

# SHARING ECONOMY

EMBRACING CHANGE WITH CAUTION

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NÄRINGSPOLITISKT  
FORUM

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## ENTREPRENÖRSKAPSFORUM

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# FÖRORD

Näringspolitiskt forum är Entreprenörskapsforums mötesplats med fokus på förutsättningar för det svenska näringslivets utveckling och för svensk ekonomis långsiktigt uthålliga tillväxt. Ambitionen är att föra fram policyrelevant forskning till beslutsfattare inom såväl politiken som inom privat och offentlig sektor. De rapporter som presenteras och de rekommendationer som förs fram inom ramen för Näringspolitiskt forum ska vara förankrade i vetenskaplig forskning. Förhoppningen är att rapporterna också ska initiera och bidra till en allmän diskussion och debatt kring de frågor som analyseras.

Delningsekonomi eller Sharing Economy och collaborative economy är samlingsnamn på aktiviteter som minskar resursåtgången genom att effektivare utnyttja varor och tjänster genom delning. Allt fler hakar på trenden att gå från att själva äga eller kunna allt till att hyra ut och låna både saker och kompetens. T ex låter Airbnb privatpersoner hyra bostäder av varandra vilket har gjort succé över hela världen.

I The Sharing Economy - Embracing change with caution uppmärksammas att digitaliseringen utgör den möjliggörande teknologiska kraften för delningsekonomin. Innovation på området innebär att identifiera outnyttjade varor och tjänster, maximera resursutnyttjandet samt att föra samman utbud och efterfrågan. Författarna noterar att Sverige, i förhållande till andra ekonomier, ligger steget före vad gäller specialisering i kunskapsekonomin men att mer skulle kunna göras för att underlätta fortsatt tillväxt inom detta område. Bland policyrekommendationerna nämns bl a behovet att främja flexibilitet både på arbetsmarknaden och inom utbildningssystemet och att underlätta för företagande och innovation.

Rapporten är författad av Claire Ingram och Robin Teigland, doktorand respektive docent vid Handelshögskolan i Stockholm, samt Anna Felländer, chefsekonom Swedbank. Den analys samt de slutsatser och förslag som presenteras i rapporten delas inte nödvändigtvis av Entreprenörskapsforum, författarna svarar själva för dessa. Ekonomiskt stöd har bl a erhållits från Tillväxtverket.

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Johan Eklund

Vd och professor Entreprenörskapsforum

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# EXECUTIVE SUMMARY

The Sharing Economy has been the subject of considerable interest among policy makers across the globe. This report begins by developing a pragmatic definition of the Sharing Economy. Next, the report describes global Sharing Economy trends, followed by an examination of the Sharing Economy in Sweden. Subsequent sections address regulatory considerations and potential economic implications. The report concludes with a discussion of possible policy responses.

**Defining the Sharing Economy.** Driven by digitalization, the Sharing Economy involves the peer-to-peer exchange of tangible and intangible slack (or potential slack) resources, including information, in both global and local contexts. This mediated exchange tends to reduce transaction costs for users by replacing third-party intermediaries with digital platforms. However, the elimination of third-party intermediaries means that risks are often borne by the providers and consumers of resources rather than by a central actor.

**The Global Sharing Economy.** *Trends in tangible assets* include the rise of household names such as Airbnb and Uber. These house- and car-sharing services have provided income for many unemployed and under-employed individuals by allowing them to utilize resources that were previously idle. However, there has been push-back from users and regulators in various countries, due primarily to concerns about safety, unfair competition and the poor treatment of workers. *Trends in intangible assets* largely relate to the sharing of money through the several types of so-called crowdfunding platforms: donation- or reward-based crowdfunding, equity-based crowdfunding and debt-based crowdfunding, also known as Peer-to-peer (P2P) lending. Although these platforms have become an important source of philanthropic and entrepreneurial finance, they are subject to incompatible regulations in different parts of the world. *Sharing time and information* have been received less controversially but are nonetheless important drivers of the Sharing Economy because they help users screen other users based on reviews and other information.



**The Sharing Economy in Sweden.** Compared to other areas of Europe and to elsewhere in the world, Sweden's Sharing Economy is less developed in certain areas but more developed in others. Notably, in Sweden, public actors have been more involved in the Sharing Economy, encouraging the use of sharing ideas for public spaces.

*Trends in tangible assets* shared in Sweden have been dominated by global players such as Airbnb and Uber; however, local actors have reacted by developing digital platforms of their own. For example, a large number of firms have aided in the sharing of second-hand clothing, tools and used goods, and numerous cities have introduced bike-sharing arrangements.

*Intangible assets*, such as money, are also being shared through Swedish and international crowdfunding platforms, and the Swedish platform, FundedByMe, has become a major European player in this field.

**Regulatory Considerations.** *Employment regulations* present complicated issues for the Sharing Economy. On the one hand, many platforms argue that they are mere matchmakers, connecting buyers with sellers, and these platforms do not provide users with any form of employment security. On the other hand, some platforms set the terms of the agreement; for example, Uber establishes its drivers' rates, and TaskRabbit requires that freelancers on its site reply to a request within several hours of receiving it. The line between employee and self-employed contractor is therefore blurred.

*Regulations regarding production and commerce* may also need to be approached creatively to protect parties to Sharing Economy contracts and the public interest. In addition, questions regarding value-added taxes (VAT) should be clarified by government actors. Other key concerns that are considered inadequately addressed by current platforms include safety, privacy, intellectual property and ownership. Moreover, risk, which is typically borne by a firm, is transferred to the users on one or both sides of a platform.

**The Sharing Economy will have mixed economic implications.** New pricing mechanisms will push inflation downward as transaction and marginal costs are reduced. Additionally, transparency, an increased matching of supply and demand, and the cutting out of middlemen through digital platforms will further drive prices down – and with them, inflation.

*Lower demand for capital* is another possible outcome in the Sharing Economy as both idle and existing resources will be used more efficiently.

*Competition* is likely to increase both between Sharing Economy firms and traditional firms and among Sharing firms, in turn driving down prices. However, the network effects of many services being on a single platform may also decrease competition as this drives out competitors.

*Labor market transition* is a likely consequence of the Sharing Economy; one which we are already seeing today. While it creates efficiencies and improves productivity for some, it will likely decrease productivity for others. Studies predict that 36-60 percent of

the jobs in Sweden will be lost due to digitalization and robotization, but it is also likely that, as in the past, new jobs in new fields will be created. An important amount of new jobs will be created in the Sharing Economy. Nevertheless, disparities in productivity are likely to exacerbate income inequality among workers.

**Sweden is ahead**, but challenges remain as Sweden has both relatively high levels of employment specialized in IT and communications and a number of well-developed entrepreneurial clusters. However, specialized industries in Sweden that employ a large number of people, such as Transportation, Construction and Metal Manufacturing, are likely to be hit hard by increases in digitalization and automation as well as by the Sharing Economy cutting out traditional middlemen.

*Scenarios for 2020* include numerous possibilities that depend on the pace of technological adoption and development and on the rate of global economic growth. High technological growth could lead either to a freelance economy or to a so-called “Internet of Space,” depending on whether the corresponding economic growth is low or high. In the same vein, low technological growth may lead either to the creation of a shadow economy (where there is low economic growth) or to “business as usual” (where there is high economic growth).

**Policy Considerations.** Relative to other economies, Sweden is ahead of the curve in knowledge economy specialization. We recommend a path that balances growth of the Sharing Economy with labor interests. To this end, we recommend discussions regarding 1) the development of flexible regulatory schemes, 2) the facilitation of entrepreneurship and innovation, 3) engaging government involvement, 4) promoting labor market flexibility and education, and 5) the elimination of bottlenecks in the housing market.

**Conclusion.** The Sharing Economy presents a number of interesting possibilities for the future of work, production, and collaboration in Sweden. Although Sweden is in an excellent position to benefit from the growth of the Sharing Economy, the country could do more to facilitate further growth in this area.

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## Chapter 1

# INTRODUCTION

When one thinks of the Sharing Economy, one typically thinks of the global “ride-sharing” application, Uber, or the house-sharing platform, Airbnb. These companies are just some of the global firms that have been built on the premise that a consumer’s underused or spare fixed assets can be shared—a business model that is currently worth USD 26 billion globally<sup>1</sup> and is predicted to grow to USD 335 billion by 2025<sup>2</sup>. Other business models, such as that of the task-sharing site TaskRunner, allow individuals to “share” their skills and office hours. Still other models allow individuals to share their spare cash; rather than holding it in a zero-interest bank account, they can lend it to other individuals (e.g., Sweden’s Trustbuddy) or firms (e.g., ToBorrow, FundedByMe) in what has variously been called crowdfunding or peer-to-peer lending. Although many of these services are provided by startup firms that have received phenomenal market valuations (such as Uber, with a USD 41 billion valuation), incumbent firms (including Avis, DHL, Banco Santander, and Marriott Hotels) have also developed their own Sharing Economy services.

Together with the Internet and mobile phones, the evolution of the Sharing Economy has led to increased digitalization; the more efficient sharing of goods, services and information; and faster and more effective internationalization among new firms due to reduced transaction costs. Indeed, many argue that the Sharing Economy is a “social revolution” because it is leading to the transfer of power from a few large firms to a multitude of loosely connected actors. Although statistics are unavailable for Sweden, it is estimated that the Sharing Economy is growing beyond a mere niche economy. For example, in the UK, approximately 25 percent of the population has participated in this

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1. Botsman, R., & Rogers, R. (2011). *What’s mine is yours: how collaborative consumption is changing the way we live*. London: Collins.
  2. <http://www.pwc.co.uk/issues/megatrends/collisions/sharingeconomy/the-sharing-economy-sizing-the-revenue-opportunity.jhtml>

economy during the past 12 months<sup>3</sup>, and a recent study in the US suggests that sharers are not only tech-savvy urban hipsters but also affluent homeowners with children.<sup>4</sup>

Although the sharing of slack resources leads to the more efficient use of those resources, the reality is likely to be more complicated, and there is reason to exercise caution with regard to the Sharing Economy. In the short run, both Airbnb and Uber have come under scrutiny because of the effects that their business models have had on their respective industries and because of concerns that they are avoiding certain safety regulations and taxes. In particular, Uber has been under fire for moving the burden of risk away from the firm and onto the “consumer” and “employee”. Indeed, when financial resources are shared, the risk of an individual transaction is not shared only by the parties to the contract; rather, collaborative finance also entails a certain amount of *risk* sharing, or pooling. Thus, one area of concern is the degree to which Sharing Economy firms avoid transaction costs and risks by pushing such costs and risks onto providers and consumers. Furthermore, scholars and media commentators have questioned the effects of these startups on the workforce, arguing that they are both a symptom and a cause of unemployment and underemployment. A *Guardian* op-ed piece states as follows:

*“One big problem with claims that the “Sharing Economy” can lead the way out of our economic morass is that proponents often advocate less consumption. How can that be a solution for an economy that—for better or worse—is fueled by consumer spending? ... Certainly not the one that could employ significant numbers of people as designers, sales clerks, warehouse staff and construction workers and help bring four million long-term unemployed people [in the UK] back into the workforce.”<sup>5</sup>*

Thus, although it holds much promise, the emergence of this new “economy” does not clearly directly create jobs. However, insofar as the Sharing Economy makes the use of slack resources more efficient, it has been well received. Regarding regulatory issues, the Sharing Economy may lead to significant legislative challenges because although regulations may obstruct potential new applications and markets, they may nonetheless be necessary to curb abuse of market power as new actors emerge. The development of new regulations should not be taken lightly; more traditional actors are likely to lobby in favor of the status quo, and even the most well-intentioned regulations may indirectly stifle growth of this nascent field.

This report investigates the following areas: 1) the global development of the Sharing Economy; 2) current trends in the Sharing Economy in the Swedish context; 3) the possible expansion of the Sharing Economy in Sweden; and economic and social implications for Sweden. In addition, this report opens a discussion on policymaking.

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3. <http://www.nesta.org.uk/publications/making-sense-uk-collaborative-economy>

4. [http://www.slideshare.net/jeremiah\\_owyang/sharingnewbuying?ref=http://www.web-strategist.com/blog/2014/03/03/report-sharing-is-the-new-buying-winning-in-the-collaborative-economy/](http://www.slideshare.net/jeremiah_owyang/sharingnewbuying?ref=http://www.web-strategist.com/blog/2014/03/03/report-sharing-is-the-new-buying-winning-in-the-collaborative-economy/)

5. <http://www.theguardian.com/commentisfree/2014/jan/07/sharing-economy-not-solution-to-jobs-crisis>

## Chapter 2

# WHAT IS THE SHARING ECONOMY?

The Sharing Economy is a broad concept that lacks a common definition, and it is often used interchangeably with such terms as “collaborative economy” and “on demand” economy. Rachel Botsman, the author of *What’s Mine is Yours: How Collaborative Consumption is Changing the Way We Live*, defines the collaborative economy as “a system that activates the untapped value of all kinds of assets through models and marketplaces that enable greater efficiency and access”.<sup>6</sup>

In line with this definition, the Sharing Economy has been defined to include the renting, bartering, loaning, gifting, and swapping of assets that are typically underutilized, either because they are lying unused or because they have not yet been monetized. Such assets include a wide variety of tangible and intangible assets (Table 1). For instance, archetypes such as Airbnb and Uber involve the sharing of *tangible* slack resources, namely, cars and homes, whereas crowdfunding and peer-to-peer finance involve the sharing of a somewhat more *intangible* resource: money. Finally, services such as TaskRabbit connect people with free time to people who need small tasks performed.

## What are the Drivers of the Sharing Economy?

The sharing of assets has always been a part of social organizing. However, over the past decade, several drivers have led to increased Sharing Economy activity and to a number of startups that promote this behavior.

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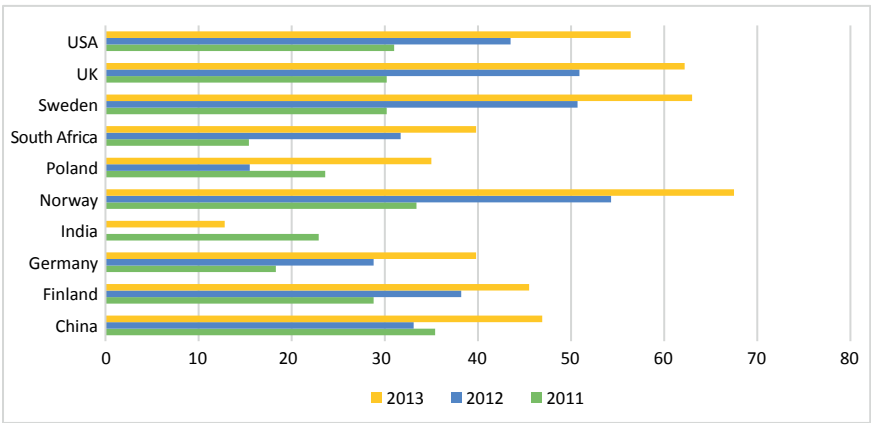
6. <https://archive.harvardbusiness.org/cla/web/pl/product.seam?c=34760&i=34762&cs=902b9545bb85f0aba03d8b645fb1d7c5>

TABLE 1. Overview of assets and well-known actors in the Sharing Economy

Asset	Example	Actor: International	Actor: Swedish
Tangible	Transportation Property Food	Uber Lyft Car2Go Airbnb DeskNearMe EatWith	Uber Car2Go Airbnb Hoffice
Intangible: Financial	Crowdfunding P2P lending	Kickstarter Indiegogo LendingClub Prosper	FundedByMe Kickstarter Crowdcube Toborrow
Intangible: Services	Professional Personal	Innocentive oDesk TaskRabbit	eWork Vint TaskRunner MyWays

- *Increasing penetration of the Internet and smartphones.* Although there are several drivers of the Sharing Economy, the Internet and smart phones are the major accelerants. Indeed, Internet penetration across the globe has risen considerably over the last two decades, from 16 million people, or approximately 0.4 percent of the world’s population, in 1995 to an estimated 3 billion, or 42 percent of the global population, in 2014 (Internet World Statistics, 2015). In addition, data collected by Google between 2011 and 2013 demonstrate the remarkable regional increases in smartphone penetration during this period (see Figure 1), and Internet penetration has no doubt increased even further since 2013.

FIGURE 1. Smartphone Penetration, 2011-2013

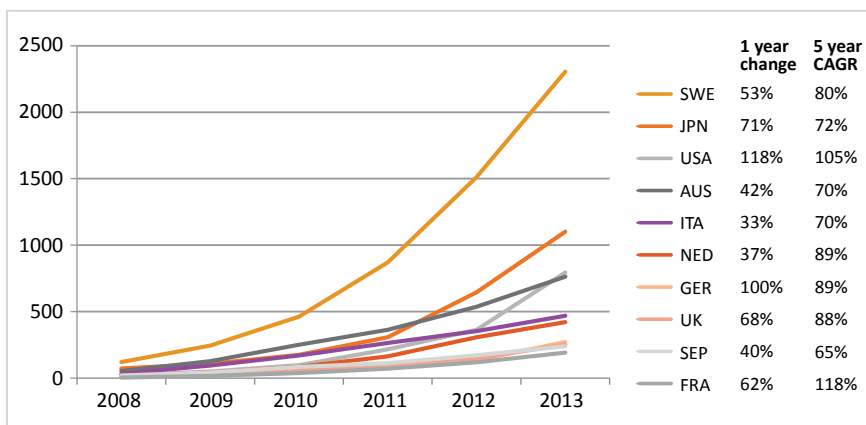


Source: Google



Although smartphone penetration is a more recent development, the data show a rapid increase in mobile data use due to smartphones (Figure 2).

**FIGURE 2.** Average per capita monthly mobile data use 2008-2013.



Source: IHS / Industry data / Ofcom

- Technological advancements in areas such as information technology platforms and big data analytics.* Although the sharing of assets is nothing new, the creation of two-sided, or matchmaking, market platforms that enable peer-to-peer communication (i.e., individual-to-individual rather than firm-to-individual communication) is a novel development. This communication can be mediated either by firms, such as Uber, that run their own platforms or by individuals who use existing social networking sites, such as Facebook, or design their own apps, using open source software, to self-organize their sharing activity in the cloud. These platforms can connect individuals locally, on a face-to-face basis, or they may be global, connecting people from all over the world digitally. Thus, they are more likely to enable a critical mass of suppliers and consumers such that both sides of the market feel that there is enough demand or choice available, which previously was a much more difficult task. Furthermore, several startups are using big data analytics to match supply and demand and even using advanced algorithms to set prices and predict demand. For example, Uber uses its vast stores of data to predict where and at what time a customer will want a cab as well as to raise prices when demand is excessively high.
- Falling entry barriers.* Digitalization has created an increased democratization of entrepreneurship and innovation by reducing entry barriers for app creators and digital platform providers. It is estimated that the number of people working in app creation and marketing in the EU will increase from 1.8 million in 2013 to

4.8 million in 2018.<sup>7</sup> Moreover, individuals and firms are taking advantage of this trend; in addition to EUR 6 billion in app sales and in-app spending, EU developers earned EUR 11.5 billion in contract labor by developing and maintaining apps to support non-app firms, such as financial services and retail firms.<sup>8</sup> The costs and risks of starting an IT firm are significantly lower today than at the beginning of the millennium because the costs of producing, distributing and marketing software and hardware have declined due to the availability of platforms such as Facebook, YouTube and Twitter.<sup>9</sup> The cost of platform innovation is also low relative to that of traditional innovation because platform innovators can assemble various existing plug-n-play components to create new platforms. Furthermore, open source solutions and cloud services can help to keep development costs down. Thus, entry barriers to the Sharing Economy are relatively low because individuals can easily and cheaply create a Sharing Economy service or platform.

- *Increased ease of financial transactions.* Financial transactions—both over the Internet and directly between individuals—have been greatly facilitated due to advancements in digital payment solutions, such as Swish, Klarna, and iZettle, combined with people’s increasingly positive attitudes toward online payments, which contrast greatly with the negative, risk-averse attitudes toward online payments in the late 1990s.
- *Increased transparency.* Sharing Economy platforms provide transparency regarding the buyer, seller, and product and therefore have assumed the role of the “trusted third party” that previously was played by various middlemen and organizations, both locally and globally. Social media and social networking sites provide information about individuals, and the rating systems used by many of these services allow suppliers and consumers to assign ratings to one another, even in real time. These systems and the accompanying transparency can encourage openness and trust among strangers, e.g., between the person renting out his or her house and the complete stranger from across the globe who rents the house, which may lead to increased generalized reciprocity and self-regulation.
- *The financial crisis.* It is not surprising that the financial crisis has been a driving factor of the Sharing Economy. Whereas the crisis has led many people to seek alternative sources of employment and income, the Sharing Economy enables individuals to make money on their tangible and intangible assets that previously sat idle. For example, a person can rent out his living room couch to a stranger

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7. [http://ec.europa.eu/information\\_society/newsroom/cf/dae/document.cfm?doc\\_id=4485](http://ec.europa.eu/information_society/newsroom/cf/dae/document.cfm?doc_id=4485)

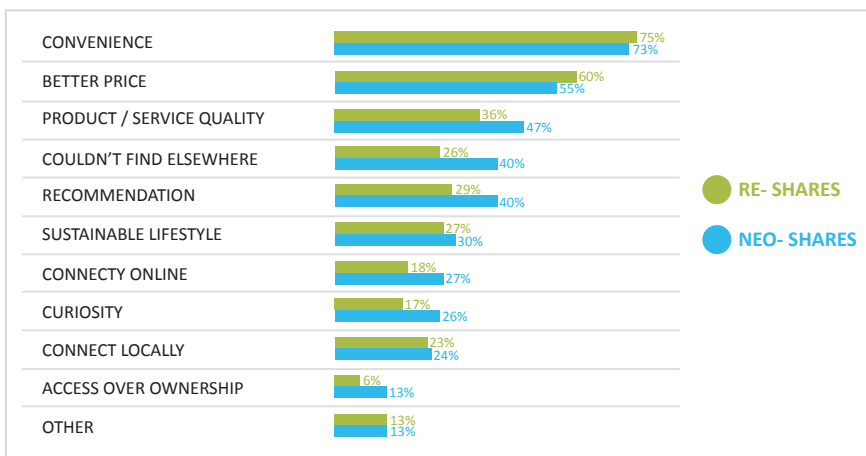
8. [http://ec.europa.eu/information\\_society/newsroom/cf/dae/document.cfm?doc\\_id=4485](http://ec.europa.eu/information_society/newsroom/cf/dae/document.cfm?doc_id=4485)

9. Ries, E. 2011. *The lean startup: How today’s entrepreneurs use continuous innovation to create radically successful businesses*. Random House LLC.

from the other side of the globe, and he can even rent out his own free time to perform odd jobs, such as assembling furniture.

- *Declining consumption patterns.* We are also seeing more negative consumption behaviors among individuals for a variety of reasons, including reduced disposable income, environmental and sustainability concerns, convenience, status, a desire for more social interaction, and a backlash against consumerism and major brands. Botsman and Rogers argue that individuals are realizing that owning a product that they will use for only a limited period makes less sense than merely having access to the product. These authors also argue that there is an increasing belief in the “commons” and that individuals who provide value to an Internet community find that their own value grows in return. The environmentalists’ view is that when goods are circulated, the life span of each individual item is maximized and extended. However, the term “Sharing Economy” could be misleading. A recent practitioner study of more than 90,000 individuals in the US, Canada, and the UK found that convenience was the number one reason why people participated in the Sharing Economy, outranking better price and product/service quality. Notably, sustainable lifestyle and a preference for access over ownership both ranked relatively low on this list.<sup>10</sup>

**FIGURE 3.** “How important were each of the following reasons for using a peer-to-peer site or app for your most recent sharing transaction?” (Asked Dec 2013-Jan 2014)<sup>11</sup>



10. [http://www.slideshare.net/jeremiah\\_owyang/sharingnewbuying](http://www.slideshare.net/jeremiah_owyang/sharingnewbuying)

11. Re-sharers buy and/or sell pre-owned goods online using well-established services like eBay and Craigslist whereas neo-sharers use emergent sharing services, such as Etsy, Kickstarter, Uber [http://www.slideshare.net/jeremiah\\_owyang/sharingnewbuying](http://www.slideshare.net/jeremiah_owyang/sharingnewbuying)

## What Does the Sharing Economy Mean in Economic Terms?

One of the primary aspects of the Sharing Economy is that technology plays a major role in driving down transaction costs. Firms such as Airbnb and Uber have not created some radical new means to satisfy consumers; rather, these firms merely provide information that makes it much easier for people to find what they are looking for or to do what they want to do anywhere across the globe, i.e., they lower transaction costs.

Approximately 80 years ago, a young economics professor named Ronald Coase presented his views on why firms exist in a paper titled “The Nature of the Firm”, thereby laying the groundwork for the concept of transaction costs.<sup>12</sup> He questioned why all transactions did not occur in the marketplace and argued that firms arose to minimize transaction costs in a world of imperfect information. Transaction costs include search and information costs, bargaining costs, and policing and enforcement costs. Search and information costs correspond to the time spent by the consumer to search for a good or for information about a good on the market. The more time it takes to search for a good, the greater the search and information costs. Bargaining costs are the costs involved in preparing a contract and reaching an agreement with the other party to the transaction. Finally, policing and enforcement costs comprise the costs of ensuring that the other party complies with the contract and of legal action if the other party fails to comply. In short, the lower the search and information costs, bargaining costs, and policing and enforcement costs are, the lower the transaction costs are.

Digitalization has decreased **transaction costs**, particularly the costs associated with search and information. For example, the search and information costs for an online bookstore, such as Amazon, are lower than those for a physical bookstore because Amazon consumers can search for books online or even obtain algorithm-based recommendations instead of taking the time to go to a physical bookstore and searching manually. The decrease in transaction costs in the Sharing Economy is perhaps even more significant. Whereas Amazon is a digital alternative to a physical bookstore that maintains a centralized non-digital collection of books, there are often no non-digital centralized equivalents to Sharing Economy platforms. For instance, a person seeking to share an empty room in a home or an empty piece of arable land previously had to search for these slack resources using *ad hoc* advertising and word of mouth, both of which are clearly far more time consuming than a digital matchmaking tool.

**Bargaining costs** are the costs associated with establishing a price for a particular good or service. Because different goods have different norms in terms of how they are traded, it is difficult to predict how bargaining costs may be affected by the Sharing Economy. Indeed, different platforms that trade in different slack resources may have different price-setting mechanisms. Whereas purchasers of smaller goods have traditionally been price takers,<sup>13</sup> purchasers of larger goods are typically better able to negotiate prices and may even act as price setters when there is a large amount

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12. <http://www3.nccu.edu.tw/~jsfeng/CPEC11.pdf>

13. Wen, M. (2004). E-commerce, productivity, and fluctuation. *Journal of Economic Behavior & Organization*, 55(2), 187-206.

of supply on the market. The explanation for this phenomenon is that when there is a large amount of supply but demand remains constant, the individual demanding the good has considerable bargaining power. This power should decrease not only the cost of bargaining but also the cost of the good itself. Thus, an abundance of a particular good or service on the market creates a situation in which the purchaser has considerable bargaining power and can drive prices down; when there are many purchasers in this situation, the average market price for a good or service is driven downward. Accordingly, not only is the manner of consumption changing, but the cost of consumption is changing as well.

**Policing and enforcement costs** are the costs to monitor an ongoing transaction and to ensure that the other party is keeping to its side of the bargain. Typically, in straightforward and small transactions, such policing and enforcement costs are low; however, these costs increase with the size and complexity of a transaction and thus also vary by sector. Monitoring costs typically decrease as the amount of information available to transaction parties increases; rating systems and user reviews therefore form an invaluable source of information for prospective transaction partners. Enforcement costs increase proportionally to the complexity of the transaction; thus, although electronic payment systems often decrease enforcement costs, the fact that many Sharing Economy transactions are conducted through forms that are relatively unknown or poorly understood in legal terms is likely to increase enforcement costs, at least during the Sharing Economy's nascent years.

**Creative destruction**, a term coined by economist Joseph Schumpeter in 1942,<sup>14</sup> refers to the process whereby the creation of a new industry or method of doing things destroys the industry or process that preceded it. Although creative destruction is evident in obviously comparable industries (for example, the replacement of tapes by CDs and DVDs), this process is less obvious in the Sharing Economy, primarily because it is not clear which industries and/or processes the Sharing Economy is likely to replace. Indeed, although incumbents in the hotel and taxi industries have been forced to innovate to survive, neither the industries nor their processes have been "destroyed" by the advent of sharing. Rather, older innovations have been connected to digital services through social networks with, for example, a marketplace or "thing" (i.e., the Internet of Things, or IoT). Such novel elements bring greater benefits to users, which often leads to the destruction of old practices, but in this case will not necessarily lead to the destruction of old products and services. Thus, sharing occasionally serves as an alternative—and even a complement—to existing industries.

## Our Definition of the Sharing Economy

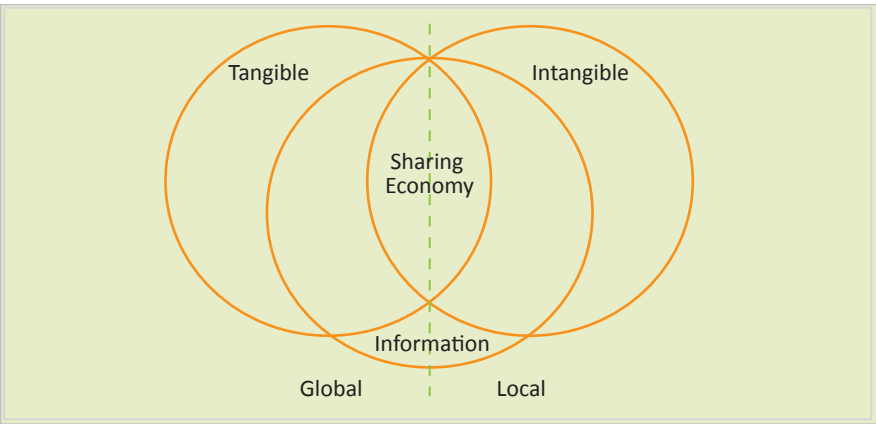
The above discussion enables us to develop a working definition for the Sharing Economy (See Figure 4). Our definition overlaps considerably with that of Botsman but is more pragmatic for the purposes of this report: *the Sharing Economy comprises the*

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14. Schumpeter, J. A. (2010). *Capitalism, Socialism and Democracy*. Routledge.

*peer-to-peer exchange of tangible and intangible slack (or potentially slack) resources, including information, in both global and local contexts.* This mediated exchange tends to reduce users’ transaction costs by replacing third party intermediaries with digital platforms; however, transactional risks are often borne by the providers and consumers of these resources rather than by a central actor.

FIGURE 4. The definition of the Sharing Economy used in this report



## Chapter 3

# THE GLOBAL SHARING ECONOMY

Below, we discuss the areas in which the Sharing Economy has thus far had the greatest influence on the sharing of tangible and intangible assets and provide examples of Sharing Economy platforms in each area. This list is not meant to be exhaustive; rather, the intent is to give the reader some insight into the different services and how they function.

## Tangible Assets

### SHARING CARS

**Uber** was founded in 2009 in San Francisco and today has a valuation of USD 41 billion and operates in 250 cities. Uber involves the sharing of rides, or cars; people who own cars are connected to people who want a ride somewhere via the Uber mobile application that is installed on the phones of both riders and drivers. The phone, in turn, relies on the open access maps created by Google as well as its own GPS technology to connect ride purchasers with the nearest available ride (Figure 5). Once the ride is over, the rider's credit card on file with Uber is automatically charged for the ride and thus the driver does not need to handle any payments. After the ride, riders and drivers rate each other.

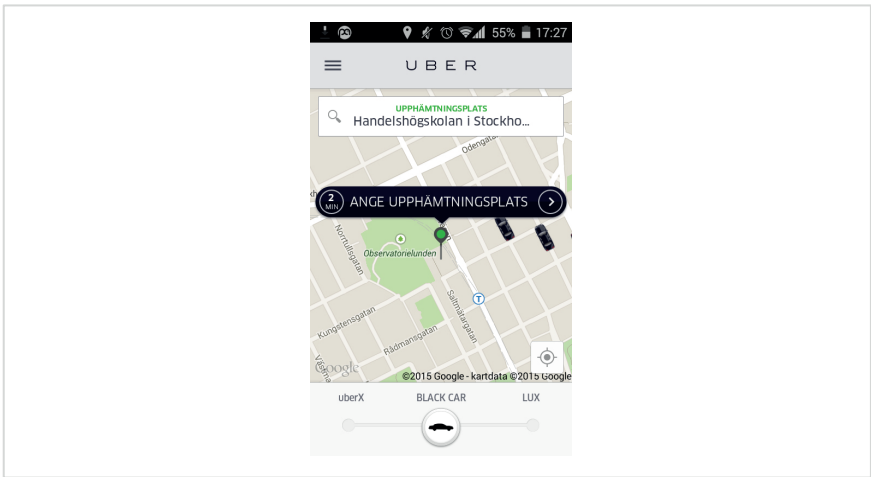
According to recent figures from the New York City Taxi and Limousine Commission, Uber cars now comprise the majority of taxis in New York City. Specifically, these data indicate that there are currently 14,088 Uber cars in New York City, compared with 13,587 yellow cabs.<sup>15</sup>

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15. <http://www.unt.se/ekonomi/uber-har-tagit-over-new-york-3647082.aspx>



FIGURE 5. Uber screenshot



Uber first offered its services to off-duty taxi drivers who had licenses to operate taxi-like services before expanding to include individuals who did not have taxi licenses but did have cars. This helped Uber to price discriminate; not only would the company provide a taxi-like service to those who might otherwise pay the same price for an ordinary taxi, but it would also provide a less expensive service that catered to a market that was unwilling to pay the same high price for the same service. The general logic behind price discrimination is that the ability to distinguish between those willing to pay different prices enables one to tap a larger market, which in turn generates larger profits, higher welfare and a reduction in deadweight loss.

Furthermore, in expanding its business model to include ridesharing, the firm relied on the notion that the expanded “ridesharing” model was sufficiently different from a taxi service to render the laws regulating taxis in various jurisdictions inapplicable. Unsurprisingly, many incumbent taxi firms disagreed. Moreover, among the cases that have been litigated, several courts have interpreted the existing laws in a manner unfavorable to Uber’s ride sharing model.

In addition, there has been a public outcry, particularly in the United States, over Uber’s treatment of the ride providers. Because Uber provides only a mobile platform, the company’s position is that it does not employ anyone; rather, Uber merely connects willing purchasers of rides with willing sellers. As many commentators have noted, Uber’s model raises questions about the applicability of labor regulations and competition laws; Uber argues that it facilitates exchanges between purchasers and individual drivers who are not employees of Uber but rather are self-employed independent contractors. However, the line between employee and independent contractor is unclear, especially when one considers the fact that Uber centrally establishes standards of service, prices and other conditions for its ride providers.

Uber sees itself as a technology firm rather than a transportation firm because its success is based on a simple user interface and an advanced information system that conducts big data analytics. The firm is currently moving into other areas, such as food delivery; it recently started delivering pizzas in Barcelona.

#### SHARING ROOMS AND LAND

Founded in 2008, **Airbnb** currently boasts over one million listings—including 600 castles—in 34,000 cities in 190 countries across the globe. Its operating model is to act as an intermediary between those who have empty rooms or apartments and those who would like to rent them. For this service, Airbnb charges a fee of six to twelve percent of the rental amount, which is set by the owner of the room or apartment. Airbnb verifies hosts' and renters' identities but does no further screening. Instead, it relies on reviews by parties to previous Airbnb transactions to act as a quality control and to give future participants information upon which to base their decisions.

Airbnb's apparent intention is to act as a central pooling area where renters and owners can meet. By relying on reviews by verified customers, Airbnb avoids the costly process of screening individual apartments and users and instead only verifies users' identities. This peer-to-peer exchange of information is vital for Airbnb insofar as it both lowers the company's operating costs and operates as a screening device. Indeed, the review system has engendered self-regulation among Airbnb's users.

Similar to the development of eBay, the development of Airbnb has fostered the creation of a new type of job. Specifically, there are now independent agents who earn fees by photographing and describing properties and creating Airbnb accounts for owners.

Unlike Uber, Airbnb has not been accused of entering into employment relationships with the individuals who list properties on its platform; Airbnb does not centrally set prices and no service is implicit in its operating model. However, the firm has come under fire from hotel groups and governments across the globe, for several reasons. First, some cities, such as New York, have laws that prohibit owners or occupants from renting out their apartments for short periods (less than 30 days) unless they are also living on the premises.<sup>16</sup> Second, many cities, including Amsterdam, Barcelona and Los Angeles, charge "tourist taxes", which are typically included in the cost of renting a room in a hotel. Finally, hotels and other commercial rentals must comply with local safety laws, whereas owners that rent properties on Airbnb are not necessarily subject to these laws.

For the most part, the problems and resistance that Airbnb has faced have been resolved amicably. For instance, in Amsterdam, tourist taxes are now included in Airbnb's service charge and periodically transmitted to the relevant local authority. Airbnb also periodically sends hosts links and information regarding local regulations,

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16. [http://www.nytimes.com/2012/12/01/your-money/a-warning-for-airbnb-hosts-who-may-be-breaking-the-law.html?\\_r=0](http://www.nytimes.com/2012/12/01/your-money/a-warning-for-airbnb-hosts-who-may-be-breaking-the-law.html?_r=0)

although compliance with these local regulations—including safety regulations—remains the responsibility of the host.<sup>17</sup>

**Landshare** operates on a principle similar to that of Airbnb but facilitates the sharing of unused arable land in the UK, Canada, and Australia. The Landshare platform allows those who are looking for land, those who have land to lease and “helpers” to upload details of their ideal transactions and to connect with one another. The site operates a map on which users can pinpoint their location, along with a description of what they are seeking.

Unlike Airbnb and Uber, Landshare encourages people to enter into explicit agreements outside of the platform. Whereas the terms and conditions of the more typical home- and car-sharing transactions are fairly standardized, it appears that Landshare anticipates that the transactions conducted on its platform will vary so widely that the users must develop and enter into contracts themselves. Although Landshare provides a pro forma agreement that users can adapt to their own specific purposes, it offers no legal advice. In addition, also unlike Airbnb and Uber, Landshare performs no screening process; it does not check the identity of the parties to the transaction and does not verify ownership of or usage rights to the land involved. In addition, there is little talk of remuneration online, which suggests that discussions regarding remuneration occur offline.

Because Landshare does not participate in the transaction, the service provided by Landshare is much closer to an intermediary service than the services provided by Airbnb and Uber. However, Landshare does not charge its users any form of operating fee. Rather, Landshare essentially operates to ensure that slack resources are used and does not provide an alternative source of employment to its users, unlike Airbnb and Uber. Therefore, although Landshare is clearly an example of the Sharing Economy insofar as it involves sharing and the creation of economic value, its role is somewhat different—and, consequently, less problematic—than the roles played by Airbnb and Uber.

## Intangible Assets

The sharing of slack resources is not reserved for tangible consumer and durable goods. On the contrary, the sharing of intangible resources—notably, money and information—has also grown enormously. This section discusses a number of major global trends in the sharing of intangible resources.

### SHARING MONEY

Crowdfunding has been described as an open call made through the Internet to obtain financial contributions from a relatively large number of individuals with limited

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17. <http://www.iamsterdam.com/en/media-centre/city-hall/press-releases/2014-press-room/amsterdam-airbnb-agreement>

involvement of standard financial intermediaries.<sup>18</sup> In 2014, crowdfunding expanded globally by 167 percent, raising USD 16.2 billion on 1250 platforms, compared with USD 6.1 billion in 2013. It is expected that the industry will double in size once again in 2015, generating USD 34.4 billion.<sup>19</sup>

The idea behind crowdfunding is that by appealing to a global community (the crowd), anyone who has access to the Internet may fund a new venture idea using slack resources. This concept is premised on the notions that the crowd can screen ideas at least as well as any professional investor and that the money of an individual investor may be better invested in a local project in which the investor believes than in an abstract mutual fund.

There are four forms of crowdfunding.<sup>20</sup> The first is donation-based crowdfunding, in which actors donate to a project and receive an intangible reward, such as a “thank you”, in return. The second form is reward-based crowdfunding, in which donations are made in exchange for a symbolic reward, e.g., a prototype or limited-release version of a service. **Kickstarter** and **Indiegogo** are among the most internationally well-known examples of platforms that provide this type of entrepreneurial match-making service. Neither Kickstarter nor Indiegogo screens the projects that are presented on their respective platforms; rather, they rely on the assumptions that project owners can link their projects to their Facebook accounts to provide legitimacy and that potential investors can ask questions publicly on these platforms. These features provide a form of transparency because would-be investors can screen potential projects using a combination of third-party verification and reviews, which makes both platforms self-regulating. Both Kickstarter and Indiegogo charge a percentage of the funds raised for a project to list on their respective sites.

The third form of crowdfunding is equity-based crowdfunding, wherein individuals purchase equity shares in an organization via a digital crowdfunding platform, and those shares and shareholders are managed either by the platform or by the organization in which shares are sold, depending on the platform and country in question. **Crowdcube**, a UK firm, is the best known equity-based crowdfunding platform. Crowdcube sells equity shares in unlisted firms and does both credit and criminal background checks on individuals who wish to list their businesses on Crowdcube’s platform.

Peer-to-peer lending and micro loans are often described as the fourth form of crowdfunding. In this crowdfunding form, organizations or individuals borrow from investors through an online campaign and lenders’ commitments are ultimately repaid, usually with interest.<sup>21</sup> Some of the most internationally well-known platforms for this type of crowdfunding are the US-based Prosper, which runs a for-profit model

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18. Ingram, C., Teigland, R., & Vaast, E. (2014). Solving the puzzle of crowdfunding: Where technology affordances and institutional entrepreneurship collide. In *System Sciences (HICSS)*, 2014 47th Hawaii International Conference on (pp. 4556-4567). IEEE.
  19. <http://www.crowdsourcing.org/editorial/global-crowdfunding-market-to-reach-344b-in-2015-predicts-massolutions-2015cf-industry-report/45376>
  20. Baeck, P., & Collins, L. (2013). *Working the Crowd: A short guide to crowdfunding and how it can work for you*. London: Nesta.
  21. Baeck & Collins (supra)

of peer-to-peer lending, and Kiva, which runs a near-philanthropic service that is aimed at providing loans to people in developing countries.

All of these forms of crowdfunding operate within the Sharing Economy to enable individuals to invest slack financial resources into projects in which they believe, whether through equity investments, donations or the pre-purchase of goods.

#### SHARING TIME

**TaskRabbit** positions itself as facilitating an “old school concept: neighbors helping neighbors”. What this means in practice is that TaskRabbit helps people to find other people to perform small services, from running errands and moving furniture to transcribing interviews. The firm acts as a platform whereby service providers (“taskers” or runners) can post online profiles in which they advertise the tasks for which they are available and provide reviews from previous purchasers. Purchasers can then find appropriate runners based on the tasks advertised and the city in which both individuals are based. TaskRabbit argues that it helps people find short-term employment, which in turn helps these people to pay bills that they would otherwise be unable to pay. However, in the words of Bloomberg, “TaskRabbit is betting on a future where employment will seem much more like a series of small-scale agreements between firms and labor than jobs in the traditional sense”.<sup>22</sup> In such a future, secure jobs would not exist; there would be only a series of short-term agreements between individuals.

This task-sharing site began as an auction- and negotiation-based platform, where individuals seeking runners to complete tasks could bid and negotiate online for that person’s time. However, in June 2014, the auction model was replaced by one in which those selling their time set an hourly rate. Bloggers and news articles described the modification as a move from the Ebay model to the Uber model, and there was considerable backlash from both taskers and service purchasers.<sup>23</sup> This unhappiness stemmed from the removal of the bidding function as well as a number of other changes incorporated by the firm. For instance, the firm implemented an algorithm that automatically matched taskers with a purchaser based on information about the required task, including when and where it was needed. This algorithm provides the purchaser with a selection of three taskers with different hourly rates and experience levels and allows the purchaser to communicate with the chosen tasker via an in-app messaging service.

Like Airbnb, TaskRabbit allows service providers to set their own hourly rate, which is publicized upfront, and the firm takes a 20 percent service fee, which includes insurance. Service providers’ profiles include reviews by purchasers, and TaskRabbit also conducts identity checks and in-person interviews before allowing a person to offer services on the platform.

22. <http://www.bloomberg.com/bw/articles/2013-05-24/in-the-future-well-all-be-taskrabbits>

23. See <http://techcrunch.com/2014/07/10/taskrabbit-debuts-revamped-platform-launches-new-website-and-mobile-apps/>

TaskRabbit was not subject to much controversy until it moved away from the auction model. Both taskers and purchasers were unhappy and argued that the new model did not allow people to manually search for taskers and that the algorithm only brought up taskers with consistently high review scores. Moreover, at the same time as the algorithm implementation, TaskRabbit focused on making it easier to connect to taskers who performed common tasks, such as house cleaning or furniture assembly, to the detriment of those who were searching for, and those who were providing, more unique niche offerings.

Under both the new and old models, the risks and costs of transactions are absorbed by the service provider. For instance, the platform currently holds service providers responsible for adding VAT when required and for addressing their own tax issues. Although it might be unreasonable to hold TaskRabbit responsible for the tax issues of every service provider who uses its platform, many individuals offering services on TaskRabbit are paid a low wage for a short-term job that is typically menial in nature. Is moving the burden of tax compliance onto the small service provider too onerous, given that it requires service providers not only to specialize in and advertise their particular niche services but also to learn all of the ins and outs of their local tax regulations? Placing this substantial burden on a single individual seems not only unfair in some respects but also inefficient. Today, large firms employ individuals to conduct specialized tasks—and only those tasks—which frees those with other specialties to do the same, increasing overall productivity. What happens to worker productivity when the workers must divide their time between numerous tasks, many of which are outside their area of expertise?

**Time Banks**, or time sharing, might be described as the philanthropic equivalent of TaskRabbit; that is, a time bank is a network of not-for-profit local nodes, wherein individuals in a community submit requests and offers for help. The premise is that a time bank is a community-building system and that no one charges for the help provided by him/her. Instead, individuals voluntarily help each other with childcare, elderly care and creative projects. Although this venture is clearly a component of the Sharing Economy, it is difficult to compare it with the previous examples because it does not provide new forms of employment.

#### INFORMATION AND INFLUENCE

Information and knowledge are key to the operations of all of the above-described platforms because information and knowledge enable the users of a particular platform to self-regulate, which limits the amount of screening that must be performed by the firm running the platform. This fundamental part of the Sharing Economy—the reduction of transaction costs—is often used on its own to improve transaction decisions by consumers. Examples include the service-provider review service **Yelp** and the tourism review service **Tripadvisor**. Neither Yelp nor Tripadvisor provide any services themselves (although Tripadvisor has recently branched out into flight and hotel price aggregation), but rather they allow users to share a wealth of information that helps consumers to find the lowest price for an item and to screen goods and services.

**Klout** is an example of a mobile app that can be used to share information about one's social influence on the Internet. The app was launched in 2008 and uses data from multiple social networks, including Bing, Facebook, Foursquare, Google+, Instagram, LinkedIn, Twitter, and Wikipedia. The data are used to create Klout user profiles, and social media analytics are used to rank the users. Users are ranked according to their online social influence and assigned a "Klout Score" between 1 and 100. The higher the score is, the higher is the user's ranking in breadth and strength of online social influence.



## Chapter 4

# THE SHARING ECONOMY IN SWEDEN

The Sharing Economy seems to be growing at more or less the same pace in Sweden as in other European countries, with certain areas, such as finance, growing faster than others (e.g., crowdfunding). International names such as Uber, Kickstarter and Airbnb are either established names in Sweden or on their way to becoming established. While the American time- and task-sharing giant TaskRabbit has not entered the Swedish market, local alternatives have arisen.

On the whole, the Swedish market for various Sharing Economy goods and services is fragmented and less developed than elsewhere in Europe. The Swedish market has also taken on a unique character in other respects; for instance, a number of home-grown services in Sweden tend to justify sharing on the basis of sustainability, rather than cost-effectiveness or efficiency. In addition, existing private firms and large state institutions have become involved in the Sharing Economy, whether by forming partnerships to drive an initiative, such as **SpaceTime.se**, or by running sharing initiatives that rival their own business model, such as Hertz running the ridesharing service **Roadmate.se**. As elsewhere, the principle guiding force in the Swedish context has been access over ownership.

Many of the Swedish platforms that support Sharing Economy activities are run by non-profit organizations and are supported by networks of volunteers. Several sites were started by students who, due to their low budgets, must “do more with less”, e.g., **Skjutsgruppen.se** and **hoffice.se**. The few organizations that are profit based have low revenues and few employees and thus do not contribute significantly to economic growth in terms of taxable revenues and new jobs.

No single firm, with the possible exceptions of **FundedByMe** and **Trustbuddy**, has truly captured the market. Instead, we find that a number of small Swedish firms and several international entrants are competing with each other for market share. This

is both good and bad for the development of the Sharing Economy in Sweden. On the one hand, high levels of competition force competitor firms to fine-tune their offerings, which improves users' experiences. On the other hand, there are limited network effects to be had when the users and providers of goods and services are spread across a number of platforms. The multiplicity of platforms means that the distribution of shared resources is not as efficient as it might be, which is likely to have implications for productivity.

## Tangible Assets

The sharing of tangible assets is the most well-developed area of the Sharing Economy in Sweden, with a number of local and international actors participating in this area.

### SHARING CARS

One study has shown that the average Swedish car is parked 23 out of 24 hours each day and that, during the typical 12,000 kilometers driven annually by Swedish citizens, the average occupancy per car is 1.5 people.<sup>24</sup> One study in Umeå found that on average, each car travelling in the Umeå region carries 1.2 people while one calculation suggests that if a person who commutes 50 km each day were to carpool, he or she would save up to SEK 40,000 a year. These savings might even be greater today given the tax-deductible travel allowance of SEK 10,000 per year.<sup>25</sup>

There is a long list of ridesharing sites in Sweden,<sup>26</sup> the most well-known of which are **Bilplats.se** (founded in 2007), **Skjutsgruppen.nu** (2007), and **Samåkning.se**. In addition, there are a number of local ridesharing systems, such as **mobilsamakning.se**, which operates in at least 10 regions in Sweden,<sup>27</sup> as well as locally organized Facebook groups, such as **En Ropsten**, which caters to individuals living on the island of Tranholmen in the Stockholm region.

The non-profit **Skjutsgruppen.nu** was founded by student Mattias Jägerskog and initially used crowdfunding to grow. Today, the group has over 40,000 users who rideshare all over Sweden. Users self-organize in terms of arranging trips and fees. Most trips occur on Fridays and Sundays, either within the larger cities or between cities: Stockholm to Gothenburg, Gothenburg to Stockholm, Stockholm to Malmö, Malmö to Stockholm, Gothenburg to Malmö, Uppsala to Gothenburg and Stockholm to Jonkoping. Data provided by Skjutsgruppen indicate that the longest journey in 2013 went from Malmö to Arvidsjaur and that the total distance of all trips made through Skjutsgruppen in 2013 was 306,475 km, enough to circle the earth seven times.<sup>28</sup> The group is managed by a group of 50-100 people who volunteer in various

24. [http://www.svd.se/naringsliv/digitalt/uber-satsar-pa-betald-samakning\\_3871646.svd](http://www.svd.se/naringsliv/digitalt/uber-satsar-pa-betald-samakning_3871646.svd)

25. Åk tillsammans - spara 40,000 om året, LAND 2015-01-02

26. <http://www.gronabilister.se/lankar/att-samaka>

27. <http://www.mynewsdesk.com/se/pressreleases/mobilsamakning-utsaags-till-aarets-landsbygdsinnovation-702509>

28. 40,000 samåker för att spara pengar och miljö, DAGENSETC 2014-03-21

contexts.<sup>29</sup> Today, the organization cooperates with local governments (länsstyrelser) in Västernorrland and Örebro and with organizations such as Be Green Umeå. Furthermore, the organization created Carpool Europe in 2010 as an international branch for travel in Europe. There is now a Skjutsgruppen app and the group has an open API. Although cars remain the most common mode of transportation on Skjutsgruppen, the site can also be used for other vehicles, such as boats and buses.

In addition, there are a number of national and local car-sharing organizations and activities in Sweden,<sup>30</sup> the oldest of which is **Sambil**, a non-profit organization now in its 36th year that operates in a growing number of cities, including, as of May 2014, Västerås, Gothenburg, Norrtälje and Sala. Members lend their cars to one another and the association facilitates agreements between members. There are also co-operatives such as **Bilcoop**, which operates in Stockholm, Uppsala, Lund, Gothenburg and Oslo. Bilcoop facilitates and manages bookings and provides administrative and other services.

For-profit car-sharing organizations include **Car2Go**, **Bilpoolen.nu**, **SunFleet**, and **City Car Club** (previously Statoil Bilpool). Membership in these organizations generally involves a membership fee, service, parking, and the option to pay by the hour. SunFleet was founded at the end of the 1990s as a cooperative venture between Volvo and Hertz. SunFleet uses only green vehicles and, according to its website, it operates Sweden's largest carpool fleet, with more than 1,000 cars in 40 cities across Sweden. Members can choose between two membership plans and then pay for cars based on time and kilometers driven, for example, SEK 35/hour and SEK 2/kilometer for the smallest car. Bookings are made online and the car is unlocked using a mobile app. SunFleet has been active in creating partnerships and today participates in 11 partnerships with firms including Airbnb and mathem.se.

**Flexi Drive**, another for-profit car sharing firm, was bought by Schibsted Tillväxtmedier in 2013 and employs two people. Its slogan is "Rent a neighbor's car", and its platform is used to rent cars, motor homes, and caravans among peers. Bookings are made on the site by the drivers and owners, who enroll through Facebook or the Flexi Drive site, and the transaction is completed between the individuals, who then rate each other. The firm takes a 10-20 percent commission, depending on the vehicle, and the price includes full insurance on the car. The firm has experienced slow growth, with earnings of SEK 69,000 and SEK 100,000 in 2012 and 2013.<sup>31</sup>

**Uber** offers several products in Stockholm and Gothenburg that are differentiated in terms of car quality and price, including UberLux (luxury, higher-end cars such as new Mercedes and BMWs), UberBlack (standard higher-end cars), UberX (smaller lower-end cars) and UberPop (any type of car). In addition, the company added UberBoat (for the sharing of boat rides) in the summer of 2014. UberPop, which was launched in September 2014, allows anyone who owns a car to drive for Uber and, according to

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29. <http://na.se/ekonomi/1.2127952-han-tror-pa-delandets-ekonomi-i-vardagen>

30. <http://www.gronabilister.se/lankar/att-dela-bil-bilpooler>

31. <http://internetworld.idg.se/2.1006/1.552830/nasta-steg-for-flexidrive>

Uber, is 60 percent less expensive than taking a taxi. This works in a manner similar to the ridesharing alternatives described above, except that the logistics and payments are arranged by Uber on its platform. Furthermore, Uber has established certain requirements for drivers and vehicles; for example, drivers must be 21 years old, have had a driver’s license for more than three years, and undergo a background check. In addition, Uber conducts interviews and trains the drivers. The car must be a 2005 or later model, have four doors, and have passed inspections by both Swedish authorities and Uber. Uber also requires that its drivers have full liability insurance.<sup>32</sup>

In September 2014, students at the Stockholm School of Economics compared the prices of an average 15 min, 10 km trip in Stockholm and Gothenburg between Uber’s offerings and traditional taxi services (Table 2) and found that UberX services were cheaper.

TABLE 2. Comparison of taxi services

Taxi company	Start price	Time price	Km price	Total fee (10km, 15min)
Taxi Gothenburg	45kr	8.30 kr/min	12.71kr/km	297kr
Taxi 020	39kr	7.60/min	9.60/km	249kr
Taxi Stockholm	45kr	7.40/min	9.20kr/km	248kr
Taxi Kurir	42kr	7.20kr/min	9.10kr/km	242kr
Uber X	40kr	5.65kr/min	7.45kr/km	199kr

The students also compared the cost of Uber’s cheapest service, UberPop, to the cost of public transportation in Stockholm (SEK 36 per trip) and in Gothenburg (SEK 25 per trip). They found that for one passenger, public transportation was less expensive than UberPop, but if the ride included four passengers, then UberPop’s prices were competitive with public transportation.<sup>33</sup>

Uber-Pop still exists in Sweden but has been outlawed in Spain, Germany, France, the Netherlands and Brussels.

SHARING ROOMS AND LAND

The sharing of parking spaces through sites such as **JustPark**,<sup>34</sup> where individuals can rent out their parking spaces, is growing across the globe. In Stockholm, certain spaces

32. [http://www.svd.se/naringsliv/digitalt/uber-satsar-pa-betald-samakning\\_3871646.svd](http://www.svd.se/naringsliv/digitalt/uber-satsar-pa-betald-samakning_3871646.svd)  
33. UberPOP: Marketing Plan: Launching UberPOP in Stockholm & Gothenburg, SSE Managing Marketing Processes: A.B., Luksep, A. Jin, C. Källstrand, C. Can Orhan, N.Wesley-James, R. Dee.  
34. <https://www.justpark.com/>



A Swedish competitor in this area is **Workaroundtown**, which is a platform for firms to hire out their extra space, whether it be an office or an unused meeting room.

The travel and housing sector of the Sharing Economy has also seen modest growth as Swedes use international platforms, such as **Airbnb**, as well as more local swapping alternatives. As of April 2015, there were 1008 properties across Sweden listed on Airbnb at an average daily rate of SEK 960. Daily rates ranged from SEK 88 for a couch in someone's living room in Stockholm to SEK 10,500 for a small one-bedroom apartment in the Old Town. Monthly rentals are also listed, including apartments in central Stockholm available for SEK 20,000 per month.

There are also several house exchange platforms that operate both in Sweden and abroad. On **Hembyte.nu** (homeexchange.com), a global platform spanning 150 countries,<sup>36</sup> there are 992 Swedish homes listed. Intervac-homeexchange.com has houses in 50 countries, including 340 houses in Sweden. **Bostadsbyte.com** (homelink.com) has approximately 100 sites in Sweden and offers exchange opportunities in more than 80 countries. Other sites include **semesterbyte.com** and **fritiden.se**, as well as a site on **Blocket**.

## Sharing Small Consumables

There are no real global players that facilitate the sharing of small consumables. Our suspicion is that the local nature of small consumables means that there is little upside for a large global company to operate in this area. Several local initiatives and Swedish platforms exist, such as **Delbar**, **Grannsaker**, **Swinga Bazaar**, and **Tjikko**, but there does not appear to be one well-established national player. The platform **off2off** primarily targets public sector organizations and recently established a partnership with **Ragn-Sells** (one of the companies active in the Circular Economy 100<sup>37</sup>), whereas a library in Malmö, **Garaget**, lends out small goods such as tools, sewing machines, and board games. Another interesting example is **Fritidsbanken**, which lends out sporting goods at no cost to children and youth to encourage them to be active while considering the environment.

### CLOTHING

Clothing is another area where there has been considerable activity, but few initiatives seem to be sustainable. Sites such as **kladbytdag.nu** and **kladbytdagar.se** list clothes-swapping events throughout Sweden. The site **kladbyte.se** lists approximately 14,000 items. In addition, a variety of stores are experimenting with new business models. For example, **Swopshop** has approximately 800 members and utilizes different prices for its garments, including cash and "green hearts", which members receive for donating clothing.

36. 26 tips! RES & BO GRATIS och mer - bil, upplevelser, nöjen , EXPRESSEN - SÖNDAG 2014-06-29

37. <http://www.ellenmacarthurfoundation.org/business/ce10>

Malmö had a **klädoteket** where one could borrow clothes for free, but it closed in March 2015 after four years of operation.<sup>38</sup> Gothenburg's site has also closed. **Länegarderoben**<sup>39</sup> is similar to klädoteket, but has not yet opened any sites.

Local initiatives, such as **Wear Wise**, are considering textile recycling. In particular, Wear Wise is exploring how to create networks to recycle clothing. Its project **Retextile** stemmed from a previous project, Studio Redesign of Borås, and aims to enable the recycling of textiles in larger volumes.

Established brands are also becoming interested in the Sharing Economy. For example, in February 2015, **Filippa K** launched the concepts "Lease" and "Collect" as part of the firm's sustainability program. The "Lease" concept enables customers to rent clothing items from the current collections, such as suits, dresses and accessories, primarily for special occasions. With "Collect", customers receive a 15 percent discount when buying new clothes if they return their old clothes in fair condition, that are then offered either for resale at Filippa K's second-hand store in Stockholm or for donation to Stadsmissionen.<sup>40</sup>

In the US, sites such as **Vinted** and **Poshmark**<sup>41</sup> have grown quite rapidly. These sites enable people to borrow clothes directly from each other without having to go through a store. Poshmark has even started to authenticate luxury goods. However, it does not appear that a site of this type has made it to Sweden. Instead, teenagers in Sweden have started their own Facebook groups for swapping, sharing, and selling clothing.

This spring, **Uber** organized a spring cleaning campaign in which individuals could arrange for an Uber car at no cost to collect used clothing for donation to Stadsmissionen in Gothenburg and Sweden.

## TOOLS

A drill is often used as an example of what can be shared in the Sharing Economy. However, a search revealed very few services of this type in Sweden. In Malmö, **ToolPool** allows individuals to borrow tools for free. In Kiruna, this sharing can occur through a tenant union (Hyresgästföreningen) if one is a member.

## USED GOODS

It is no surprise that there are numerous sites for swapping, donating, and selling used goods. Blocket is one of the largest sites for sales and exchanges; this site combines peer and business advertisements and allows individuals and firms to advertise a wide range of items: from houses to puppies to second hand clothes. Sites offering goods for free include **bjussa.se**, **bort.nu**, **bortskankes.se**, and **syndattkasta.se**. In addition,

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38. <http://kladoteket.se/>

39. <http://www.lanegarderoben.se/>

40. <http://makeitlast.se/2015/02/18/filippa-k-launches-three-sustainability-concepts/>

41. <http://techcrunch.com/2014/12/04/poshmark-hits-100m-in-annual-revenue-for-its-fashion-resell-biz-begins-luxury-goods-authentication/>



there are several local community Facebook groups through which community members borrow, swap, donate, and sell just about anything.

### BIKES

Bike sharing is a major global trend and is often launched as a government initiative to highlight the importance of sustainability. Several local actors exist in Sweden, such as **Lundahoj** in Lund and **Styr & Ställ** in Gothenburg. In Stockholm, **Citybikes** is a collaboration between the city of Stockholm and Clear Channel that launched in 2006. Citybikes enables people to share bikes through its system, and there is some discussion about integrating this program with SL, the public transportation system. Individuals can buy a season pass for SEK 250 or a 3-day pass for SEK 165, which allows them to borrow a bike for up to three hours at a time from one of 140 spots in Stockholm.

## Intangible Assets

### SHARING MONEY

Sweden leads the way in the area of finance and particularly in crowdfunding and has a number of Swedish and international actors. **FundedByMe**, a Swedish firm, is a one-stop shop that offers all four crowdfunding services: donation, reward, equity, and lending. Founded in Sweden in 2011, FundedByMe now has 18 employees and is located in eight countries; locations are primarily in Europe but also include Singapore. The firm charges 6 percent of the amount raised for donations and rewards. More than 51,000 individuals have registered as members and have pledged more than SEK 60 million. In 2013, the firm generated sales of SEK 2.2 million and a net turnover of SEK 8.3 million. Another significant Swedish crowdfunding platform is **Crowdculture**, which uses the donation and reward model to help individuals in creative industries to raise funding. International players **Kickstarter** and **Indiegogo** are also active in both donation- and reward-based crowdfunding and **Crowdcube** in equity-based crowdfunding in Sweden.

Peer-to-peer lending is the fastest growing sector in this area, and international players are becoming more interested in entering Sweden. For example, Finnish firm **Fixura** is launching a subsidiary in Sweden. However, Swedish platforms have a competitive edge over foreign players; **ToBorrow**, a peer-to-business lending platform, has been operating since 2014 and **Trustbuddy**, a peer-to-peer lending platform, has been operating since 2010 and has since expanded into other European markets.

### SHARING TIME

There are numerous services in Sweden that facilitate on-demand help, ranging from simple matchmaking sites such as **Grannar.se** to commercial platforms such as **Helping**, **Hinnerdu**, **TaskRunner**, and **Urbt**.

**Helping** is a cleaning service app that connects cleaners to those looking for cleaning services. The company has earned approximately EUR 540 million and aims to be

the leading global IT platform for cleaning services. Helpling currently has subsidiaries in Germany, France, Holland, Austria, Sweden, Italy, Spain, Brazil and Canada and has plans to expand into Australia, Singapore and the United Arab Emirates. The Swedish firm is based in Berlin, where Rocket Internet, one of the company's investors, is based.

**TaskRunner** is a Swedish platform launched in autumn 2014 that enables people to find other people who can help them with small tasks, such as assembling IKEA furniture, drilling holes, delivering roses or ironing shirts. According to TaskRunner's CEO, the network comprises approximately 600 "runners", many of whom are university students but which also includes other individuals with excess available time, whereas the task orderers are parents with young children or homeowners. TaskRunner has created a platform through which the orderer and runner reach an agreement on the price and task. The payment is deposited by the orderer to TaskRunner and is paid out when both parties have fulfilled their obligations. TaskRunner charges a commission of 15 percent and does not have any corporate tax (F-Skatt in Swedish) obligations. TaskRunner is comparable to the US site TaskRabbit, which currently has approximately 30,000 "rabbits".

**Urbt**, a shared delivery service, charges a fixed price of SEK 129 per hour for delivery services in Stockholm and is just commencing operations. The "Urber" gets SEK 80 per hour and Urbt charges 5-15 percent of the basket value. Similar to TaskRunner, most Urbers are students, and 250 Urbers have already been certified. The firm has raised SEK 30 million in venture capital. A similar site is **Hinnerdu.se**, which was launched in 2010 and has three employees and a sister organization in Denmark.

In addition to exchanging houses and performing short-term tasks, new work-to-pay solutions are being developed whereby people work while staying at others' houses and therefore stay for free. One of these is **woof.org**, which is for farmers, and there are several people in Sweden offering their farms. In general, guests work for approximately six hours each day for six days a week and in return receive free meals and accommodations.<sup>42</sup>

Swedish **eWork** has approximately 4,700 professional freelance consultants in its network and is the largest such network in Sweden. These consultants work on projects for firms of all sizes. In the first quarter of 2015, sales increased by 32 percent to SEK 1.5 billion, with rolling one-year sales of SEK 5 billion.<sup>43</sup> Individuals are responsible for handling their own taxes and administrative activities.

**Freelance Finans** started in 1999 and provides invoice and administrative services to individuals who are self-employed but who do not yet have their own firms. The organization has 11,000 members, many of whom work in journalism, graphic design, or film.<sup>44</sup> The CEO of Freelance Finans is also the chairman of the Freelance trade union.

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42. Upplev utan pengar, TIDNINGEN ÄNGERMANLAND 2014-12-23

43. <http://mb.cision.com/Main/302/9760499/370125.pdf>

44. <https://www.frilansfinans.se/about>

**Vint** was founded in 2013 in Stockholm and is a niche platform that matches professional instructors and local athletes with individuals looking for personal trainers. In 2014, Vint raised USD 1.8 million in seed funding and opened operations in San Francisco. In August 2014, the firm employed eight people in Stockholm and four in San Francisco.<sup>45</sup>

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45. <http://techcrunch.com/2014/08/13/vint-sf/>

## Chapter 5

# REGULATORY CONSIDERATIONS

The Sharing Economy has already been confronted by a number of regulatory issues, from legal challenges, such as the challenge to Uber’s definition of “independent contractor”, to regulatory requirements, such as the insurance and risk requirements relevant to Airbnb. Many areas of potential conflict are highlighted in the book *Practicing Law in the Sharing Economy*, by US attorney Janelle Orsi.<sup>46</sup> The areas highlighted by Orsi concern legal standards in general but are particularly relevant in the context of the litigious and accusatorial legal system of the United States. Nonetheless, Orsi provides interesting insight into the legal and regulatory impacts of the Sharing Economy. Below, we discuss several of the particularly relevant—but still unresolved—regulatory issues relevant to the Sharing Economy

## Employment Regulation

Although numerous labor regulations exist to protect the rights of workers vis-a-vis their full-time employers, such regulations are often silent about the rights of freelancers. Thus, a digital platform does not guarantee an individual’s well-being in the same way that a “traditional” employer does, and individuals who provide their services through Sharing Economy transactions generally must bear a considerable amount of risk. For example, platforms such as Uber and Airbnb do not define themselves as employers in the transportation and hotel sectors, respectively. Rather, they argue that they are merely digital platforms that match drivers with clients and property owners with tourists. Hence, these companies are not responsible for the social benefits and insurance of the drivers and property owners. The shift to a more individualized labor

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46. Orsi, Janelle (2014). *Practicing Law in the Sharing Economy: Helping People Build Cooperatives, Social Enterprise, and Local Sustainable Economies* (Kindle Locations 628-645). American Bar Association. Kindle Edition.

market with a larger share of self-employed individuals of various skill levels requires a reformed labor market policy.

Furthermore, individuals in the Sharing Economy often have no control over when and from whom they receive work assignments. In addition, as the number of labor platforms used by freelancers increases, freelancers may be affiliated with more than one platform, further complicating the situation. For example, taxi drivers might simultaneously participate in Uber and other platforms and/or might have traditional full-time employment but participate in Uber when they have free time.

Because freelancers such as Uber's drivers are not legally employees, they do not have the right to organize to obtain the collective bargaining privileges and protections that most labor unions have. Thus, although some people argue that the Sharing Economy offers flexibility and supplemental income not available from traditional jobs, others argue that it signals a return to the piecemeal labor system that exploited workers.

Moving forward, traditional unions will not capture the entire labor force. Thus, labor market regulations must be adapted not only to ensure the traditional safety net for individuals but also to provide regulatory and tax incentives to incentivize self-employment. In the US, one such organization, the Freelancers Union, has emerged to serve the needs of this labor force. However, as explained above, the line between employee and freelancer is not always clear, and the Sharing Economy is increasingly generating more nuanced situations. For example, what happens if individuals barter or are paid in kind, rather than in money? Can residents of a community volunteer for a housing association in exchange for reduced rent? If so, what do they need to declare for tax purposes, given that they may not be employed by the association? For that matter, are they employed by the association?

The ability of lawyers to advise Sharing Economy clients on how to structure their relationships and how to manage work assignments and compensation requires not only additional legal precedent but also clarification regarding the applicability of specific regulations to the various areas of cooperation.

## Regulation of Production and Commerce

Because digitalization increases access to a variety of mass market and tailored goods and services at competitive prices, consumers tend to benefit from digitalization. However, as is the case for e-commerce, there are risks that must be addressed and new areas requiring regulation.

*Taxation.* Taxation remains a significant and unresolved issue. Who is responsible for reporting the sale and paying the sales or income tax? Furthermore, what about exchanges in which money does not change hands, e.g., a farming cooperative where individuals receive produce from the farm in exchange for labor or an Uber-like exchange where the number of hours spent driving others can be exchanged for rides from other participants? Similarly, when new currencies are created, should they be

treated as goods, services, or currencies for the purposes of VAT? Such debates have already begun to emerge with regard to Bitcoin, a cryptocurrency.<sup>47</sup>

*Safety.* Some risks in the Sharing Economy relate to the fact that although an individual transacts directly peer-to-peer, he or she does not personally know the person on the other side of the transaction. For example, an individual who rents a room in an apartment is not guaranteed the regular safety standards of a traditional hotel room. Several platforms have developed screening mechanisms to help determine whether a person is trustworthy. Additionally, the consumer is in some sense protected by the “crowd” because users perform collective screening and third-party verification through, for example, comments (as in crowdfunding) and reviews (as on Airbnb or tripadvisor). Low ratings from the crowd will self-regulate the market.

However, in regard to the sharing of durable goods, such as homes and cars, regulators have pushed back on several issues, typically in response to protests and lobbying. First, there is the issue of safety. Most countries have regulations to ensure that goods and services sold to the public meet some minimum level of safety. For example, hotels are legally required to have emergency exits and fire extinguishers, whereas private homes are not. Similarly, to drive a public taxi, a driver must often have a specialized or supplementary driver’s license that requires passage of some sort of screening test. However, what if a driver is given the wrong information about driving conditions, what if a very large amount of money is at stake or if a fire alarm is not installed in an apartment on the Airbnb platform?

The regulations discussed above are by no means the only regulations that may come into play in the Sharing Economy. Regulations identified by Orsi as potentially applicable to the Sharing Economy include those relating to health and safety; food and agriculture; the licensing of childcare centers; public utilities; taxi services; and the hotel industry. However, such regulations typically apply only to purely commercial undertakings. Thus, there is some question whether these regulations also apply to non-commercial undertakings, cooperatives and reciprocal agreements. As Orsi observes, “The Sharing Economy is built on a very different set of relationships, which makes it tricky to determine which regulations may or may not apply.” The regulatory framework must be adapted in a manner that permits the appropriate application of regulations in the Sharing Economy, and policy makers involved in the effort to harmonize regulations for the digital and traditional economies should focus not on the *technology* used but on the *activity* conducted.

*IoT and Privacy.* Looking ahead, both technology evangelists and consumer goods manufacturers have hailed the rise of the “Internet of Things” (IoT), wherein everyday devices contain tiny computers and are Internet-enabled, as a boon for the Sharing Economy. Things can be programmed not only to alert the user to certain events but also to communicate with each other and even to coordinate and make payments directly among themselves without human involvement.

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47. <http://www.coindesk.com/europe-inches-towards-decision-bitcoin-vat/>

The name “Internet of Things” is somewhat inaccurate; a more accurate label might be “The Internet of Small Computers on Things”, which is another way of saying that the things themselves cannot be endowed with the capacity to connect to the Internet. Rather, manufacturers have started to install small computer processors on devices and these computers both connect to the Internet and control the device. This idea is not new, but advances in both computer hardware and Internet connectivity over the last decade, including increasingly smaller computer parts and an increasing number of processes being hosted in the cloud, have made it a realistic possibility (Fleisch 2010).

Indeed, although the sharing phenomena that exist today rely on human-controlled mediators to control them as well as on human reviewers and screening procedures, a Sharing Economy built on IoT principles is unlikely to be subject to such restrictions. Rather, a pool of IoT resources may be self-run and self-guiding. Consequently, numerous regulatory issues are presented; for example, who is to blame if a self-run, self-shared car is in an accident? Other issues, such as cyber security and data integrity, will also come to the fore and demand regulation.

*Managing Intellectual Property and Ownership.* A Sharing Economy is likely to include not only the sharing of goods and services but also the exchange of information. Such exchanges of information may also encompass collaboration and the creation of new ventures. Such collaboration, while not new, is likely to create new constellations and concerns regarding intellectual property. For instance, increased sharing in the creative and software industries led to the development of new licenses that established the terms of this sharing and collaboration. Ranging from the Creative Commons License to the GNU General Public License (GNU GPL), such licenses include standard terms relating to the sharing, re-use, private use and commercial use, among other issues. As sharing increases, the use of standardized licenses is likely to become more common.

With regard to ownership, according to Orsi, “In a world where enterprises and housing will ideally be financed and owned by members of our local communities, securities law compliance will keep Sharing Economy lawyers busy.” This statement is equally applicable to Sweden. Indeed, questions regarding securities regulations have already arisen in the context of crowdfunding.

*Managing Risk.* Orsi notes that the fear of liability and loss constrains both commercial and cooperative relationships. In the Sharing Economy, where the responsibility for risk and risk pooling shifts away from firms with established risk practices and skills and onto consumers who lack such practices and skills, what might happen? One immediate effect will be a shift in the relationship between individual consumers and established firms and institutions, including lawmakers. Indeed, consumer protection laws, which were designed to protect consumers at the expense of firms, cease to apply in the Sharing Economy. How should these risks be addressed as power shifts away from centralized institutions and toward broadly distributed networks of individuals and communities? Whereas risk sharing has traditionally been enshrined in contracts, the increasing prevalence of sharing—of both goods and risk—is likely to lead to an increasing number of liability disputes. Addressing such disputes, and their increasing prevalence, is likely to necessitate both new expertise and increased capacity in the legal area.

## Chapter 6

# MIXED ECONOMIC IMPLICATIONS

Having reviewed the legal considerations implicit in the Sharing Economy, there are a significant number of economic implications as well.

### New Pricing Mechanisms Push Inflation Downward

Current trends continue to push inflation downward. Also, due to the Sharing Economy and digitalization, newly emergent pricing mechanisms are appearing and some of them are not captured in the traditional macroeconomic models that are based on historical data. Also, the official statistics might not capture these new price mechanisms. Digital platforms and other technological advances are decreasing entry barriers and contributing to transparency, resulting in increased price competition. New entrants, so-called *born globals* and *micromultinationals*, are accessing the global market right from their inception, which means that previously protected local providers now find themselves facing global competition. Traditional middlemen, which generate higher transaction costs and higher fixed costs of holding capital or labor, are being replaced by digital platforms. These enable more perfect matching of supply and demand as well as lower transaction costs. Since the digital platforms in the Sharing Economy have no fixed costs related to owning, they are able to offer a lower price. Thus, although demand is growing in the Swedish economy, companies are finding it difficult to increase their margins.

Moreover, the CPI basket in the official statistics might be weighted incorrectly. According to estimates by Swedbank, 30 percent of the Swedish CPI basket is directly or indirectly affected by digitalization. Yet, the degree to which consumption of digital goods is fully captured in the official statistics is debatable. For example, there is a supply shock of software due to almost zero marginal costs (the costs of copying, distributing and transporting digital services are close to zero), examples of which include

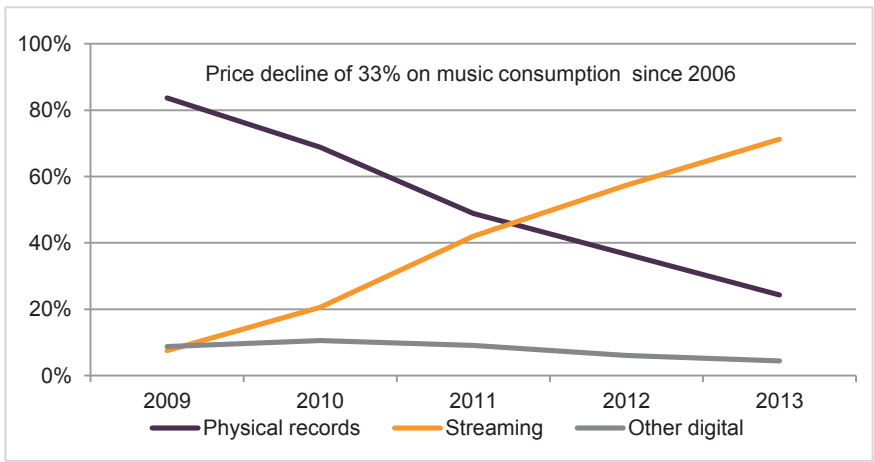


Massive Online Open Courses (MOOCs) and streamed music and videos (Figure 7). In addition, there are numerous free services such as Skype and Dropbox.

Productivity could be underestimated since all the free digital goods are not fully captured in the statistics as consumption. Furthermore, there are numerous apps that save people time and money in their everyday lives. For example, Waze, a community-based traffic and navigation app, enables drivers to share real-time traffic and road information, which saves everyone time and gas money on their daily commute and travel. As a result, there is a “hidden” unit consumption of free digital goods while the marginal costs of digital goods are falling. Because GDP measures the value of transactions, free digital services create a consumer surplus that is difficult to capture and inflation might be overestimated to some extent.

Many of the services in the Sharing Economy is optimizing the use of our time making our lives more productive. Yet, time optimization has never been included in GDP which could lead to an underestimation of productivity. The measurement error is larger now than it has been previously due to the digital platforms. In summary, digital services create time optimization that is not translated into productivity and decrease marginal and transaction costs. The net effect is a consumer surplus and a time optimization that are not captured in the official statistics.

FIGURE 7. Income in the Swedish music industry by format



Source: IFPI, musikförsäljningsstatistik

As discussed above, productivity from the Sharing Economy is not fully captured in official statistics thus any amount of change in productivity due to the Sharing Economy is difficult to measure. However, a significant underestimation of productivity could be significant, and this underestimation could be an additional factor contributing to downward price pressure.

Finally, there are considerable downward pressures on wages, e.g., transparency, increasing competition. In addition, taking a more general perspective of digitalization, software applications are replacing routine tasks and robots replacing manual labor in manufacturing processes. These forces are causing a middle-tier job squeeze and forcing middle-skilled labor to compete for jobs in the lesser-skilled sector, which has the effect of reducing wages. Such structural factors are holding back wage increases even in the current environment with a cyclical upswing in the US labor market. In Sweden, lower labor mobility and lower wage flexibility cause more wage rigidity compared to the US. Nevertheless, the underlying forces lead to the same wage pressures.

At the same time, there is a divergent price trend. It could be argued that everything that can be digitalized will be, and that prices for these goods will be reduced; The Sharing Economy is making customized services and experiences available to individuals for lower prices. Looking forward, this increased supply of mass customized goods is likely to decrease the price of such goods - and consequently the cost of living. However, at the same time, everything that cannot be digitalized will increase in value.

Although some of the above-referenced pricing mechanisms have been occurring for decades, we are now entering the second phase of the exponential development curve, and it is possible that prices will be affected to a much greater degree than they have been previously. In the same vein, the cost of insurance and regulatory compliance may ultimately drive prices in the Sharing Economy upwards, should regulators choose to regulate this emergent business model further. At the same time, margins may rise as a result of new regulations or because companies find new ways to earn profits; thus, at present, the precise impact of these new price dynamics on inflation is unclear.

We believe the net effect considering both the supply shock of goods and services and increasing regulation will have a net downward effect on prices.

## Lower Demand for Capital in the "Zero Marginal Cost Society"?

How is the Sharing Economy affecting demand for capital and investments? What will the new long-term interest rate be? Are the new digital assets appropriately priced and risk-weighted? These questions are difficult to answer given the new price mechanisms and business models in the Sharing Economy. Below, we try to provide some guidance to help to answer these questions and urge more academic research in this field.

The reduction of slack in the economy, through the use of resources that previously sat idle, creates more and smaller transactions while adding value to one part of the economy. However, because of the way resources are exchanged, e.g., as free digital services or exchanged goods, these transactions are not fully captured in the official statistics, as explained above. Indeed, we may even find that GDP is reduced as slack is

reduced and more economic activity migrates from traditional middlemen to Sharing Economy digital platforms.<sup>48</sup>

The spread of digital services and the decrease of marginal costs to close to zero are changing the characteristics of economic and business models. There are indications we are entering an era characterized by *abundance* rather than scarcity.<sup>49</sup> Most firms in the Sharing Economy try to achieve market dominance, obtain a monopoly, and impose prices that are higher than marginal costs. However, if consumers pay only the marginal costs and marginal costs are falling to zero, then businesses cannot ensure a return on their investments. How will lower profit levels satisfy shareholders?

According to Jeremy Rifkin, new types of incentives are emerging that are based less on financial reward (in a traditional sense) and more on a desire to build social capital or to advance the social well-being. Rifkin argues that a hybrid economy is developing, in which these new incentives will complement goods and services with more traditional and higher marginal costs that can be exchanged on traditional markets and yield sufficient profits to insure a return on investment. For firms that embrace the Sharing Economy, where the prices of goods and services are reduced or even free, what type of value can be acquired and how can this value be capitalized? Consumers in the Sharing Economy are aggregating a new form of capital, social capital,<sup>50</sup> which refers to time optimization, social well-being, meeting more individualized demand, etc., and as noted above, this form of value is not captured in the official statistics. Will the growth of the Sharing Economy eventually cause social capital and digital assets to play a more crucial role than traditional financial assets?

The challenge for traditional financial institutions today is that they might reject or miss opportunities for investment due to the difficulty of assessing the risks of digital assets and social capital. Entry barriers to digital innovations are low, and most of the “capital” or “value” is invested in intangible assets, not in traditional tangible goods or assets, which parallels the economy in general, insofar as both are increasingly driven by the knowledge-intense service sector. Thus, new models to evaluate risk in both ideas and creativity are needed in the Sharing Economy.

Furthermore, the Sharing Economy has disrupted mature industries, such as the hotel and taxi industries, by providing consumers with cost-efficient access to resources without ownership. Production in these sectors as well as volume and revenue might fall in the future as consumption shifts from traditional middlemen to Sharing Economy digital platforms and as borrowing or renting replaces owning. The demand for investments in, for example, taxi vehicles, hotel buildings, and physical retail stores, could fall and would lower returns on investment and capital for the economy as a whole. As a result, credit spreads may widen due to the decreased ability of firms to repay future debt, which will be penalized by the

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48. Rifkin, J. (2014). *The Zero Marginal Cost Society: The Internet Of Things, The Collaborative Commons, and The Eclipse Of Capitalism*. Macmillan.

49. Rifkin (supra)

50. Rifkin (supra)

stock market. In contrast, sectors that are less capital intensive in the Sharing Economy might experience positive stock market growth. Because these firms demand relatively little or no capital from capital markets, the effects on the credit spreads of these firms may be limited, whereas they may reap increasing returns on their social capital.

## Competition

Although there are significant opportunities for economic growth, incumbent firms may feel threatened by the new competition and the possibility of shrinking profit margins. Incumbents in industries such as the transportation industry are already spending vast resources to hire lawyers, lobby for legislation to block the new competition, promote negative publicity around the competition, and market their traditional services. This was the case for Uber, which has been banned in countries including Brazil, France, Germany, the Netherlands, Portugal, and Spain.

Other firms indicate that they see no point in fighting this trend. Instead, they are exploring ways in which they may participate in the Sharing Economy, such as through sponsoring partnerships, acquiring firms, integrating the Sharing Economy into their existing business models, building their own platforms, and innovating their services.<sup>51</sup> For example, incumbent taxi firms in San Francisco reacted to Uber by co-developing Flywheel, an Uber-like app, and the leading taxi firms in Stockholm have developed several different payment solution apps. Similarly, DHL created its own MyWays app to facilitate peer-to-peer deliveries.

There is a certain assumption that digitalization is ‘superstar biased’ and that this assumption holds for the Sharing Economy as well.<sup>52</sup> The superstar bias suggests that there is a ‘winner takes all’ effect because the marginal utility derived by consumers from using a certain digital technology increases with the number of other consumers who use the same technology, which leads to the rapid standardization of technology and monopolization of sub-markets. What we are beginning to see is “perfect competition” on digital platforms but a monopoly situation between platforms. This monopolistic situation is obvious from a consumer’s perspective. If there are a vast number of nearly free digital platforms, why take the second-best option? As a result, similar to the dotcom boom of the late 1990s, many startups are rapidly expanding their operations into numerous countries based on the assumption that there is a first mover advantage.

### LABOR PRODUCTIVITY AND A LABOR MARKET UNDER TRANSITION

The Sharing Economy is having a significant impact on the labor market, and the effects on existing workers and on the line between employees and freelancers have been the subject of discussions in many countries. On the one hand, the Sharing Economy

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51. <http://www.web-strategist.com/blog/>

52. Rosen, S. (1981). The economics of superstars. *The American Economic Review*, 845-858.

enables a freelance economy in which there is increasing global labor mobility, e.g., in the tech industry, and an increasing number of new work opportunities across the globe for people who prefer to be self-employed. On the other hand some Sharing Economy services are, by their nature, local. The Sharing Economy may therefore also introduce constraints on the labor supply in urban areas. Digital platforms have led to the unbundling of traditional jobs, thereby providing alternatives to traditional jobs and promising new job creation, especially for unemployed and lesser-skilled individuals.

Labor activity in the Sharing Economy is by its nature both local and global. Some services can be provided by workers far away while others are, by their nature, local. The Sharing Economy may therefore also introduce constraints on the labor supply in urban areas as demand increases for locally provided services. The development of the Sharing Economy therefore calls for a critical mass of service providers, meaning that dense, urban areas are prime locations for the Sharing Economy to thrive.

Thus, although there is no denying that the Sharing Economy creates efficiencies and improved productivity, this only benefits certain workers. Indeed, it allows the high-powered executive to outsource tasks such as collecting the laundry and emptying the garage, allowing her to be more productive at her job. However, the people performing these tasks may have little opportunity to develop beyond the performance of a single menial task. Furthermore, rather than specializing in a particular service, the individuals selling their time (or tasks) do not necessarily have the opportunity to specialize because all administrative duties, including the calculation of VAT and income taxes, fall on them. This undermines decades of productivity gains wherein people specialized in certain tasks within a firm, which improved productivity as a whole. Increases in productivity are therefore unequal; some individuals experience increased productivity whereas others do not. This possibility raises the question whether the phenomenon is, productivity-wise, generally beneficial for society.

Some academics argue that the productivity gains achieved through ground-breaking advances in IT have diminished and we are entering an era of slow productivity growth and stagnation. One possible reason for this scenario is that because digitalization is skills biased, i.e., it complements highly skilled workers to a larger extent than lesser-skilled workers, there is a relatively larger lag.

In the future, as digitalization is embraced by nearly all sectors of the economy and IT becomes increasingly mobile, we could experience a new era of potential productivity gains. IT has been characterized as a General Purpose Technology and constituted a breakthrough that led to a productivity up-shift. Mobile IT has the potential to become the new General Purpose Technology. However, commentators and academics are concerned about the fast pace of digitalization and automation and their potential impact on the labor market, especially because wages in the Swedish manufacturing industry are relatively high. Recent studies predict that 36-60 percent of the current jobs in Sweden, primarily routine jobs, will be lost during the

next 20 years due to digitalization and robotization.<sup>53</sup> However, although 10 percent of Swedish jobs disappeared between 2006 and 2011 due to automation, the employment rate has remained relatively unchanged. The reason for the stable employment rate is threefold: 1) digitalization and increased revenues have increased the demand for labor, such as computer specialists and engineers, 2) higher disposable incomes of highly skilled individuals have increased the demand for local service sector jobs, and 3) labor market reforms, particularly those targeted toward youth labor, have had a positive impact on employment.

Thus, as in previous technological paradigm shifts, it is predicted that there will be technological unemployment as technological advances outpace the rate at which we can find new uses for the displaced labor. Although this prediction implies certain negative effects in the short run, the long-run effect should be positive because history shows that people tend to move higher up in the value chain as lost jobs are replaced by new jobs over time. Indeed, the Sharing Economy may provide a short-term cushion for those who lose their jobs as a result of digitalization. As Arun Sundarajan, Professor of Information, Operations and Management Sciences at the Stern School of Business, New York University recently observed: "The Sharing Economy will expand the job market faster than the job loss due to robotization - in the near term".

To a certain extent, the above-described net effect on jobs will depend on the enabling power of the Sharing Economy, which is beginning to embrace sectors beyond those already affected. Although the Sharing Economy seems relatively innovation friendly, based on its low entry barriers, the crowd's real-time self-regulatory and sharing characteristics, and less capital-intensive services, the question is the degree to which entrepreneurs and freelancers will be able to create opportunities and jobs in both highly skilled and lesser-skilled sectors. It is difficult to foresee what types of jobs the future will bring. The tasks that cannot be digitalized will in certain cases increase in value, such as the value of the physical meeting, and thus create job opportunities in sectors that will not require technology.

#### LEADING TO INCREASED INEQUALITY?

One of the biggest concerns regarding the Sharing Economy elsewhere in the world is based on the fact that it does not necessarily create new, stable jobs. On the contrary, it creates a market for short-term employment, which potentially undermines decades of productivity gains through specialization, and often pays lower-than-market wages. A prolonged period of expansionary monetary policy and technological change has already created polarized labor markets and, as a result, higher income inequality, and it is possible that a greater share of the productivity gains derived from digitalization will be allocated to highly-skilled workers than to lower-skilled workers, thereby

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53. Fölster, Stefan. (2014) *De nya jobben i automatiseringens tidevarv*. Stiftelsen för Strategisk Forskning, Stockholm.

further exacerbating this inequality.<sup>54</sup> It should be noted that the effects of technological change on labor markets constitute a historical trend that commenced with the Industrial Revolution, and the current effects of technological change predate the financial crisis, with wage growth beginning to decouple from productivity growth more than 10 years ago.<sup>55</sup>

Recent academic publications (see, for example, OECD 2014<sup>56</sup>) argue that inequality hampers growth, which counters the traditional argument that a certain level of inequality provides incentives for innovation and entrepreneurship and is therefore important for growth. Rather, an effectively implemented redistribution policy as well as appropriate social policies (such as access to free high-quality education) have been shown to have a positive effect on growth, thereby avoiding a trade-off effect between growth and inequality.<sup>57</sup>

Moreover, although these changes have exerted and continue to exert pressure on prices and wages, it is not clear that this effect will persist indefinitely. For instance, new regulations and firms may lead to the discovery of new ways to earn profits. In addition, previous waves of industrialization have ultimately created new, unforeseen jobs; such job creation may yet occur during this wave of analogous structural change.

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54. Brynjolfsson, E., & McAfee, A. (2014). *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies*. WW Norton & Company.

55. Felländer & Berman (supra)

56. <http://www.oecd.org/els/soc/Focus-Inequality-and-Growth-2014.pdf>

57. Raul, R. & Vicente, R., "Inequality in European regions" in Wennberg & Ehrling (Eds) *Inclusive Growth in Europe* (2014), available at: [http://www.liberalforum.eu/en/publications.html?file=tl\\_files%2Fuserdata%2Fdownloads%2Fpublications%2F2014%2FInclusiveGrowth.pdf](http://www.liberalforum.eu/en/publications.html?file=tl_files%2Fuserdata%2Fdownloads%2Fpublications%2F2014%2FInclusiveGrowth.pdf)

## Chapter 7

# SWEDEN AHEAD, BUT CHALLENGES REMAIN

Characteristics of the Swedish economy suggest that it is in a good position to benefit from the Sharing Economy. These characteristics include high levels of employment, relative specialization in IT and communications services, high levels of Internet and smartphone penetration, well-recognized entrepreneurial hubs, and the ideological concern of Swedes for sustainability<sup>58</sup>, which in many ways is the backbone of the Sharing Economy movement. Because the Sharing Economy is likely to continue to grow in Sweden, the labor market, prices, productivity, and the demand for capital will be affected. However, well-established behaviors do not change quickly, and thus we will probably see a hybrid economy<sup>59</sup>—one that is characterized by both sharing and owning—for some years to come.

At the same time, like most countries, Sweden is likely to feel the adverse effects of increased digitalization and robotization. This is partly because its largest sectors of employment are transportation, construction, and metal manufacturing. All three sectors are significant employers across Europe, and employment in these sectors is roughly the same in Sweden, relative to its population, as it is elsewhere in Europe.

Sweden has enormous potential with respect to embracing the Sharing Economy. One reason for this potential is that Sweden experienced the IT boom and crash of the late 1990s and thus has learned many lessons regarding the governance of financial markets, investment in digital infrastructure and training, and the accumulation of a critical mass of serial entrepreneurs with experience in building digital ventures.<sup>60</sup> With the right training and circumstances, jobs that are lost due to digitalization and

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58. Berkes, F., Folke, C., & Colding, J. (Eds.). (2000). *Linking Social and Ecological Systems: Management Practices and Social Mechanisms for Building Resilience*. Cambridge University Press.

59. Rifkin (supra)

60. Wennberg, K. (2011). Entrepreneurial Exit. Available at SSRN 1825113.



robotization can to some extent be replaced by self-employed individuals or freelancers in the Sharing Economy. The Swedish welfare state gives the country some advantages in this regard: the state not only provides a safety net for entrepreneurs and freelancers, but the education needed to re-train people is free at the point of use for Swedes. In contrast, other places, like the US, rely on private firms and other middlemen to provide private insurance and paid-for higher education.

Falling or continued low prices will increase purchasing power. Nonetheless, the Sharing Economy is developing at a rapid pace, and the regulatory framework must appropriately address the protection of consumers and employees while simultaneously enabling the creation of new jobs. These tasks will require a balancing act. In Sweden's modern welfare state, the labor unions have played a significant role in shaping the labor market and ensuring the protection of workers. Fahlbeck<sup>61</sup> writes that Swedish unions have worked hard in the international arena to "broaden the aim of the European Union to embrace labor market and social issues". The Swedish labor market model is based on risk sharing, with a safety net for the individual, but has its roots in traditional manufacturing industries.

The Swedish welfare state is also premised on the idea that individuals are "employed" in the sense that they work for a larger firm; self-employment is the exception rather than the norm. One possibility is that self-employment will become the new norm and, if so, different rules will be required to ensure both that self-employment runs smoothly and that individuals keep enough of their earnings to live on rather than opting out of self-employment.

Sweden boasts a strong skill base and traditionally has a high share of graduates in natural sciences and engineering, which bodes well for innovation in general but may not impact the growth of the Sharing Economy. However, there are increasing concerns about the quality of Swedish education and its ability to produce a workforce with the skills that will meet the needs of the Swedish economy in the years to come. In science education, Swedish students rank in the middle of the OECD states, and the pay-offs of higher education in Sweden lag behind many of its peer countries.<sup>62</sup> Further, Sweden does not rank high in the attraction of foreign skill, which Christian Ketels<sup>63</sup> argues is increasingly necessary in the global economy. Further, Sweden's government regulation and administrative practices are considered bureaucratic, and Sweden has one of the highest levels of taxation in the world, especially for individuals.

## Some Possibilities: Scenarios for 2020

A tool commonly used by organizations and individuals to prepare for the future is scenario analysis. In brief, scenario analysis enables individuals to envision multiple possible future scenarios, which is especially helpful in situations characterized by high

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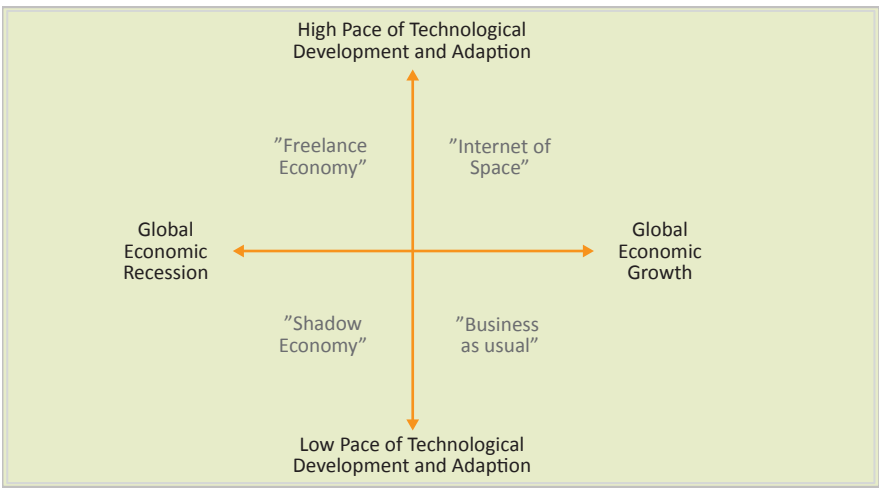
61. Fahlbeck, R. (1999). Trade Unions in Sweden. Discussion Paper, Labour and Society Programme, International Institute for Labour Studies (Geneva, ILO).

62. Ketels, C. 2009. *Clusters, cluster policy, and Swedish competitiveness in the global economy*. Globalisation Council.

63. Ketels (supra)

levels of uncertainty and change.<sup>64</sup> One method of conducting scenario analysis is to create a 2x2 matrix with each of the two axes based on critical uncertainties, i.e., the driving forces that will have the most impact on how the future unfolds. The 2x2 matrix enables the creation of four plausible but distinct scenarios of the future and thereby encourages the consideration of both the threats and opportunities presented by each scenario. Note that there is no one right or wrong scenario; rather, the realized future tends to possess components of each scenario. Although we do not have the space to conduct a complete scenario analysis here, it is interesting to apply the tool in the context of this report to better understand what implications these different scenarios have for the development of the Sharing Economy in Sweden, particularly in the context of the regulatory environment.

FIGURE 8. Scenarios for 2020



We have selected the following two axes of uncertainty for our matrix: 1) digitalization and technological advancements (e.g., IoT, artificial intelligence, robotics, 3D printing, energy), ranging from High Pace of Technological Development and Adoption to Low Pace of Technological Development and Adoption, and 2) the global economy, ranging from Global Economic Boom to Global Economic Recession. Although there is always some debate about which axes of uncertainty should be selected to build the matrix, the two axes selected here both have considerable implications for the Sharing Economy. The first axis relates both to the pace at which technological development occurs across a number of areas and to the rate at which it is absorbed into society and the economy. The second axis represents the level of growth of the global economy.

64. A Note on Scenario Planning, Harvard Business School, 2005.

We have labeled each of the four scenarios and discuss each scenario and its implications for the Sharing Economy below, beginning with the lower right quadrant and moving clockwise (Figure 8). Finally, we have chosen to look five years into the future—i.e., at 2020—as this should provide a sufficient amount of time for both technology and the economy to go either way, and we use this opportunity to break somewhat free of our current views of the world.

#### SCENARIO: BUSINESS AS USUAL

Predictions about the future, including the pervasiveness of IoT, a 3D printer in every home, and the replacement of a high percentage of jobs with robotics, are far from fulfilled in this scenario, and both work and home life in 2020 have remained more or less the same. However, the global economy has picked up considerably since 2015; most nations across Europe and the globe are experiencing expansionary phases, and business and consumer confidence are at levels not seen in years. As a result, employment across all sectors of the economy is experiencing steady increases, and established firms in the construction, manufacturing, transportation, and pulp and paper industries are continuing to hire employees. The freelancing economy continues to grow at a steady pace, primarily in the areas of IT consulting and other specialized consulting areas, such as advertising and PR. Within the banking industry, crowdfunding and P2P lending are steadily gaining ground.

Platforms such as TaskRunner cater primarily to students who are looking for small jobs to help them pay for their everyday expenses. However, a number of new Sharing Economy platforms and services have emerged in response to a growing number of individuals who are looking for ways to make their everyday life much more convenient and have a disposable income to spend on these services. These neo-sharers are focused on sustainability and therefore use new services that focus on sharing new durable goods, such as energy-efficient cars and electric bikes. There is a high degree of differentiation among Sharing Economy platforms, with a broad array of both local and global platforms because people are interested in developing their own independent, individualized lifestyle, which enables these platforms to charge reasonable margins.

Despite these advances, consumerism and the labor force remain largely unchanged, leading many people to question why there was so much hype around the Sharing Economy in 2015.

#### SCENARIO: SHADOW ECONOMY

Similar to the Business as Usual scenario, predictions about the future, including the pervasiveness of IoT, a 3D printer in every home, and the replacement of a high percentage of jobs with robotics, are far from fulfilled. However, the Global Economy has hit a rock-bottom low in terms of recession. As a result, many people working in Sweden's established manufacturing and other industries have lost their jobs. Consumption has fallen dramatically as disposable income has all but dried up. Contrary to the Business as Usual scenario, the Sharing Economy is in full force. However, it has merely driven

the creation of a Shadow Economy characterized by micro-entrepreneurs and the re-sharing of used goods. There has been a rapid rise of “low-skilled” micro-entrepreneurs who are willing to take on any number of menial jobs and small tasks to make ends meet.

This rise has been substantially encouraged by a number of TaskRabbit-like platforms that have emerged with the aim of making money by attracting micro-entrepreneurs to join their respective platforms. However, due to an oversupply of people searching for these types of jobs, it is difficult for individuals to differentiate themselves. Furthermore, because the ability to make one’s living from these tasks depends on a dense population, there is growing pressure on urban areas as runners move to cities, which further exacerbates the situation. Platforms are taking advantage of this oversupply, and due to competition both among the platforms and among the runners, wages and conditions have quickly deteriorated into a downward spiral. As a result, there is a continuous flow of class action lawsuits by runners against the platforms.

Beyond the labor platforms, local Sharing Economy platforms are attempting to enter a number of areas. However, international sharing platforms continue to gain monopoly positions in a growing number of industries in Sweden due to these platforms’ ability to achieve productivity gains on a global scale through big data analytics, thereby driving out local startups. Because there is little competition among the monopoly platforms but significant competition within them, there are increasing transaction fees and increasingly poor conditions for both suppliers and consumers. In response, a number of local not-for-profit Sharing Economy platforms and community sites have blossomed, allowing individuals to swap and donate their used goods (resharing), which further drives down consumption. Individuals have also discovered that they can trade tasks with one another on these homegrown sites without having to go through TaskRabbit-like platforms. Due to the recession, trust in established banks continues to decrease rapidly; at the same time, banks have severely tightened their credit policies. Banks continue to lose market share as both local and international crowdfunding platforms gain in popularity, with P2P lending growing far beyond expectations.

As a result, the Shadow Economy is at an all-time high and the government is spending vast resources on efforts to regulate and monitor these activities and is considering a reduction of the limit for non-taxable income. The government is also attempting to monitor the international monopoly platforms to prevent them from abusing their market power but is having difficulty doing so because it does not understand the various business models. One bright light in this scenario is that there are a number of local government Sharing Economy initiatives across Sweden that are focused on facilitating the sharing of durables, consumables and tasks to encourage people to remain local and to allow them to save on expenses.

#### SCENARIO: FREELANCE ECONOMY

The global economy is at an all-time low but the pace at which technological developments are being adopted far outpaces 2015 predictions. Households have 3D printers,

the IoT is in full force due to cheap sensors and standardization, robots and drones abound, and the majority of homes and buildings are creating an energy surplus. These factors have had serious implications for Sweden's labor force, and job reductions at Sweden's established firms have also outpaced predictions.

However, due to the fast pace of technological development and adoption in new technological fields, there is a high demand for various new skills to feed this technology wave. A number of local and global Sharing Economy labor platforms have emerged and to attract individuals, these platforms are offering free education, online skills training, and networking activities. Fortunately, competition among the platforms is not overly fierce because the platforms can differentiate themselves based on technological area and on whether they serve local or global markets. Although traditional sources of funding, e.g., banks, venture capitalists and soft loans, have dried up, crowdfunding platforms are booming as entrepreneurs and small businesses launch their new ventures on these platforms.

Furthermore, as the circular economy begins to take hold, resharing platforms for durables and consumables are being replaced by local neo-sharing platforms as technology begins to pervade all aspects of work and home life. Households are becoming self-sufficient, not only due to their energy surpluses but also because they are able to print a variety of products from recycled and local materials through their local 3D printing network. People are leaving congested urban areas due to poor quality of life and moving to small and medium-sized towns and the countryside to take advantage of the rise of local, self-sufficient economies with community-owned assets and of their ability to work anywhere through the internet. Local governments are vying to attract these urban refugees by promoting local government initiatives to facilitate publicly accessible goods, e.g., cars, working spaces and 3D printers, and are experimenting with collaborative models for taxes and funding.

#### SCENARIO: INTERNET OF SPACE

Who could have predicted this global economic boom and fast-paced technological development and adoption? It seems that the two phenomena have continued to feed each other in a continuous growth spiral. Established firms are competing for talent and individuals are increasingly holding two jobs, both as employees and as freelancers, which allows them to develop their hobbies and interests. There are a number of talent platforms that enable training and networking for professionals, as well as TaskRabbit-like platforms for students, which are increasingly popular because of the high number of students moving to Sweden due to Sweden's leadership position in technology. Both local and international crowdfunding platforms are booming because they are able to differentiate themselves and to attract both local and international entrepreneurs and investors.

Due to alternative energy sources and micro-manufacturing techniques, and because used goods are being recycled as input for 3D printers and the quantity of imported goods is declining, neo-sharing platforms focusing on locally made, small-scale, high-quality "shareable" goods abound. Sweden's advanced development in areas such as

IoT, drones, and robotics has led to the country being used as a test market by many multinational firms interested in developing new products and services in both urban and non-urban settings. Furthermore, Sweden has become the global leader in space tourism due to Spaceport Sweden's efforts, attracting significant talent and capital from across the globe to its space tourism cluster in Norrland.

Due to Norrland's need to develop considerable regional infrastructure—essentially from scratch—and its highly educated population and advanced technologies, Norrland is also a global leader in the development of new forms of Sharing Economy platforms and value creation models. The Swedish government now spends a considerable amount of resources on issues such as privacy and data integrity as a result of the fast pace of technological development and adoption. In addition, the government is focusing on the transition of traditional institutions, such as banks and universities, into P2P platforms because demand for traditional institutions has declined considerably in recent years.



## Chapter 8

# POLICY CONSIDERATIONS

The above discussion highlights the risks that the Sharing Economy poses for Swedish and other economies. Indeed, although Sweden is already a largely knowledge-driven economy, and thus is likely to benefit more from the rise of the Sharing Economy than other countries, we argue that much could be done to maximize the potential of the Sharing Economy while simultaneously minimizing the possible negative effects. We believe that the following themes are crucial areas of consideration for policy makers: 1) flexible regulation using “trial and error”, 2) facilitation of entrepreneurship, 3) the government’s involvement in the Sharing Economy, 4) labor market flexibility, education and challenges for general statistics, and 5) housing and the gains from dynamic clusters.

### Flexible Regulation Using “Trial and Error”

Consumer protection should be strengthened in Sharing Economy transactions, and insurance for users provided. In addition, employers and employees each need a “single voice” through which to lobby, and each group should pool their resources to facilitate negotiations in areas such as insurance coverage. Technologies to facilitate trust and identification should be developed and shared. Transparency is necessary for users to provide impartial information on taxes and other regulatory filings, and unbiased ratings should be provided. Most importantly, a flexible regulatory framework should be established. For example, an individual renting out a single spare room should not be subject to the same type of regulation as a firm that rents hundreds of rooms annually. Finally, because technology is enabling the rapid spread of Sharing Economy dynamics, the regulatory framework should be able to work in an iterative fashion.



The British government outlined a number of pro-Sharing Economy policy considerations in a report released at the end of 2014.<sup>65</sup> However, this report has been criticized for neglecting labor issues. Although this report demonstrates that Sharing Economy platforms enable lower prices in horizontal transactions, it is also true that the network effects of engaging with a single platform may create monopolies at the platform level. Thus, although consumers stand to benefit from the Sharing Economy, if a single monopolist platform captures all of the activity, it may exploit the market, whether by raising fees for its captive market or by failing to innovate. These issues require further discussion among regulators.

## Facilitation of Entrepreneurship

Previous attempts by governments to facilitate entrepreneurship include efforts to simplify the initiation and operation of small firms. For example, sole proprietorships (“Enskild firma”) and limited liability firms (“Aktiebolag”) are subject to simplified accounting and tax reporting requirements. Similarly, in 2010, the upfront cash requirements were reduced from SEK 100,000 to SEK 50,000. This simplification process seems to have worked: the number of new limited liability firms in Sweden has increased since 2010, and research indicates that four out of five new jobs are created by small and medium-sized enterprises. Self-employment plays an important role in the creation of new jobs, and the Sharing Economy might be an additional means of promoting self-employment and new job creation.

Innovation has been widely linked to entrepreneurship. Thus, encouraging innovation also facilitates the creation of new businesses, including both businesses that create jobs and businesses that allow Sweden to compete internationally. One key area of innovation is the creation of innovative clusters. Stockholm is home to a significant technology cluster, which is likely to help the country become and remain competitive in the area of digitalization. Firms and organizations in Sweden employ 592,000 individuals in high-tech areas.<sup>66</sup> This number increased 9.5 percent between 2000 and 2011 and represents 12.7 percent of total employment in Sweden and 2.7 percent of high-tech employment in Europe. The Stockholm region alone employs 197,000 individuals in high-tech, which accounts for 18 percent of all individuals employed in the region and is the highest per capita concentration in a large business center in the EU.<sup>67</sup>

Although few countries have statistics on inter-firm cooperation within regional clusters, firms and individuals in clusters are part of the same ecosystem and their

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65. Wozzkow, D. (2014). *Unlocking the Sharing Economy An independent review*. Available online at: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/378291/bis-14-1227-unlocking-the-sharing-economy-an-independent-review.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/378291/bis-14-1227-unlocking-the-sharing-economy-an-independent-review.pdf).

66. Defined as “the production of high-tech goods and services, or otherwise engaged in highly technical activities in other industries. This includes all workers in the high-tech industries regardless of occupation, as well as those employed in the STEM occupations of science, technology, engineering, and math in non-high tech industries”.

67. <http://feb.kuleuven.be/VIVES/Onderzoek/discussionpapers/DP/dp2013/final-20131223-3rd.pdf>

close spatial proximity allows for frequent direct, informal, face-to-face contact between employees, entrepreneurs and other actors, which is likely to foster tacit knowledge sharing between individuals. The presence of a strong cluster is a source of local competition, particularly for capital investment and demand, which encourages entrepreneurs and other actors to improve their offerings in order to remain competitive, not just in price but within regional supply networks.<sup>68</sup>

Numerous academics have noted that the fuel for innovation is unclear; instead, they refer to “something in the air”. This “something in the air” has been linked to network effects, including both strong and weak ties among individuals, which stimulates the sharing of tacit and explicit information and knowledge.<sup>69</sup>

Therefore, keeping innovation and entrepreneurship in mind, we make the following recommendations:

1. *Channel risk capital into early stage innovation.* This would include harmonizing regulations in non-banking sectors, including crowdfunding and P2P platforms.
2. *Encourage cooperation and lower entry barriers.* This could be accomplished by creating networked incubators and research centers that are closely linked to and cooperate with established firms and venture capital
3. *Teach business skills* at schools, especially relating to accounting and tax regulations.

## The Government’s Involvement in the Sharing Economy

Government services could be opened up to include Sharing Economy services alongside traditional services. Public sector services could gain from decreased costs and from time optimization, and public finances could achieve lower costs and more efficient use of taxpayer money. In the UK, for instance, the Croydon City Council is supporting the car-sharing service Zipcar, thereby reducing the extent to which its employees use their own cars.<sup>70</sup> According to Zipcar, the Croydon City Council’s successful initiative produced the following results:

1. A 42 percent decrease in car travel costs, from GBP 1.3 million to GBP 756,000.
2. A 52 percent reduction in the number of Croydon City Council employee car users, from 1,284 to 611.
3. A 42 percent decrease in employee business miles.
4. A 36 percent reduction in annual employee CO2 emissions, from 324 tons to 207 tons.

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68. Delgado, M., Porter, M.E., & Stern, S. (2010). Clusters and entrepreneurship, *Journal of Economic Geography*, 10(4), 495-518.

69. Uzzi, B. (1999). Embeddedness in the making of financial capital: How social relations and networks benefit firms seeking financing. *American Sociological Review*, 481-505.

70. <http://www.zipcar.co.uk/press/releases/croydon-council-cuts-employee-car-usage-in-half-with-zipcar>

Another such initiative is the Shareable Cities Resolution adopted by the US Conference of Mayors in June 2013.<sup>71</sup> This resolution encourages mayors to make their cities more shareable, encourage better understanding of the Sharing Economy, and create local task forces to review and address regulations that may hinder participation in the Sharing Economy. Mayors also agreed to play an active role in better utilizing publicly owned assets through proven sharing mechanisms.

Other proposed means of government involvement in the UK include opening the government's digital identity verification system, GOV.UK Verify, to use by private companies.<sup>72</sup> The Swedish equivalent of this, BankID, has already been opened for use by private companies in Sweden (subject to approval) for some time.<sup>73</sup> Similarly, a UK report recommends that criminal record checks be digitized so that they can be performed quickly by Sharing Economy firms.<sup>74</sup>

## Labor Market Flexibility, Education and Challenges for General Statistics

What is clear from the above discussion is that the Sharing Economy blurs the lines between employment, self-employment and consumption. Although it will be difficult to tease out these relationships, it is clear that additional skills and different types of protections are necessary for vulnerable workers. Policy suggestions include the following:

*Facilitate a flexible labor market.* The labor market may need to be more flexible, creating incentives both for mobility and for self-employment. However, such flexibility is difficult to balance with a safety net for vulnerable individuals. The Swedish welfare model, which is characterized by risk sharing among individuals and security for the individual, has benefited the economy, and in our view it is even more crucial to aim for social cohesion in the future. Nevertheless, the model must be adapted to the newly emergent labor market.

*Capture the value of the Sharing Economy in general statistics and models.* Calculating the employment effect of the Sharing Economy is difficult because such employment occurs by sharing tasks and hours, that is, by performing services that are not registered in the official GDP. Consequently, the line between work, leisure and social engagements is blurring. Brynjolfsson and others have previously argued that the number of hours people spend on Facebook does not reflect the value created. The same can be said of the Sharing Economy: value is definitely created, but it is difficult to capture this value quantitatively. In qualitative terms, we have already seen that the Sharing Economy affects not only the economy but also the individuals who

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71. <http://www.collaborativeconsumption.com/2013/06/26/shareable-cities-resolution-passed/>

72. Wozzkow, D. 2014. *Unlocking the Sharing Economy An independent review*. Available online at: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/378291/bis-14-1227-unlocking-the-sharing-economy-an-independent-review.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/378291/bis-14-1227-unlocking-the-sharing-economy-an-independent-review.pdf)

73. <https://www.bankid.com/sv/Om-foretaget/Historia/>

74. Wozzkow (supra)

engage in it, particularly with respect to the manner in which labor is organized. New methods of collecting and analyzing data are needed. For further discussion on the policy implications for Sweden's Central Bank related to the new price mechanisms and the underestimation of productivity, see Appendix Two.

*Promote diversity among board members.* There appears to be a higher proportion of women involved in Sharing Economy sites than in more traditional IT startups, but this issue must be studied more closely. Another initial observation is that many new startups founded by Swedish men have all-male Swedish management teams and boards of directors. As startup firms, they should be encouraged to be more diverse in their composition.

*Provide a workforce with skills that meet the needs of the Swedish economy in the future.* Moving forward, Sweden boasts a strong skill base and a traditionally high share of graduates in natural sciences and engineering, which bodes well for innovation in general but may not necessarily affect the growth of the Sharing Economy. Moreover, there are increasing concerns about the quality of education and the ability to provide a workforce with skills that meet the needs of the Swedish economy in the future. Swedish students rank in the middle of the OECD countries in science education, and the pay-offs of higher education in Sweden lag behind those of many peer countries.<sup>75</sup>

*Attract foreign skill.* Sweden does not rank high in the attraction of foreign skill, which Christian Ketels<sup>76</sup> argues is increasingly necessary in the global economy. Diversity tends to spur creativity, which in turn leads to a dynamic, innovative climate characterized by higher productivity. In addition, Sweden's regulatory scheme and administrative practices are viewed as bureaucratic, and Sweden has one of the highest levels of taxation in the world, especially for individuals.

*Reassess the tax base.* The cost of labor will increase in the future as digitalization spurs a knowledge-intensive service sector. Thus, increasing taxes on labor might not be the best approach. Instead, other tax bases must be explored. Some international discussions on this issue include consideration of both wealth and property taxes.

## Housing and the Gains from Dynamic Clusters

Studies show that labor market mobility is closely linked to innovation (Entreprenörskapsforum, Dec 2014), and Berkeley Professor Enrico Moretti argues that the housing market and its dampening effect on labor mobility is constraining innovation. Professor Moretti has estimated the impact of housing shortages and the over-regulated building sector on US GDP growth and shows that US economic growth would have been 10-13 percent higher over a ten-year period if regulations had not hindered construction and labor mobility in high-productivity, high-innovation cities such as San Francisco, Boston and New York.

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75. Ketels (supra)

76. Ketels (supra)

While Sweden's largest cities and university areas have emerged as some of Europe's most attractive tech centers in recent years, the Swedish housing market is characterized by high entry barriers and low mobility, which is causing "insider-outsider effects" and matching problems in labor markets. According to Moretti, highly skilled, innovative labor is the most mobile segment of the labor force because of the substantial benefits of being in clusters. Tech giants have long operated in business parks located in the suburbs, but the new generation of startups has elected to establish itself in the hearts of metropolitan centers that cater to workers who crave easy access to a city's fashionable bars, public transportation and quirky apartments in addition to stock options and six figure salaries.<sup>77</sup> Thus, significant attention should be paid to reducing the bottlenecks in the Swedish housing market in order to enable higher potential growth.

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77. *New York Times*, December 14, 2014. Stockholm's Housing Shortage Threatens to Stifle Fast Growing Startups, available online at <http://www.nytimes.com/2014/12/15/technology/stockholms-housing-shortage-threatens-to-stifle-start-ups.html>

## Chapter 9

# CONCLUSION

The reduction of slack in the economy through the use of resources that previously sat idle creates more and smaller transactions and adds value to the economy. However, the manner in which such resources are exchanged, e.g., as free digital services or goods or at falling marginal prices, prevents such transactions from being fully captured in the official statistics. It is therefore difficult to estimate the extent to which the Swedish economy has already been affected by the nascent Sharing Economy. However, this report has discussed where and how the effects of the Sharing Economy are being felt, in part so that future researchers can endeavor to quantify its effects and in part to provide certain guidelines for social policies as this phenomenon becomes more common in the Swedish economy.

As discussed above, it is unlikely that the Sharing Economy will completely replace the formal economy; however, this discussion demonstrates how economic activity has started to migrate from traditional intermediaries to digital platforms and thus to the Sharing Economy.<sup>78</sup>

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78. Rifkin (supra)

## APPENDIX ONE: FURTHER READING

- Anderson, C. (2012). *Makers: The New Industrial Revolution*. Random House.
- Baack, P., & Collins, L. (2013). *Working The Crowd: A Short Guide To Crowdfunding And How It Can Work For You*. London: Nesta.
- Brynjolfsson, E., & McAfee, A. (2014). *The second machine age: Work, progress, and prosperity in a time of brilliant technologies*. WW Norton & Company.
- Kelly, M. (2012). *Owning Our Future: The Emerging Ownership Revolution*. Berrett-Koehler Publishers.
- Orsi, J. (2014). *Practicing Law In The Sharing Economy: Helping People Build Cooperatives, Social Enterprise, And Local Sustainable Economies*. American Bar Association.
- Rainie, H., & Wellman, B. (2012). *Networked: The New Social Operating System*. Cambridge, Ma: Mit Press.
- Rifkin, J. (2014). *The Zero Marginal Cost Society: The Internet Of Things, The Collaborative Commons, and The Eclipse Of Capitalism*. Macmillan.

## APPENDIX TWO: EFFECTS ON THE FINANCE INDUSTRY

According to Rifkin, the Sharing Economy and the capital market are finding synergies with each other as they simultaneously compete and attempt to absorb one another.

Innovation is playing a more crucial role in economic growth and represents an important channel through which to replace the jobs that are being lost in this technological paradigm shift. From both a societal and a firm perspective, venture capital must be channeled to a larger extent to early stage innovation.

Traditional banks are retreating somewhat due to stricter regulations, and it is not their role to provide venture capital. Nonetheless, there is significant potential from collaborations involving financial innovations and their infrastructure, such as P2P and crowdfunding platforms. Also, the Block chain technology has the potential to reduce risk, costs, and fraud in the financial system.

One potential solution is to use crowdfunding platforms, wherein intangible assets for new innovations could be assessed by the crowd in real time and the crowd could thereby set a price on the risk involved in financing a service.

These platforms can help traditional banks to perform risk assessments of digital assets and social capital in real time. In addition, the cryptocurrency infrastructure enables fast transactions at decreasing and zero marginal costs.

Crowdfunding and P2P challenge the regulatory framework in the financial industry in the same way as Uber and Airbnb did in their respective industries. Although demand and supply are met more efficiently, the risk is shifted from the traditional middleman

to the individual, who thus needs protection from, for example, asymmetric information. The financial innovations could have the potential to solve challenges in the financial sectors such as maturity mis-match and leverage. The regulatory framework represents both an opportunity and a risk for the Sharing Economy. As the non-banking sector advances, all financial activities must be regulated in a harmonized manner. The regulatory framework must focus on the activity, not the technology, to create the same opportunities for all actors in the non-banking sector.

## Policy Implications for Sweden's Central Bank (Riksbanken)

All current price trends are pushing inflation lower. The crucial question is what kind of strategy the Sweden's Central Bank (Riksbanken) can use to fight disinflation in this environment where both supply and demand factors occur simultaneously. Also, how harmful is disinflation due to supply side effects? And, if there is an underestimation of productivity thus pushing inflation downwards, that kind of downward pressure is not as harmful as demand side effects pushing inflation downwards. The key challenge is to distinguish between supply and demand factors, which is a very difficult task. We see three main options.

First, take a "wait and see" approach until the output gap is closed, which occurs when resource utilization is normalized and growth is close to its potential path. Then, one can disregard the cyclical factors, making it easier to evaluate the magnitude of the structural mechanisms. However, we find this strategy to be risky because inflation expectations have already fallen and further falling expectations are harmful. Inflation expectations are one of the key channels that can be used to push actual inflation higher.

Second, adopt an even more expansionary monetary policy to influence the demand side. A continued, or even lower, negative repo rate, more quantitative easing or refinancing operations are possible options available to Sweden's Central Bank if it aims to pursue a more expansionary monetary policy with interest rates in negative territory. In our opinion, further expansionary policy will continue to have limited ability to affect the real economy. In addition, such a strategy risks creating asset inflation, which would cause financial instability in the longer run.

Third, return to a flexible inflation target. This approach would signal that inflation can deviate from the target for a period of time. Still, that would shift the monetary policy stance. We think that it is too early to make such a change before we understand the underlying mechanisms on a comprehensive level.

We recommend an in-depth study to provide a deeper understanding of the underlying price mechanism of the Sharing Economy. We want to argue that Swedish inflation has been affected quite a lot compared to other countries by digitalization. Digital maturity and IT penetration in Sweden is among the highest in the world. **Therefore, Sweden's Central Bank *could* be keeping policy too expansionary relative to its limited ability to influence the supply side effect on inflation following from digitalization.**





I *Sharing Economy - Embracing change with caution* uppmärksammas att digitaliseringen utgör den möjliggörande teknologiska kraften för delningsekonomin. Innovation på området innebär att identifiera outnyttjade varor och tjänster, maximera resursutnyttjandet samt att föra samman utbud och efterfrågan. Författarna noterar att Sverige, i förhållande till andra ekonomier, ligger steget före vad gäller specialisering i kunskapsekonomin men att mer skulle kunna göras för att underlätta fortsatt tillväxt inom detta område. Bland policyrekommendationerna nämns bl a behovet att främja flexibilitet både på arbetsmarknaden och inom utbildningssystemet och att underlätta för företagande och innovation.

Rapporten är författad av Claire Ingram och Robin Teigland, doktorand respektive docent vid Handelshögskolan i Stockholm samt Anna Felländer, chefsekonom Swedbank.

*"A cornerstone for a successful democracy is equality before the law (Justitia is blind). If rules apply differently to different people the system will start to crumble. A fundamental challenge is to find ways to integrate the sharing economy into the formal economy or to radically change taxation so that sharing is equated with trade and commerce and labor with financial returns.*

*Erika Åslund  
Lawyer and partner Cederqvist*

*"A significant piece of work - thoughtful and insightful - that raises crucial questions for governments, corporations and society at large.*

*Noreena Hertz  
CEO & Co-Founder Generation K and Professor, University College London*

*"Sharing economy- embracing change with caution is a comprehensive overview of where Sweden currently stand in an international comparison and it also the first attempt to draw policy implications in an area that constantly changes. In my view innovation, entrepreneurs and private equity is what will make the sharing economy grow. Sweden has the potential but must nurture the opportunity.*

*Elisabeth Thand Ringqvist  
Chairman Swedish Private Equity & Venture Capital Association*

*"Taking up slack is tremendously important to making cities smarter and more people-friendly. Most major metros have far too many parking spaces, for instance. Get parked cars off the streets, guide drivers to available parking faster and share spaces that aren't being used at various times. Reel in this slack and you'll free up lots of space for other kinds of human activity!*

*Billy McCormac  
President of the Stockholm Property Association*



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