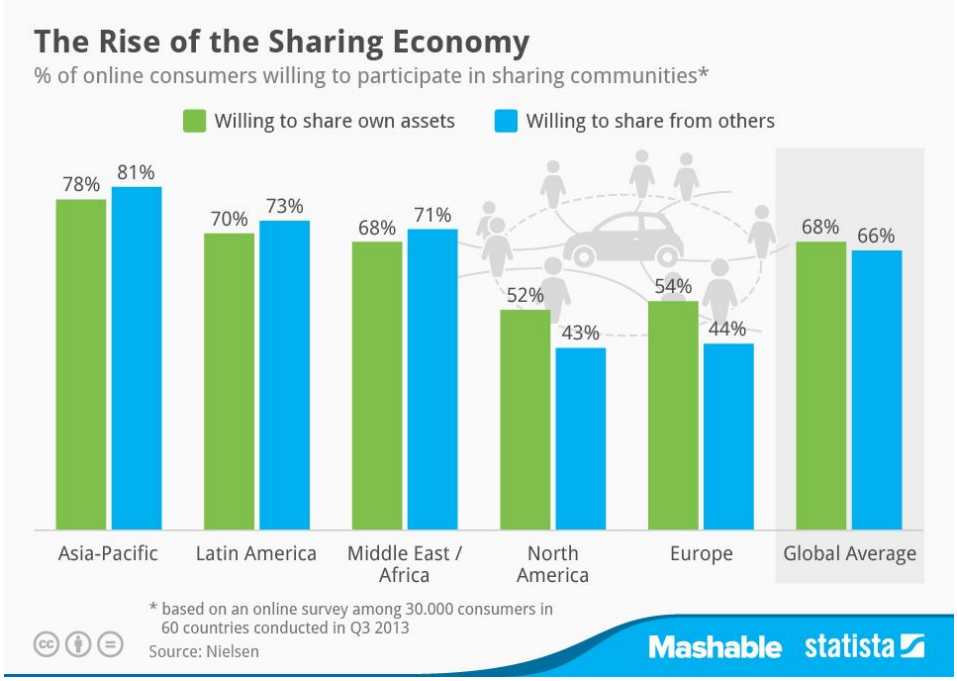
The main innovation in the sharing economy business model comes from the technology platforms and mobile apps that bring together and aggregate demand and supply in ways that were not possible before (faster, cheaper and more efficiently allocated and coordinated) - including in geographical areas/ service sectors where less density would make this more complicated, creating new business opportunities. The Internet reduces transaction friction in connecting those offering assets or services and those wishing to consume them and enables that at massive scale with instantaneous matching. The success of 'sharing economy' companies such as Uber or Airbnb[8] depends greatly on the ability to efficiently share a physical asset (car, house), but in the case of concierge or delivery services, for example, there is no real 'sharing' involved in the transaction, other than the time of the person running the errands and doing the chores. In the latter cases value is derived by more efficiently allocating human resources and capacity, and more efficiently matching demand and supply.

Trends

The sharing economy depends on people's willingness to share (figure 3). For example, according to a Nielsen survey, 28% of global respondents were willing to share or rent their electronic devices for a fee (respondents in Asia-Pacific were more willing to do so at 39%). Other items global respondents were willing to rent include power tools (23%), bicycles (22%), clothing (22%), household items (22%), sports equipment (22%), cars (21%), outdoor camping gear (18%), furniture (17%), homes (15%) motorcycles (13%) and pets (7%). In addition, 26% of global respondents will rent lessons or services via the Internet, such as music lessons or dog sitting services.[9]

[7] https://www.handy.com/ and https://www.taskrabbit.com/.
[8] https://www.airbnb.com.
[9] http://www.nielsen.com/lb/en/press-room/2014/global-consumers-embrace-the-share-economy.html.

Figure 3: The sharing economy depends on people's willingness to share



Source: http://www.statista.com/chart/2323/the-rise-of-the-sharing-economy/.

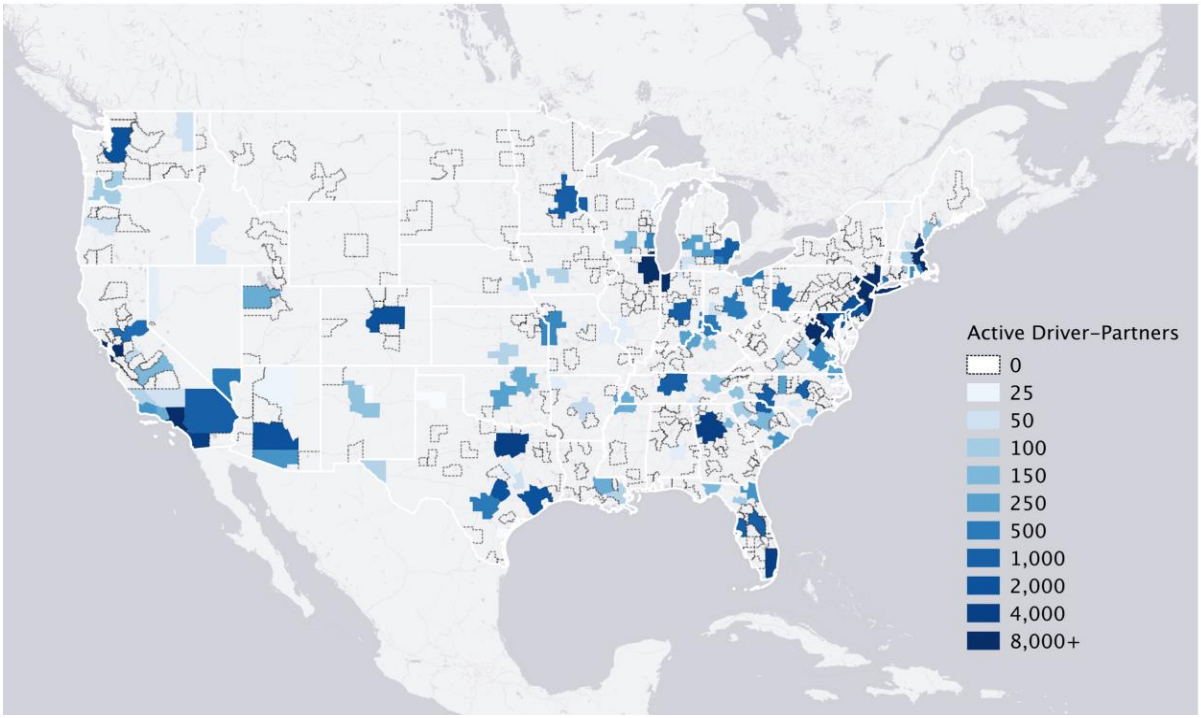
The sharing economy covers many sectors (see also figure 2), including transport, delivery and logistics, travel and hospitality, home services, dining, food and beverages, and finance, each with their own substantial market potential. Some companies are developing and expanding globally, whereas other markets are still more confined to the US often in dense urban areas, and/or developed countries. For example, as of early March 2015, Airbnb reported operating in more than 34,000 cities and 190 countries (figure 4), and over 25 million guests.[10] At the same time, Uber was available in 55 countries, with a presence in some 150 cities in North America (figure 5), 11 cities in Central and South America, 63 cities in Europe, Middle East and Africa, and 45 cities in Asia Pacific.[11] Other services are only available in defined and smaller geographic areas, at least initially, such as one-hour delivery by Amazon—only available in (some parts of) the Manhattan borough of New York City.[12]

[10] https://www.airbnb.com/about/about-us (accessed 2 March 2015).
[11] https://www.uber.com/cities (accessed 2 March 2015).
[12] As of early March 2015.

Figure 4: Worldwide Airbnb listings as of early March 2015

Source: https://www.airbnb.com/about/about-us.

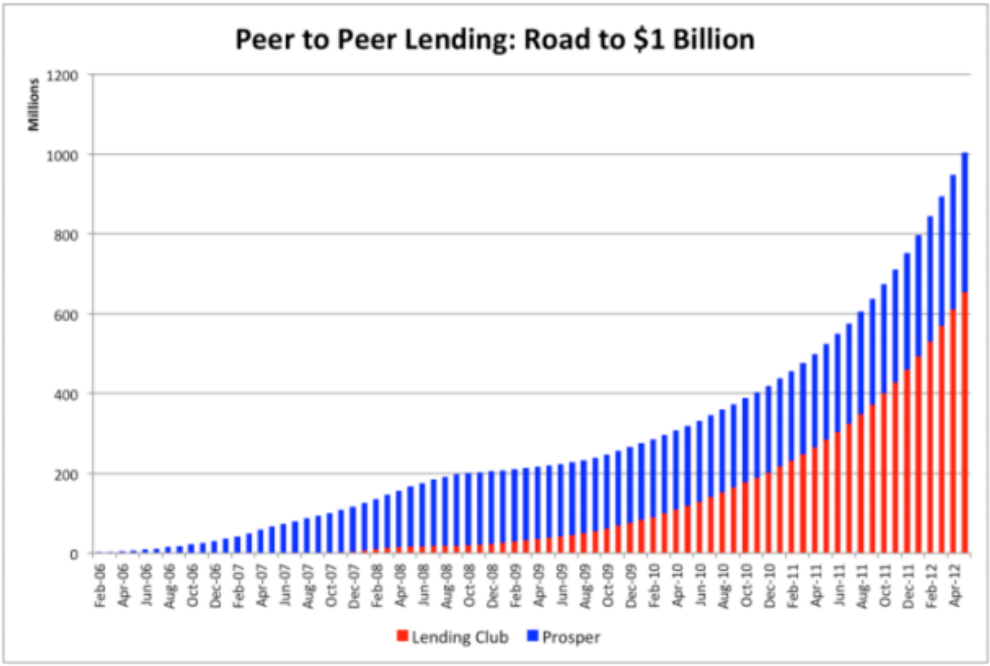
Figure 5: Active Uber drivers in the US, November 2014



Source: https://s3.amazonaws.com/uber-static/comms/PDF/Uber_Driver-Partners_Hall_Kreuger_2015.pdf.
Note: The map indicates the number of Uber driver-partners who took at least four trips in November 2014, by Census MSA.

In contrast to these globally operating services platforms, growth in the market for peer-to-leer lending, for example, is for now more concentrated in the United States, with reported growth rates of around 250%.[13] The US the market is especially growing fast with companies such as Lending Club[14] and Prosper[15] (figure 6).

Figure 6: The US peer-to-peer lending market



Source: European Commission, DG Enterprise and Industry (2013), 'The sharing economy: Accessibility based business models for peer-to-peer markets—Case study 12':

http://ec.europa.eu/enterprise/policies/innovation/policy/business-innovation-observatory/files/case-studies/12-she-accessibility-based-business-models-for-peer-to-peer-markets_en.pdf.

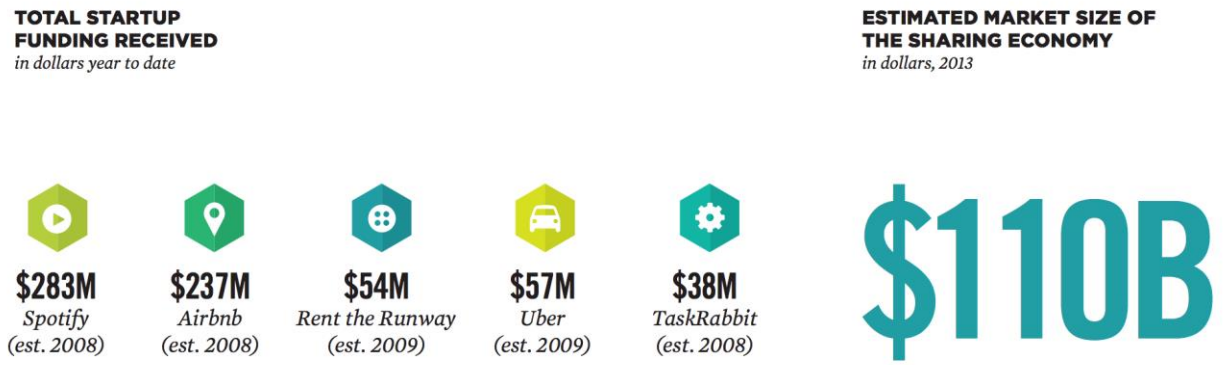
[13] European Commission, DG Enterprise and Industry (2013), 'The sharing economy: Accessibility based business models for peer-to-peer markets – Case study 12': http://ec.europa.eu/enterprise/policies/innovation/policy/business-innovation-observatory/files/case-studies/12-she-accessibility-based-business-models-for-peer-to-peer-markets_en.pdf

[14] https://www.lendingclub.com/

[15] https://www.prosper.com/

Sharing economy startup companies are also successful in funding rounds with many keen investors, and the estimated market size is large and growing (figures 7a and 7b).

Figure 7a: There are investment opportunities in the sharing economy



Source: http://www.gravitytank.com/pdfs/info_graphics/SharingEconomy_web.pdf.

Note: By December 2014, Uber was worth over $40bn, and Airbnb a rumored $13bn.[16] PwC also estimates that total revenues for the five most prominent sharing economy sectors (peer-to-peer (P2P) finance, online staffing, P2P accommodation, car sharing and music/video streaming) could rise from $15bn in 2014 to around $335 by 2025.[17]

Figure 7b: Sharing economy firms are successful in funding rounds (June 2014)

Source: http://venturebeat.com/2014/06/19/uber-and-airbnbs-incredible-growth-in-4-charts/.

Note: By December 2014, Uber was worth over $40bn, and Airbnb a rumored $13bn.[18]

[16] http://www.wsj.com/articles/ubers-new-funding-values-it-at-over-41-billion-1417715938 and http://upstart.bizjournals.com/money/loot/2015/01/05/companies-are-on-the-ipo-watch-list-for-2015.html?page=all

[17] http://pwc.blogs.com/press_room/2014/08/five-key-sharing-economy-sectors-could-generate-9-billion-of-uk-revenues-by-2025.html.

[18] http://www.wsj.com/articles/ubers-new-funding-values-it-at-over-41-billion-1417715938 and http://upstart.bizjournals.com/money/loot/2015/01/05/companies-are-on-the-ipo-watch-list-for-2015.html?page=all.

The sharing economy offers opportunities for people across the demographic spectrum (Uber example in table 1) to generate an income (Uber example in table 2), either full time or part-time (Uber example in table 3), and/or as a complement to other employment, being a parent at home, or while in education.[19]

Table 1: Characteristics of Uber's Driver-Partners, Taxi Drivers and All Workers

	Uber's Driver-Partners (BSG Survey)	Taxi Drivers and Chauffeurs (ACS)	All workers (ACS)
Age 18-29	19.1%	8.5%	21.8%
30-39	30.1%	19.9%	22.5%
40-49	26.3%	27.2%	23.4%
50-64	21.8%	36.6%	26.9%
65+	2.7%	7.7%	4.6%
Female	13.8%	8.0%	47.4%
Less than HS	3.0%	16.3%	9.3%
High School	9.2%	36.2%	21.3%
Some College / Associate's	40.0%	28.8%	28.4%
College Degree	36.9%	14.9%	25.1%
Postgraduate Degree	10.8%	3.9%	16.0%
White Non-Hispanic	40.3%	26.2%	55.8%
Black Non-Hispanic	19.5%	31.6%	15.2%
Asian Non-Hispanic	16.5%	18.0%	7.6%
Other Non-Hispanic	5.9%	2.0%	1.9%
Hispanic	17.7%	22.2%	19.5%
Married	50.4%	59.4%	52.6%
Have Children at Home	46.4%	44.5%	42.2%
Currently Attending School	6.7%	5.0%	10.1%
Veteran	7.0%	5.3%	5.2%
Number of Observations	601	2,080	648,494

Source: https://s3.amazonaws.com/uber-static/comms/PDF/Uber_Driver-Partners_Hall_Kreuger_2015.pdf.

Note: The American Community Survey (ACS) data pertain to the same 20 Uber markets as the Benenson Strategy Group (BSG) survey, and are for 2012 and 2013.

[19] https://s3.amazonaws.com/uber-static/comms/PDF/Uber_Driver-Partners_Hall_Kreuger_2015.pdf.

Table 2: Comparison of Median Hourly Earnings of Uber Driver-Partners and Hourly Wages of Taxi Drivers and Chauffeurs

	Earnings Per Hour or Hourly Wages	
	Uber Driver-Partners (Earnings Per Hour)	OES Taxi Drivers and Chauffeurs (Hourly Wages)
BOS	$20.29	$12.92
CHI	$16.20	$11.87
DC	$17.79	$13.10
LA	$17.11	$13.12
NY	$30.35	$15.17
SF	$25.77	$13.72
Avg. BSG Survey Uber Markets	$19.19	$12.90

Source: https://s3.amazonaws.com/uber-static/comms/PDF/Uber_Driver-Partners_Hall_Kreuger_2015.pdf.

Note: For Uber Driver-Partners: Uber. Data aggregated to the driver-month level and medians of hourly earnings reported for Uber's driver-partners who drove at least one hour a week during the month of October 2014. Earnings per hour are net of Uber fees but do not adjust for expenses. For OES Taxi Drivers and Chauffeurs: OES data from May 2013. OES average for all areas in last row is weighted by the number of taxi drivers and chauffeurs in the 20 BSG market areas. The figure reported for Uber in the last row is the weighted average of median earnings per hour in the 20 market areas, where weights are the number of taxi drivers and chauffeurs in the market area. Abbreviations: BOS=Boston, CHI=Chicago, DC=Washington DC, NY=New York City, and SF=San Francisco.

Table 3: Distribution of Uber's Driver-Partners and Taxi Drivers and Chauffeurs by Hours Worked (USA)

	Uber driver-partners	Taxi Drivers and Chauffeurs (ACS)
1-15 hours/week	51%	4%
16-34	30%	15%
35-49	12%	46%
50+ hours/week	7%	35%

Source: https://s3.amazonaws.com/uber-static/comms/PDF/Uber_Driver-Partners_Hall_Kreuger_2015.pdf.

Note: Uber and 2012-13 American Community Survey. Data for Uber driver-partners pertain to each week when they worked at least one hour in October 2014. ACS hours based on "usual hours worked per week past 12 months." All data are for BSG surveyed market areas.

Winners and losers in the sharing economy

In the absence of official, or even comprehensive, statistics it is difficult to determine precisely who is participating in the sharing economy, and what the impacts and net effects are. In addition, outcomes will depend on the type of service under consideration, and may also differ between the user/consumer side and supply side of these transactions. For example, it can be argued that on the supply side, a person needs to own desirable assets (e.g. a car, housing, equipment) in order to share them. But certain companies offer help in acquiring the assets (e.g. Uber helping out with new car financing), and in other cases less desirable lower income housing may become a (sustainable tourism) tourist attraction, as in the case of Favela Experience[20] in Brazil.

On the user/consumer side, these services may make assets available to those who might otherwise not be able to afford them (car, machinery, tools, etc.). In the case of services that are more based on the availability of time, the general tendency appears to be for relatively lower wage type services to be supplied to relatively better off, often younger, urban professionals. In addition, some Internet (and mobile) connectivity and use is required to participate. Without access to the Internet, participation in the sharing economy is pretty much ruled out. This means that certain parts of the developed world (e.g. rural and/or remote areas) and parts of the developing world are unlikely to participate, at least in the near future. In the developing world in particular, affordable access and use may be a barrier, as well as the availability of supply. Many of these services also rely on credit cards and/or other online or mobile payment systems, which may exclude part of the developing world, for now. Much innovation is under way in developing and rolling out new (mobile) payment and financing mechanisms in order to grow financial inclusion beyond the traditional financial systems in place in the developed world.

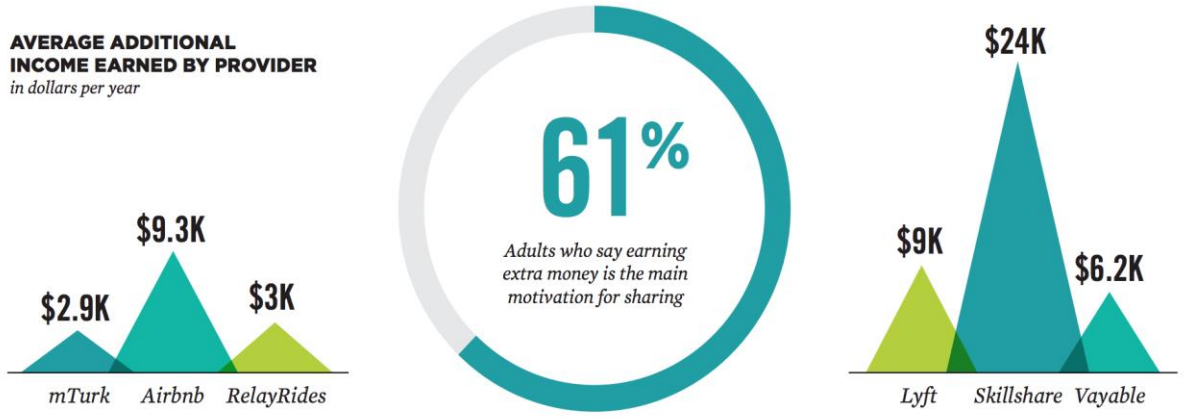
Opportunities

Those who benefit in the sharing economy include the successful companies, their founders, owners, investors and employees, but also consumers who have more efficient access to (more of) these services. Participants in these service models benefit from the opportunity to generate income including as a supplement to other sources of income (figure 8). Indeed, in some cases, the sharing economy creates new full time employment opportunities, in other cases part-time opportunities or freelance and contracting opportunities, which allow people to complement their existing jobs or earn extra money while in education, for example.[21]

[20] http://www.favelaexperience.com/

[21] For example, Jonathan Hall and Alan Krueger find that "drivers who partner with Uber appear to be attracted to the platform in large part because of the flexibility it offers, the level of compensation, and the fact that earnings per hour do not vary much with hours worked, which facilitates part-time and variable hours". https://s3.amazonaws.com/uber-static/comms/PDF/Uber_Driver-Partners_Hall_Kreuger_2015.pdf

Figure 8: Average additional income earned by sharing economy 'providers'



Source: http://www.gravitytank.com/pdfs/info_graphics/SharingEconomy_web.pdf.

It is clear that many participants on the supply side benefit from greater flexibility in choosing when to work or make assets available, and on the demand side users/consumers benefit from customized and/or on-demand services. The users/consumers may also benefit as they have a more efficient way to satisfy their needs, and in cases it may give them access to goods and services they might otherwise not be able to afford. For example, a person may not be able to buy a certain type of power tool, but they can afford to 'share' it for an hour or a day without having to buy it themselves.[22] Or someone may be able to just buy a person's time for the duration it takes to hang up a picture frame rather than having to employ a full-time handyman. At the aggregate level, the allocation and use of time and resources should become more efficient, and services gaps may be bridged. More efficient use of physical assets and other resources that might otherwise be idle should aid sustainable development. Especially in the developed world this can be seen as a positive development to counter some of the consumerist tendencies where people are thought to 'have more than they need'. Thus, sharing assets can be seen as putting less strain on societies going forward. In addition, more sharing can improve community welfare and reduce negative environmental impacts, including in developing countries.[23]

Challenges

In many cases, existing (traditional/ brick-and-mortar) companies with large and capital intensive physical asset inventories—such as taxi companies and hotel chains—are most challenged by alternative models that manage asset allocation more efficiently. However, in theory, this creates more competition which should incite existing companies to innovate, change pricing policies, and improve the quality, delivery and efficiency of their services. Consumers are generally free to choose, so all companies can compete for their business. Provided the regulatory environment

[22] In the words of Brian Chesky, founder of Airbnb: "There are 80 million power drills in America that are used an average of 13 minutes. Does everyone really need their own drill?"; http://www.nytimes.com/2013/07/21/opinion/sunday/friedman-welcome-to-the-sharing-economy.html?_r=1

[23] http://www.nytimes.com/roomfordebate/2014/05/06/regulating-the-sharing-economy/a-digital-economic-opening-for-the-worlds-poor.

adapts and enables new entrants and new business models, the overall impact on the economy should be positive.

While workers in these sharing economy companies have employment/income generation opportunities, they may be disadvantaged longer term as current systems do not generally entitle them to benefits, health insurance, sick leave, unemployment insurance/benefits, pension schemes, or training. It is also likely that the competition from new 'sharing economy' business models will cause traditional business to constrain and reduce worker benefits and protections in order to compete effectively. Going forward it is important for governments and policy makers to think about how to address the implications of these social aspects of the sharing economy. One example would be a system where benefits are 'portable'—attached to the person rather than the job or company—so workers take it with them wherever they go.

Barriers

The main barriers in the sharing economy revolve around regulation, (access to affordable and high class) infrastructure, and trust in the online economy. In many cases regulation is outdated and cannot accommodate the implications of the technologies and services offered in the new sharing economy. Keeping pace with rapid changes in markets—particularly those driven by technology—has been a perennial problem for policy makers and regulators. The tendency is to regulate or control that which is not yet well understood or appears to be (too) disruptive to existing models. In developing countries, and in parts of developed countries, infrastructure (hard and soft) can also act as a barrier. Indeed, the hard (physical) infrastructure has to be available to be able to create platform services that run on top of the infrastructure. People must also have the skills and tools (affordable broadband connections, smart phones etc.) to use them. Trust is another key ingredient in the sharing economy eco-system, both in terms of the treatment of the personal data that are collected, stored and used by the companies offering the services, and also in the reliability and quality of the service delivery (e.g. getting packages undamaged and on-time, by delivery staff who are professional and have been vetted including through background checks). Indeed, Uber (for example) has had incidents in which drivers have been accused of criminal and/or harmful activities. The absence of, or lack of access to, some form of credit card or online/mobile payment systems may also exclude people from being able to use sharing economy type services.

New divides

New 'sharing economy divides' may be appearing in terms of the availability of sharing economy type services offerings and supply opportunities. Some of the 'on-demand' services (such as delivery, picking up and shipping parcels, food preparation and delivery, washing/dry cleaning, etc.) are in great demand in particular by relatively well-off professionals in urban areas, but possibly less so in more remote or poor areas. As these services tend to require volume and scale, they are also unlikely to be available in areas with less population density and/or in more remote rural areas. At the same time, there might be less demand for certain types of services too (for example, the delivery service Parcel[24] acts as a middle man in delivery in buildings in urban areas where there is no one to sign for UPS and FedEx deliveries when the customer is not at home, whereas in rural areas packages can often be left outside the home). The availability of affordable

[24] https://fromparcel.com/.

and reliable infrastructure can be another divider. If people do not have the sharing economy technology, tools and skills they cannot participate in the sharing economy (this can be seen as an extension of the so-called 'digital divide'). Hence, there is a divide in who has access to the sharing economy services, either through affordable infrastructure availability, and/or through the services offering available.

Growth opportunities

Developing countries

The argument is often made that many of the sharing economy type services (e.g. delivery services, concierge type services) already exist in developing countries, but informally. Even when this is the case, there is scope to make the process more efficient, and more beneficial (if more people can benefit from consuming the services and/or from becoming a supplier of the services) through the use of the sharing economy technologies and platforms. In developed countries, the shift to platform services based employment could be seen as a shift to more informal types of working arrangements, more 'informal' ways to generate income, whereas in developing countries it could be seen as a way to formalize services that already existed informally while also increasing the opportunities and scope for innovation and creation of new services. A local development argument can also be made in locations where sharing economy companies offer their services, in particular if/when they use local workers, and if it leads to agglomeration effects. If these companies invest in a locality it may improve the infrastructure (or the infrastructure may have been improved to attract them), create more local investment, attract other businesses, and create (more) employment opportunities.

It can also be argued that the 'sharing economy' attributes may be more inclusive and provide more economic opportunities for developing countries. For example, it is sometimes argued that the user/customer review system used by many 'sharing economy' type services can overcome some of the informational problems that traditionally justify regulation. Take the review systems used by Uber and Airbnb on both the supply side (drivers and accommodation) and the customer side. These systems might (arguably) be able to bypass the need for more formal regulation to maintain certain standards and safeguards: "in a country with a corrupt government, would you be more confident having a cab driver with a long list of good reviews or one with a bureaucratically issued license?."[25] Many developing countries are still plagued by issues that can make doing business there in the traditional sense and/or with large companies and fixed investments unattractive, such as unreliable or corrupt governance, difficulties in access to funding, weak/non-existent regulation and enforcement of (intellectual) property rights, business models that require large amounts of capital investment that is not footloose (i.e. not easy to pull out or move rapidly). However, sharing economy business models provide opportunities that can bypass many of these weaknesses as they typically require less capital investment, can benefit from peer or crowd funding type models, and the peer-to-peer and review systems may help overcome the governance and regulatory issues.

In spite of differences in culture and attitudes, which could be a barrier to doing business and or engaging in transactions and exchanges online, a 2014 Nielsen survey found a relatively high

[25] http://www.forbes.com/sites/modeledbehavior/2014/08/04/the-sharing-economy-and-developing-countries/.

willingness of online consumers in developing regions to participate in the sharing economy, showing "how the web can quickly become part of the culture." The report argues that "online consumers in developing markets often represent a younger and more affluent demographic than the general population, which can contribute to greater eagerness and enthusiasm."[26] However, it may also be the case that some of these services already existed informally, and that the willingness to 'share' was already more part of the culture in some countries.

Substitution or complementarity?

How much the sharing economy contributes to growth and employment opportunities will in part also depend on whether it substitutes or complements the traditional economy. This is a difficult question to answer, at least for now, as the answer may depend on the type of service, and/or may change over time. If people rent (share) their car, house or tools rather than using traditional taxi services, staying at hotels, or buying their own tools there are substitution effects at play. If the availability of shared services makes them more affordable it can also lead to additional complementary consumption. For example, in the case of Airbnb, if the availability of cheaper accommodation increases the number of people who can travel, and/or increases the length of stay, potentially increasing the total amount of local spending, there may still be positive growth effects in spite of a substitution effect, especially when these factors also increase associated consumption (e.g. eating out in restaurants, visiting tourist attractions, buying souvenirs). Some services may act as a complement to existing products and services (e.g. Parcel delivers in cases where UPS or FedEx cannot deliver, thus acting as a complement). The sharing economy also allows for hyper-specialization and customization which creates niches that might otherwise be challenging to supply. It is difficult to predict today how the overall aggregate effects will play out. While there is a lot of disruption in some sectors, in does not necessarily have to mean destruction.

[26] http://www.nielsen.com/lb/en/press-room/2014/global-consumers-embrace-the-share-economy.html.