Future Problems for the Sharing Economy – Five Potential Challenges to Growth and Progress

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Abstract This paper briefly reviews some of the technical and economic issues that have led to the dramatic growth in the sharing economy and then suggests challenges which might cause serious disruptions, both short and long term. At the end of 2016 this sector had never looked better, with double and occasionally triple digit annual growth the norm. Other market segments, like retail and consumer goods and media/entertainment, are growing too. Yet this growth is already showing vulnerability to serious concerns, which can be grouped into five categories: fragility of the part-time work force; uncertainty of long-term consumer inducements; increased risk of potential government intervention; taxation equity complexities; and the possibilities of zero or negative growth long-term. Each will be discussed briefly, concluding with a recommended agenda for action.

I INTRODUCTION—THE SHARING ECONOMY AND ON-LINE PLATFORM SECTORS

The essential value proposition of the sharing economy is that some goods and services in legacy specialties can be delivered at a lower price by deployment of flexible part-time providers, who require fewer employee benefits while offering consumers the benefit of lower cost. This basic model of so-called "online platform sectors" has led to significant, extraordinary growth in all parts of the sharing economy--hospitality and dining (Airbnb, Feastly, for example) , automotive and transportation (Uber, Lyft, Getaround), retail and consumer goods (Poshmark, Tradesy, Etsy) and media and entertainment (Amazon Family Library, Wix, Spotify), among others. But now disputes are beginning to surface, because of uncertainties on the part of providers, customers, and regulators. In labor markets, there have already been numerous cases of strikes, work stoppages, and other similar disruptions where legacy system employees, cab drivers or motel owners, for example, feel that the process is unfair or, similarly, where on-line platform workers, like part-time drivers, complain about government bans. With respect to government's role, there have been countless petitions to legislatures to adjust the perceived unfairness to brick-and-mortar companies caused by the sharing economy

There are also many examples of state, national and even supranational groups like OECD (see below) challenging the sharing economy providers to pay a more equitable tax burden. As to lower wages, studies have indicated that both temporary workers in the sharing economy and permanent workers in legacy systems are sometimes being reduced to Dickensian straits. [1] This condition could ultimately yield a net lowering of overall value in each sector—consumers get lower prices but both legacy and part time workers' companies both earn less. Since the sharing economy is now a multibillion-dollar global phenomenon, it is definitely useful to examine its challenges and vulnerabilities.

II SIZE AND SCOPE OF THE SHARING ECONOMY

By almost any measurement, the digital segment of the sharing economy, sometimes referred to as the online platform economy (OPE) has been growing at a surprising rate, especially over the past five to six years. A Pew study in 2016 found that 72 percent of Americans have used some type of shared or on demand on line service. [2] The impact is especially noticeable in transportation and real estate/housing sectors, where Uber, Lyft, and Airbnb's aggregate market capitalization at the end of 2016 was in the range of $100 billion. Uber's market capitalization is now roughly about equal to that of Daimler [3], while Airbnb is in the range of Hilton Worldwide plus Hyatt in valuation [4]. In terms of the OPE labor market, for the period October 2012 through July 2016 participation has risen from 0.1% to 0.9% of the U.S. workforce, roughly evenly divided between labor platforms -- which do specific tasks, like driving, doing repairs, etc. (Uber, Lyft) -- and capital platforms -- which sell or rent assets, like homes equipment, etc. (Airbnb, Feastly) . Year-over-year growth during that period has moved from 400% to 102% for labor platforms. For capital platforms, after peaking at nearly 300% year-over-year growth in May 2014, the current rate has become negative (3%), indicating a stalled growth rate in that sector. In terms of monthly earnings, though, capital platforms are more successful, increasing 34% over the past two years, while labor platforms have experienced a decrease of 6% over the same period. [5]

In summary, the sharing economy, through its online platforms, has definitely become an economic reality. Even though Uber and Airbnb are the dominant players, there are tens of thousands of participants in many varied sectors, like agriculture, finance, food, travel, property, and many others. At one end of the spectrum are activities like bicycle sharing, CD-swapping and parking space exchanges, with low entry costs and profit margins, while at the high end can be found high-value crowd funding, peer-to-peer lending, and, of course, car sharing and short-term rental of living spaces. While the phenomenon has shown the greatest increase in the United States, it is completely global, with activity and dozens of countries and many new startups every day.

III CHALLENGES OF COLLABORATION AND SHARING—FRAGILITY OF PART-TIME WORK FORCE

While the on-line platform segment of the sharing economy has shown dramatic growth there are some characteristics inherent in the business model that can lead to instability. A recent report by J.P. Morgan Chase examined these issues and found several interesting conclusions. First, as mentioned, individual monthly earnings from online labor platforms have decreased 6% since 2014, matching some of the wage cuts during that same period, but possibly due to other factors. Second, turnover rates are extraordinarily high, with one in six existing employees at any moment in time being new, and half of the participants leaving within six months, on average. Third, the increase in jobs in the traditional, legacy market place occasioned by relatively low unemployment rates has had the effect of reducing the available talent pool for the online labor platforms. [6] Finally, A study by McKinsey global Institute found that 20 to 30% of the working age population in United States and Europe engage in some form of independent work, which fits into four segments: free agents, casual earners, reluctants, and financially strapped, but these figures apply primarily to contract workers. [7] Barely 1% of this population works for intermediaries like Uber, Airbnb, TaskRabbit etc. [8] To complicate the situation still further, the income volatility of the workers in the online platform economy is significant. In a detailed study the national average of individuals in this segment of the economy which experienced more than a 30% month-to-month variation in income was 55 percent. For younger workers (age is 18 to 24) the month-to-month variation with 70 percent. In addition, almost 40 percent of these individuals experienced at least one job transition in a year. Finally, platform workers in aggregate earn less than a third of their necessary income from that source, 20 percent for labor platform workers (like transportation) and 33 percent for capital platform workers (like room rental). [9]

These findings do not bode well long term. As the work force, particularly for the labor segment of the OPE, becomes less and less permanent -- again, the typical employee works for only six months or less-- it seems likely that discontinuities of service and cooperation will continue. Further, since the labor segment of OPE is now experiencing sustained lower monthly wages, the fragile nature of this employment pattern seems likely to continue.

IV CHALLENGES OF COLLABORATION AND SHARING: UNCERTAINTY OF CUSTOMER INDUCEMENTS

For long-term growth the sharing economy needs increasing inducements for customers to participate. While it might be expected that most consumers would favor the sharing economy, since it seems to be a way to balance consumption, reduce pollution and even alleviate some poverty because of its ability to coordinate transactions more simply, research has indicated that the actual situation is much more complicated. There have been many empirical investigations of this issue in recent years. One study examined the effect of intrinsic and extrinsic motivations in consumer behavior associated with collaborative consumption, and found that while economic benefits were able to influence attitudes -- that is, users became more positive toward the concept of collaborative consumption -- there was not a direct relationship toward actual participation.

> “An interesting detail in the result is that sustainability is not directly associated with participation unless it is at the same time also associated with positive attitudes towards collaborative consumption. This suggests that sustainability might only be an important factor for those people for whom ecological consumption is important. Furthermore, the results suggest that in collaborative consumption an attitude-behavior gap might exist; people perceive the activity positively and say good things about it, but this good attitude does not necessary translate into action.” [10]

A study of mobile crowd sourcing market behavior yielded results that were more specific. Low socioeconomic status (SES) was found to be a strong negative predictor of participation, along with travel distance. [11] A four stage Delphi process tried to discover the significant variables, or “drivers”, that influence collaborative consumption. The top five positive inducements were: cheaper transaction costs, technological enablers (Internet, mobile phones, smart phone technology), globally global economic crisis (including recession and austerity), digital relationships and social networking, and financial benefits for individuals. Negative drivers, or inhibitors, were found to be: lack of awareness, establishing trust, difficulty in building a critical mass, legal and regulatory issues, and materialist cultural norms. [12] Another study aimed to determine the degree of sharing tendency in the context of consumer behavior for a sample of 1121 Swiss-German and German consumers. By assessing scores on variables like perfectionism, tit-for-tat reciprocity, integrated motivation extrinsic motivation, sharing behavior, etc. it was possible to develop four separable variables which distinguish different attitudes and approaches toward sharing behavior. The researchers named the four derived groups idealists, normatives, pragmatists, and opponents. Interestingly, each of the derived cluster groups differ from one another significantly in terms of variables like gender, employment status, circle of acquaintances, etc. indicating that the categories are robust and useful. Several insights from this study help explain some of the complexities of consumer behavior in the sharing economy. First, sharing can be considered as related to a personal mindset and not simply a demographic identity; second, it appears possible to use these categories, the derived variables, to gain practical insights into the broader questions of consumer behavior to possibly predict which market segment is more likely to be composed of idealists, a marketing positive, or opponents, a much more difficult sale. [13]

In summary, sustainability of the sharing economy requires that increasing numbers of willing users continue to appear.

These studies indicate that it is by no means certain that this outcome will take place. Some of the studies at law schools and business schools may point the way toward developing models that become increasingly effective in predicting the behavior of consumers. Several have just been described, and is also notable that the large consumer samples developed by private think tanks like JP Morgan, Chase & Co. Institute, cited earlier in this paper, will help to yield greater clarity on consumer behavior.

V CHALLENGES OF COLLABORATION AND SHARING—TAXATION EQUITY CONFLICTS

Since Uber is by far the largest and therefore the most representative example, the problems of taxation, possibly the most significant challenge in the sharing economy, are most easily examined in the context of that company. Over the past two years Uber has been either banned, partially banned, or suspended operations in dozens of cities on four continents due to challenges primarily related to taxation at the local, state and national level. [14] The financial model seems simple enough. Uber keeps roughly 20% of their revenues and gives the remainder to the driver who is liable for all expenses including, maintenance, taxes, fuel, etc. The OPE company side the argument goes something like this: "we provide a useful service to the public in an efficient way and at low cost, probably increasing the number of persons who can attend functions and other tax-producing activities in the urban centers; in addition, we offer a revenue stream to part-time workers that had never been available before and have developed a highly effective cell phone application to improve customer convenience." The other side of the argument, that of the taxation camp, might go like this: "Uber and others in the on line platform economy need to be taxed like any other company, because they use the public infrastructure, and need to contribute to that; furthermore, Uber is physically separated geographically from the location of their service, therefore potentially avoiding taxation because its headquarters is in another country."

A study by two professors at the Curtin Law School in Australia examined the Uber tax implications in three countries -- France, Australia, and the United States--and also evaluated the 31-nation OECD report on base erosion and profit shifting (BEPS) of the sharing economy. Several common findings emerged. First, in none of these cases did the country's existing tax law accommodate easily to the Uber situation, especially with respect to the crucial distinction between employees and individual contractors. An example was Uber drivers ignoring the various bans at Tullamarine Airport in Melbourne, thereby increasing congestion and avoiding taxes. [15] For the OECD a particular sticking point was the "permanent establishment" idea for collecting taxes, a requirement that does not neatly fit with Uber or other transportation companies. Since OECD represents countries as large as the United States and the small as Israel and Latvia, they have established a permanent task force for all the countries which keeps track of variations in the tax structure that may be complicating the collection of appropriate levees and fines. [16]. Another analysis found that, for the United States at least, the legal complexities of tax law with respect to the sharing economy, especially Uber and Airbnb, are not as daunting as described. Uber, for example offers insurance policies for their drivers which cover accidents on assigned trips as well as driver liability and uninsured motorist coverage plus contingent comprehensive and collision insurance. [17] It noted that these companies actually have detailed plans for with respect to taxation, and concluded that the business models of Airbnb and Uber can accommodate to the US tax system comfortably:

> “Again, we argue that despite complexities surrounding business-personal allocations, the substance of the federal income tax law is quite clear. With respect to state and local occupancy taxes, the application of these taxes to home sharing may be slightly more ambiguous, even though the rules themselves are not unclear.” [18]

It seems likely that taxation battles will continues to go on, since the past few years have shown no decrease in the intensity of the combatants. But a general view of this literature seems, to this observer at least, to indicate that among all the many problems associated with the sharing economy, taxation may gradually be worked out. The energy for product innovation and improvement can be sapped with too much litigation on the side of the businesses involved, and governments seem to be gradually developing methods for achieving their goals. The subject is eliciting a vibrant increase of academic papers, which are contributing to rationalization of the various points of view. This research could possibly lead to better data available to decision-makers in this important facet of the online economy.

VI CHALLENGES OF COLLABORATION AND SHARING—INCREASED RISK OF GOVERNMENT INTERVENTION

Governments at all levels -- county, city, state, national, even supranational, like OECD (see above) -- are beginning to become more and more involved in the collaborative economy. In the positive sense there of many examples of providing inducements for collaborative economy startups. The year 2014 provides examples of the positive and negative aspects of this challenge—which have been repeated every year subsequently. In 2014 Amsterdam became the first large city to pass an ordinance that was particularly friendly toward occasional rentals. These new accommodations were called "private rental" and the only restrictions were that renters had to pay appropriate government taxes, and observe restrictions on noise or neighborhood complaints. [19] By contrast, in the same year the Germany banned all Uber operations [20], and even, now, three years later, the company still struggles to compete in Europe’s most populous nation. [21] Several cities in North America did the same thing, in 2014, with the Calgary City Council concluding that Uber is running an unlicensed transportation service. [22] The state of

Massachusetts sued the company, claiming that it was trying to avoid paying benefits by classifying drivers as independent contractors. [23] And again, still in 2014, the New York State Attorney General concluded that 72% of Airbnb rentals violated some statute related to zoning or other regulations. [24].

The trend of 2014 has continued apace since. For example, recently the governor of New York New York signed into law a measure prohibiting Airbnb from advertising an apartment for less than 30 days occupancy. [25] In spite of these difficulties, it should be remembered that the online platform economy or presents over 1 million workers in the United States and also is showing solid, although diminishing, financial success. But the news is not all bad. The some of these continuing difficulties with government regulation, especially related to taxation, are apparently being worked out. A *Harvard Business Review* article noted that there is actually considerable congruence between the tax goals of city and state governments and the interests of the sharing economy firms. For example, studies have shown that many individuals who spend a few nights in the city staying at an Airbnb location would not have visited the city otherwise, thereby increasing potential revenues to the city during their stay. Also, the reduced commuter miles made possible through vehicle sharing operations can help reduce air pollution. [26]. And many niches of government are openly optimistic about the opportunities offered by the sharing economy. Think tanks in states like Texas, Illinois, Arizona, and others have lobbied successfully to limit the restrictions on several online platform operators. [27]

To sum up, during its entire existence, the online platform segment of the sharing economy has been involved in many litigious disagreements with government regulators. It could be argued that the business model involved is inherently contentious, especially in the context of the crucial distinction between employee and independent contractor. That particular debate—whether a worker is an employee or an independent contractor--is the basis of many disagreements and lawsuits [28]. Some sort of rapprochement is certainly desirable, and since the mutuality of potential benefits is obvious for businesses as well as regulators, perhaps this problem will gradually be adjusted. But for now, it is a major challenge.

VII CHALLENGES TO COLLABORATION AND SHARING—POSSIBILITIES OF ZERO OR NEGATIVE GROWTH IN THE SHARING ECONOMY

The nightmare scenario for the sharing economy is the possibility that economic gains achieved through Internet-based collaboration -- increased traveling to cities, more efficient allocation of resources in transportation, short-term housing, crowd funding efficiencies, etc. -- are offset by dislocations caused by reductions in legacy system employment, and increasingly tight restrictions on part-time workers, resulting in overall loss of income and total buying power in both the OPE and legacy sectors. There has been considerable research on this topic, since it is obviously the most significant overall issue in the sharing economy, and, as might be expected, there is a wide variance in the findings for long-term expectations, ranging from highly optimistic to deeply skeptical. On the optimistic side a recent study modeled the behavior of a significant sample of participants in the sharing economy and concluded that those with lower incomes could be the greatest beneficiaries long term:

> “Perhaps the most important takeaway from our current findings, one we fully expect to persist with extensions and alternative calibrations, is that peer-to-peer rental marketplaces have a disproportionately positive effect on lower-income consumers across almost every measure. This segment is more likely to switch from owning to renting, provides a higher level of peer-to-peer marketplace demand, is more likely to contribute to marketplace supply, and enjoys significantly higher levels of surplus gains.” [29]

The reverse of this kind of positive view can be found in assessments which are concerned about the overall market growth potential inherent in the sharing economy. For example, Don Tapscott in *Harvard Business Review* discusses the dark side of today's rapid digital growth. He notes several negative indicators including the youth unemployment rate in Eurozone countries--over 40% in Greece and Spain, over 25% in France, Portugal and Italy, and over 20% in Euro area overall. Many of the newly generated jobs in the sharing economy might normally have been available for this cohort. [30] Brishen Rogers has speculated that long-term Uber will probably be part of a broader revolution when package delivery drivers are replaced by temporary workers and more clerks in retail stores are replaced by online shopping, not to mention the effect of the "Internet of things". The result:

> “At that point, workers without many skills will find their access to work determined in part by their ability to smile and appear cheerful—to perform emotional labor. This has already occurred in retail, hospitality, and other customer-service sectors. This is where Uber’s rise begins to have unsettling implications. After the ride-sharing drivers’ jobs are eliminated, what happens to mail- and package-delivery drivers whom Uber also hopes to displace? What happens to supermarket clerks and other retail clerks as more and more shopping goes online, with goods delivered by—yes—Uber? What happens to the fast-food workers displaced as Uber or some other “Internet of things” company delivers fast food on demand in driverless cars?” [31]

The pessimistic perspective is probably somewhat overdrawn, since there are countless examples in recent decades were dire consequences are predicted for a new technological approach, only to be discredited. But many of the published articles, particularly in the popular outlets, are relatively optimistic about the growth prospects for the Online Platform Economy. As mentioned at the beginning, three of these companies – Uber, Lyft and Airbnb-- have aggregate market valuations of close to $100 billion, and continue to increase their business volume (although at a decreasing rate). The key question is whether the legacy systems and the platform systems will both grow. Perhaps that will happen, but there is certainly a possibility that legacy systems may decline due to the competition of the OPE competitors. Similarly, the OPE segment is not assured of continued growth, and, as mentioned above, has several challenges ahead. So the possibility of one segment improving at this expense of the other definitely needs to be considered.

VIII CONCLUSION

The so-called sharing economy has grown to an 11-figure annual income giant in a very short time. In this paper the long-term potential for that growth is questioned. Wages in one of the major sectors of the on-line platform economy -- the labor sector -- are down for the past two years. Governments are increasingly active in prohibiting various growth -- inducing activities, like urban rentals for less than 30 days and several transportation options. The customer base, never assured, may not be solid enough to assure long-term growth. And taxation continues to be a severe challenge since many governments at the city, state, and even international levels have imposed several restrictions, especially on Uber and Airbnb, the two largest players. Also, in the labor segment of the platform economy, like transportation services, there is significant fragility in the stability of employment–half the employees work for six months or less and most earn a small fraction of their living in OPE work.

In terms of public policy in this dynamic environment it would seem that several options are called for. First of all, the sharing economy employs 1% of the workforce in the United States and therefore cannot be ignored, so it makes sense for policymakers to create as a general goal the facilitation of its activities. But it is also important to aim for a rapprochement between government and the major providers, especially with respect to taxes. This will require greater clarity in the definition of the differences between employees and independent contractors. That definition will be crucial to subsequent labor settlements. Also, since the inducements for customers to join the sharing economy are complicated and by no means assured, long-term government policy could be directed toward activities that could facilitate greater participation, not just support. For example, governments' themselves could aim for greater deployment of OPE capabilities like transportation, accommodations, repair of vehicles, etc., thereby seeking a middle ground between outsourcing to legacy and on-line platform firms. In an article called "The Dark Side of the Sharing Economy ... and how to lighten it" the authors summarized the situation this way:

> "The problem is not whether to bury or build the sharing economy: it is already on the ground. The larger opportunity is to move forward despite the disruption. In the short run, platform firms should indemnify users and self-regulate the health of their ecosystems. At the same time, consumers should choose sharing platforms based on short and long-term gains as well as individual and community benefits. The task is to share the pain and the wealth. If this sharing happens, the wealth will grow and endure." [31]

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This approach seems to be the logical policy agenda for both governments and OPE firms. In the near term there will probably be continued litigation, strikes, government decrees, etc. aimed at carving out a body of law and practice which can deal equitably with the needs of all sides of this debate. Yet it is hard to imagine a scenario by which some sort of agreement cannot be reached. The long-term concern will probably not be adjudication of the rights of claimants. More likely it will be the propensity of consumers to continue the growth that has sustained the sharing economy in recent years. As the studies indicate, the demand equation is still very much in flux. Will there be more and more customers for the OPE firms to serve, stimulating continued dramatic growth? Will the typical OPE employee gradually obtain a larger share of total needed monthly income so that job permanence can be anticipated? And finally, is it possible that the ultimate effect of the various forces affecting the sharing economy will result in revenue decreases for both the OP sector and the legacy firms? That could imply a zero-sum game or worse. The current year will probably yield hints of answers to these questions.

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