In 2004, Yochai Benkler of Yale Law School asserted that social sharing represents a third mode of organising economic production, alongside markets and the state. However, with the exception of carpooling, he acknowledged that “he was hard-pressed to find instances where sustained sharing of valuable things is prevalent in the world outside information technology.” But a few years later, Forbes estimated that the revenue flowing through the sharing economy directly into people’s wallets would surpass $3.5 billion in 2013, with growth exceeding 25%.

The idea of sharing resources is an ancient one. Explaining it, less so, partly because there are some definitional issues to overcome. For example, a production process that requires the combined contributions of many people of different skills and specialisms (analysed by 18th century economist Adam Smith in his discussion of ‘the division of labour’) might be called sharing if it is done as a cooperative venture in which each then receives part of the revenues as their reward, but would not be so if organised by an entrepreneur who pays contracted wages and takes the profit.

It follows that most modern commercial enterprises, such as joint stock companies that ‘share ownership’, do not operate their assets on a sharing basis, but in the world of modern banking the principle of sharing survives in the form of Islamic banking. This replaces the notion of interest with the notion of sharing the profits on investments. In the European Middle Ages this was also the basic principle of the ‘scholastics’, religious scholars who denounced usury.

So, as the Bible (Ecclesiastes) says “there is nothing new under the sun” when it comes to sharing; except, perhaps, in the use of the internet, where the rise of the internet-based sharing economy has been variously called ‘collaborative consumption’, ‘asset-light lifestyle’, and an economy that is ‘collaborative’, ‘peer’ and ‘access’ as well as ‘sharing’.
Sharing can be purely social, but can also have a powerful business motivation.

Many of today’s sharing economy start-ups are purely commercial ventures, but with very few capital assets of their own. Their main outlays are on the costs of administration, marketing, etc., yet they hope to make revenues and more often than not turn to venture capital for their initial funding. Sharing economy companies such as Airbnb and Uber – currently two of the best known start-ups globally – do not own the performing assets that generate revenue, apartments and rooms in the case of Airbnb, or taxis and private vehicles providing taxi services in the case of Uber.

Their market appeal is dependent on three factors: first, they cut the transaction costs involved in marketing these assets by creating a centralised, easily accessible online marketplace. Second, they often do not just focus on a single market but sell assets across a wide range of services. By opening up alternative options, such as taxis at peak periods when they are difficult to find (but see ‘China’ below) they stimulate awareness and interest and ultimately demand.

This should not be overestimated. Companies like Airbnb and Uber and others still have to advertise to drive demand, partly against their competitors but partly to grow the market size. This is turn stimulates supply. Companies that bring together the networks of suppliers and customers in this way are sometimes referred to as multisided platforms (MSPs) serving what are known as two-sided markets.

Third, these companies can become trusted third parties if they also introduce guarantees of service quality, service delivery, safe payment processes, insurance against risk, and so on. This builds their markets in terms of scale (more users) and scope (more categories of services). In some cases these additions may be the requirements of regulators, such as car insurance and certificates of mechanical worthiness, and although the costs of compliance may rise, so will consumer confidence. But for any sharing economy business to work it must hit on an appropriate business model in which all the participants see some benefit.

THE SHARING MODEL

The concept of sharing is a broad one, and there is no one sharing model. The assets involved may be personal work and time, personal wealth, or personal ownership of physical things. But a distinction needs to be drawn between sharing of resources and sharing of property. The idea of a ‘tragedy of the commons’ is often cited in these terms (see panel, page 35).

In the US, by 2014 the sharing economy was appearing everywhere there were mobile phones and apps. Using a definition of on-demand mobile services (ODMS) as “apps which aggregate consumer demand on mobile devices, but fulfill that demand
confirmed through offline services”, a researcher’s blog at RRE New York Venture Capital adds: “ODMS deliver a ‘closed loop’ experience by collapsing the value chain including discovery, order, payment, fulfillment (offline but within owned network) and confirmation” (see graphic above).

Other countries are also seeing the rise of sharing economy apps, such as Singapore, where the Sharing Economy Association (Singapore) was set up in 2014 to promote the field. Advising the association, and undertaking research on the economics of sharing, behavioural issues and social effects, and the technological platforms, is the Initiative for Sharing Economy Research – see ise.sutd.edu.sg for details.

TRAGEDY OF THE COMMONS
The tragedy of the commons becomes a controversial subject as social values and politics get mixed with economic theory and analysis. The most often cited examples are the use of common land for grazing cattle or for recreational purposes. If no-one owns it, no-one has an economic incentive to care for it. Overgrazing or unattended litter can spoil the common resource for everyone. If there are common rules such as limited grazing times or taking your own litter home with you, the ‘free rider’ problem arises. Selfish people ignore the rules for their own perceived advantage. So enforcement of rules becomes a necessary shared expense, by employing someone to police the common area.

The issue here is not that everyone is primarily motivated by their own selfish economic advantage, but that it only takes a minority to undermine the majority. The alternative view of the ‘property rights’ school says that if the land were parcelled out to individuals to own it they could reach their own sharing cooperative arrangements. The truth is probably that both approaches work well in their own different environments. The smaller the scale, reliance on property rights may be a workable answer; on a larger scale it may not be so practical and simply puts too much economic power in the hands of too few.

What really distinguishes sharing models today is the use of the internet, initially as a means to connect two or more parties, but also to create additional value-added services.

TAXES AND TAXIS
The rise of a sharing economy is putting pressure on regulators. In cases where the sharing is a purely communal venture there is no great issue. Websites such as TaskRabbit in the US, which match demand for assistance, whether it be for babysitting or plumbing, with neighbours in the locality who have the time and the skills, are generally regarded as benign. These sites give token credits for hours put in and those credits can be used to ‘pay’ for the services of others when they are needed.

However, it becomes more contentious when cash payments are made. In the UK a sharing service called ParkatmyHouse, which connects house owners with unused driveways and car owners looking for parking spaces, ran up against a local authority that threatened to fine a household £2,000 for illegally renting out their driveway space. The UK government has now responded by legalising such services as innocuous and efficient, but it remains the case that if property is to be rented out then the income needs to be declared.

If the payments are made not in the national currency but in a cryptocurrency, such as bitcoin, another series of issues arise for monetary regulators. Are such payments recognised for taxation purposes and if so, what is the applicable exchange rate? Are they easily detected and traceable? Are they legal? There are several forms of ‘alternative currency’ ranging from local community currencies – available and expendable only within a locality – to global cryptocurrencies which are used by consumers for international payments, to corporate currencies which are used between businesses as payment systems. Each represents a shared economic resource aiming at becoming a store of value, a means of payment and a measure of value. Their existence indicates that the challenge is to many different regulators in many different sectors of the economy.

The most public of issues arise when a fully commercial sharing service, such as Airbnb or Uber, is challenging the markets of incumbent businesses, such as hotels and taxi companies, which come under an often complex mix of different taxes and operational rules and regulations. And because these are commercial sharing economy ventures, the logic of the marketplace is that they will expand into new value-added services, such as insurance, travel guides, booking systems and goods delivery services – in fact anything that is complementary to their core business, and this in turn will widen the scope of the disruption they will cause to established and traditional ways of doing business – a familiar tale in the age of the digital economy.

Taxes
Often it will be difficult to distinguish between shared economy activities and the ‘underground’ economy which operates in grey/dark areas with regards to taxation. Residents who rent out their properties often do so on a casual basis, for example when they are on a long trip away from home. But they may also do so on a large scale as a regular commercial business. In most jurisdictions, all
such revenues are to be declared for tax purposes, but they can be difficult to police and the costs of detection can easily outweigh the taxes foregone.

An example is house owners with mortgages who are prohibited by banks from subletting; but as long as the loan repayments are forthcoming on a regular basis the banks rarely employ agencies to investigate them. Similarly, public housing authorities are hardpressed to check on every tenant, but if neighbours complain then an alert is sounded. In June 2014, two homeowners in Singapore had their flats confiscated by the Housing Development Board (HDB) for letting their units to tourists. Short-term rental remains illegal in Singapore.

Companies such as Airbnb have run up against the taxation issue in a number of places, and although several cities including Hamburg, Amsterdam and Seoul have passed rules allowing short-term holiday rental services in private residences, Airbnb’s business model has faced legal challenges in others such as Berlin and New York, where the state attorney general claimed that almost two-thirds of Airbnb’s hosts were breaching a New York law prohibiting them from subletting their entire homes for less than 30 days. The attorney general demanded that Airbnb hand over details of 1,849 renters who owned multiple properties. Airbnb eventually reached an agreement to hand over business records without revealing the individual names of customers who therefore would not be taxed retroactively.

Sharing economy companies are being forced to walk a tight line while the local authorities work out how to adjust their policies. In many cities, residents in certain zones are not permitted to sublet. In tourist zones in the US, hotels operate under a series of local and state taxes. For example, there is a hotel occupancy tax in New York City of 5.875%. To meet the requirements of taxation authorities, Airbnb has reached agreements to collect occupancy or ‘hotel’ taxes in NYC, San Francisco and Portland, Oregon. In Chattanooga, Tennessee, the city council has decided to re-zone an entire neighbourhood to allow short-term rentals as tax revenue was being lost to ‘underground’ rentals.

Taxation battles are not to be taken lightly, and the needs of public authorities to fund local government expenditures, be it big or small government, are unavoidable. What the sharing economy may well do, however, is to kickstart debates about taxation reform, and the desirability to harmonise and simplify tax rates across a host of close substitute sectors, such as hotels and home-stay rentals.

TAXIS

Of all the new sharing economy services, taxi apps have proved the most controversial to date, bringing out supporters and opponents wherever they operate. The word ‘disruptive’ has rarely been plainer to see. Vested interests include traditional taxi companies, in many cases regulators that take exception to a bending of long-established practices and rules, and even logistics and delivery companies that fear that start-ups such as Uber, Lyft, GetTaxi, GrabTaxi and Hailo will end up eating into their business. For example, Uber has started a grocery delivery service in the US.

In August 2014, Uber also opened its applications interface to developers. “In effect, Uber is no longer just an app for requesting taxis trips; the Uber app will now be able to become a platform for other services, across a broad range of industries.” Is it the case that not just taxi carts will be ‘apped’ to death?

Europe

The black cabs of London worry about it. The taxi drivers pay a large sum for their cabs and licences for which they must complete ‘the knowledge’ of London streets, and the resale value of their business is seen by most as ultimately part of their retirement pension. On a technicality, they claim that the Uber smartphone app, which records distance and calculates the price for the journey, is in effect a taxi meter which, according to regulations, only licensed black cabs are permitted to use.

Similar protests by taxi drivers have taken place in capital cities across Europe and in at least 15 cities worldwide. The reaction from city governments has been varied. In Europe several cities have tried to ban taxi apps with Brussels, for example, threatening €10,000 fines and Hamburg threatening to follow suit despite Germany’s monopolies commission recommending to the federal government the deregulation of the taxi market.

Uber’s reported response, reminiscent of internet file-sharing companies in other sectors, has been to argue “it is not a cab firm but an enabling ‘platform’”. This line of argument sounds more like a workaround than a confrontation with the real issue of how to provide a service, and rather parallels the ‘when is a meter not a meter but just a software app’ of the black cab companies, relying on technical niceties.

The then European commissioner, Neelie Kroes, has been more direct. “Many people know how outraged I was by the reaction of authorities and drivers to the emergence of services like Uber in Brussels, Berlin, Milan and Madrid and more cities across Europe… The fact is that digital technology is changing many aspects of our lives. We cannot address these challenges by ignoring them.”

United States

In the US, the main battle has been the competition between San Francisco-based companies Uber and Lyft, along with smaller start-ups such as the ride-sharing company Sidecar, but reactions from cities like Boston, Dallas, Miami and Las Vegas reflect those in Europe. For example, in New York City, Lyft drivers have been threatened with fines of $2,000. In response to concerns about public safety of vehicles and drivers, California has become the first jurisdiction to create a special category of ‘transportation network companies’ that are obliged to train drivers, run background checks, and provide insurance. In fact the competition between Uber and Lyft is pushing them in this direction as they compete for both passengers and drivers; for example, they have started to offer loans to finance new car purchases and insurance to drivers.

China

A similar story is emerging in China where Kuadi Dache (Alibaba’s ‘Swift’ taxi) and Didí Dache (Tencent’s ‘Honk Honk’ taxi) were going head-to-head, but are now set to merge in what is said to be the largest merger in Chinese internet history. The first step into the market is typically to provide a fleet of limousines for private hire by the better-off middle class customers, followed by a fleet of saloon cars for the average citizen and then to sign up volunteer taxi drivers and then regular taxi drivers to use their app. The inducements offered to taxi drivers to join the business included fare subsidies of RMB10 per ride and commissions of RMB5 to drivers and other perks such as a tipping
function from RMB5–20. These produced unforeseen consequences as taxis in some major cities became almost impossible to hail without a smartphone app.

There are obvious lessons here. First, the sharing apps may have unintended consequences if, instead of creating more supply at peak periods when traditional taxis are difficult to find, they create an incentive to disappear from view. Second, this situation already exists in the arcade world of taxi regulation, with or without the sharing apps, as taxi drivers arbitrage destinations and times of day or night according to a myriad of add-on fees.

In Singapore, for example, the taxi system is probably the most complained about part of the public transport system, and as arranged it seems to serve more than one master, more than the customer alone. The irony is that it is exactly that issue that is creating a market for the sharing apps companies like Uber and GrabTaxi.

### ASIA PERSPECTIVE

The sharing economy is only just emerging in Asia, and regulators and local authorities are still feeling their way. The sharing economy companies consist of local as well as international start-ups because they are serving what is a local supply market even if part of the demand comes from overseas. In many cases governments around the region are expressing awareness of the contribution the shared economy can make to GDP growth and to social and financial inclusion, as well as to innovation. For example, the China Securities Regulatory Commission (CSRC) “has carried out in-depth research and survey regarding the equity crowdfunding industry. At present, based on overseas regulatory experience and the results of the research and survey, we are dedicated to developing a set of regulatory rules for crowdfunding financing.”

In South Korea the authorities have gone further. The city government has declared Seoul as ‘the sharing city’ and outlined detailed plans to support and promote start-ups with an initial allocation of 250 million won ($240.000) funding. Sites such as BnbHero, another apartment sharing site, may look derivative, but they are among the leaders. However, Seoul has also declared the Uber taxi hailing app illegal for offering unlicensed taxi services, while planning its own taxi app in conjunction with the taxi companies.

Taiwan has yet to take a stance, although taxi drivers in Taipei staged a protest in July last year, while the chief of transport in Jakarta in August came out openly against the Uber app, again citing the need for taxi services to be licensed. Uber’s defence has been to repeat that it is not a taxi service but an enabler, a middle-man, but this technical distinction seems unlikely to cut ice with those regulators adamant to maintain current licensing regimes and under intense lobby pressure from taxi cab companies. But sooner or later, the issue of reforming regulations will need to be faced.

In the Philippines, there are lively peer-to-peer (P2P) sharing economy sites, and mobile taxi hailing apps, such as Easy Taxi and GrabTaxi are permitted because they partner with taxi companies, but both

Uber’s hailing app and Tripid’s carpooling service are under threat of being declared illegal for offering a public transport service. Malaysia is home to GrabTaxi and it does seem that partnering with licensed public transport firms is the route of least resistance.

In Hong Kong, as might be expected, mobile sharing economy apps, including taxi hailing apps, are popular, but in Japan the evidence suggests they have not yet caught on. However, there is a very Japanese example of the sharing economy in a house built for sharing “where complete strangers can share kitchens, living spaces and bathrooms”.

### Singapore

Singapore, following Seoul, is the authority that has signalled the greatest interest and commitment to finding ways to harness the inclusive energies of the sharing economy. The Infocomm Media Masterplan 2025 places emphasis on creating a self-sustaining ‘smart nation’ ecosystem. Among the initiatives being encouraged are energy saving and environmentally friendly sharing economy start-up ventures, such as Waste is not Waste and Green Future Solutions, both members of the Sharing Economy Association.

In more controversial areas, such as residential sharing and taxi hailing apps, the Housing Development Board (HDB) and the Urban Redevelopment Authority (URA), which are responsible for public and private sector housing respectively, and the Land Transport Authority (LTA) responsible for vehicle licensing, have been circumspect. The HDB investigates unauthorised subletting, while the URA has re-emphasised that all rental incomes are subject to taxation.

iCarsclub, another member of the association, in July 2014 launched a petition to support its car sharing proposals to the LTA. In June 2014, Forbes reported that iCarsclub was able to raise SGD10 million “just two years after it began operations in Singapore and less than a year after it expanded to China under the name PPzuche”.

It is in the area of the regulation of crowdfunding that the Singapore government seems most open to change, hinting at new terms covering who can raise funds and who can make contributions.

### CROWDFUNDING AND SHARED CURRENCIES

By 2014, over 600 crowdfunding platforms worldwide had generated around $2.7 billion, but in Asia they are very new, with Indonesia being one of the leaders. Equally new to Asia is the appearance of crypto-currencies, but already bitcoin is traded privately in most economies, and bitcoin ATMs operate in Hong Kong, Singapore, Seoul and Taipei.

**Crowdfunding**

Typical ways to fund start-ups begin with personal savings and support from family, friends and relatives; seed money from angel capital or from incubation programmes, just possibly a loan.
from a bank, and larger scale investments of venture capital where the latter looks forward to full commercialisation and an initial public offering (IPO) as shares are issued to private and public investors. The key differentiator along this funding supply chain is between goodwill capital or donations, which may or may not ever get a return, and commercial investment that is looking for capital gains.

Crowdfunding stops short of the full investor stage. Among the best known crowdfunding companies running websites are Kickstarter and Indiegogo, based in the US. Ulule is well known in Europe. In Asia there is Fundator and many others, such as Singapore’s Crowdlending. Probably the most famous case of crowdfunding was Barack Obama’s fundraising in his successful presidential bid in 2012, when 57% of the $1 billion raised came over the internet, an average of $200 per supporter.

Crowdfunding contributions are seen mainly as donations. The first national legislation to cover crowdfunding was enacted in the US in 2012 as the Jumpstart Our Business Startups Act or JOBS Act. Under the act, companies that raise funds through portals registered with the Securities and Exchange Commission (SEC) with up to a maximum of 500 ‘non-accredited’ shareholders or a maximum of 2,000 shareholders including both ‘accredited’ and ‘non-accredited’, can be exempted from many of the regulations governing publicly listed companies. The act aims to give greater scope for crowdfunding as investments beyond simple donations.

Singapore may well be one of the first jurisdictions to follow the US in allowing crowdfunding portals to play a significant role in the financing of sharing economy start-ups.

**Crypto-currencies**

Crypto-currencies, sometimes referred to as alternative currencies, can be either closed-user group or open currencies. Closed-user groups may be geographical entities, such as a town or a mining community, or business networks for B2B payments. The currency may be exchangeable for a national currency or its value may be expressed solely in terms of claims on goods or services, such as discounted grocery products or dog-walking credits. To act as a store of value, all currencies, closed or open, must rely either on trust or possibly a register that records all transactions.

The most well-known of the open crypto-currencies is bitcoin, which relies on a register that is always available to all owners of bitcoins, similar to the way a stock exchange records transactions and fluctuations in reference values.

The first task of an open crypto-currency such as bitcoin is to establish itself as a store of value, otherwise no one would buy or accept it, far less speculate in it. The second step is to function as a means of payment. In March 2014, a real estate deal for a villa in Indonesia took place in San Francisco for $500,000 worth of bitcoin, and major companies such as Dell now accept it. The third step is to become an acceptable medium of exchange, so that the public will accept them. This is certainly a way off, even with full convertibility into sovereign currencies. Since there is no state ‘lender of last resort’ in the eventuality of a devaluation, risk is unavoidable. Also, in some economies in Asia, notably China, bitcoins and similar crypto-currencies have been declared illegal.

This is not so in Singapore where the Monetary Authority of Singapore (MAS) is taking a more circumspect view as outlined by managing director, Ravi Menon: “...digital currencies have a role to play, which is why we have not sought to ban them, or make it more difficult for them to operate. We still have bitcoin ATMs here in Singapore.”

**CONCLUSION**

The sharing economy consists of purely social ventures at one end of the scale and intensely commercial ventures at the other. The internet offers the intermediary enormous opportunities for scale and scope in reaching out. Sharing works within closed communities and across open ones, within B2B, B2C, C2C and P2P settings. Crowdfunding of shared economy start-ups is well positioned for social ventures, but many commercial start-ups need access to larger numbers with more funds to invest. The JOBS Act in the US is the first attempt to revise regulations governing who can invest as opposed to who can donate. Singapore is now considering this issue under the Infocomm Media Masterplan 2025.

Could crowdfunding ever involve crypto-currencies, like bitcoin? More of them are making an appearance, but many are for closed-user groups, such as B2B network transactions or local town communities. Open currencies such as bitcoin have survived initial scepticism, and although some regulators oppose what they see as a possible threat to monetary stability, others like the Monetary Authority of Singapore are keeping an open mind.

All these components of the sharing economy, and others not touched on here, are currently seen as rather marginal to the economy in terms of revenues, users and employment. However, some of the early start-ups already look destined to be the next wave of internet companies, unless of course they get gobbled up by the last wave, in which case the disruptors will become the disrupted.

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