

Social Enterprises and the Sharing Economy: The Case of Shared Use Transportation

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Abstract: This paper examines the relationship between social enterprise theory, the concept of shared value and where these theories are applied in the shared use model. The concepts of integrated social entrepreneurship (Fowler 2000), shared value (Porter 2011) and the social enterprise spectrum (Dees and Anderson 1998) are used to better understand the place for for-profit shared use businesses in capturing positive externalities for social benefit, simultaneously contributing economic benefit. By identifying three shared use businesses in the transportation sector evidence is presented on how these business function, provide benefits to the community and are impacting existing public services.

Introduction

In our modern economy, particularly since the adoption of Keynesian economics in post Great Depression era, American policy has allowed for social welfare programs to serve as safety nets for endangered populations that the government could no longer ignore. With the introduction of the Great Society and the programs that followed, the non-profit sector blossomed. We have seen a shift again recently as many of the direct government programs and non-profits have faltered in their feasibility and funding platforms. We look to business and the market for solutions to the issues that plague our economy. The concept of the social enterprise and creating more social entrepreneurs is well positioned to exploit this market niche through shared value and application of the idea of shared use.

The concept of a shared economy has been on the rise in recent years. The internet has ushered in an age of shared content that anyone can be “accessed by anyone with an Internet connection, a browser, and a government that allows access to most or all web content” (Belk 2014, p. 1595). This ability is exemplified by the peer-to-peer connections prevalent in the transportation sector. Shared use or transportation network companies (TNCs) have grown substantially in the past 5 years. Companies such as Uber, Lyft, Zipcar, Bikeshare, Bikestation, NuCar, Car2Go, and others have taken advantage of this shift in consumer preferences toward ‘renting’ or ‘sharing’ for the purpose of transportation, as well as the ability to have two way communication between users and providers. Their future impact on government policies cannot be ignored as attitudes of the millennial generation are changing what they demand from government and business.

This paper evaluates, through literature review, case study, and primary economic modeling how the shared use structure fits into existing social enterprise and entrepreneurship theory and how they are impacting the entrenched industries. Through examination of the current theories and current conditions, extensions are made to existing theories to these shared use businesses and areas of potential impact on government policies.

Aligning shared use businesses with social enterprise theory is not by any means a perfect fit. But these shared use businesses fit some of the characteristics of social enterprises. This paper focuses on shared use transportation businesses to answer the question of how do these shared use companies fit with the idea of a social enterprise and how they potentially impact regulatory and public investment strategies in the region. The paper also examines the commuting trends in the Washington DC region, to support the idea that trends are shifting and there is a potential niche for shared use to exploit socially minded consumers. The paper reviews the claims of social benefits that shared use businesses in this sector are reporting by looking in depth at Uber and Lyft. These businesses appear to benefit society by reducing congestion, mitigating environmental hazards, providing ‘social satisfaction’ to the user, increasing job opportunities and providing health benefits. Governments are slowly allowing shared use businesses to operate legally but there are many concerns of allocating public space, encroaching on public services, and integrating into policies of public infrastructure that need to be considered.

Why Shared Use and Social Entrepreneurship?

Why are shared use transportation businesses important? The shared use business structure of companies existing within the transportation sector builds upon empirical data of commuter trends recorded by the American Community Survey and National Household Travel Survey. Bicycles have become an increasingly important means of transportation with 11.5 percent of personal trips utilizing walking or biking as a mode of transportation. Overall car ownership is down. And business travelers are choosing a car share service, like Uber, over taxis with near one to one substitution. Government has long been the steward of public goods and socially minded services. But there is the potential for shared use to change the delivery of such services. Descriptive statistics, reviews of existing reports and a Difference in Difference model is used to support the examination of changes to the public transportation and shared use businesses. Limited data is available at this time on this topic, but through utilizing publically available transportation data the model shows the changes in metro ridership compared with the introduction of Capital Bikeshare in the region to begin the discussion. In order to maximize potential social benefits from this business model, it is argued here that more social entrepreneurs need to consider this model as a way toward their goals. The companies highlighted herein may or may not consider themselves doing social good, but they are, merely through the peer to peer networks and impacts they are having on the environment and economy around them.

Social entrepreneurship and the development of social enterprise are not new. There is evidence that the seeds of social entrepreneurship as we know it today began as early as the 17th century. This was due to the period called the Enlightenment, where charities began to arise outside of the church and in more secular organizations (Aygören 2014, p.24). One can think of the development of hospitals, orphanages, or even workhouses that dealt with the underprivileged portion of society through the lenses of benefactors who would privately support these ventures. The cooperative movement that began in the early 1800s is also a historical reference for the origins of social entrepreneurship. One of the most well-known social entrepreneurs, often considered the first, was Robert Owen who hailed from the United Kingdom. Owen launched a number of cooperatives and championed labor and women’s rights in the work place (Aygören 2014, p.24). Later in the 18th century this is followed by the great American Industrialists who founded enduring philanthropic institutions that we still use and recognize today, this includes the Carnegies, Rockefellers, Fords, and so on. Work by Huriye Aygören in 2014 gave a broad overview of the variety of definitions of what is means to be a social entrepreneur from 1991 to 2010 and

found 41 variations on the term. In the author's review of the variety of definitions offered by Aygören similar words appear in many of the definitions that can serve as a guide to determining how shared use fit into the idea of the social enterprise: Innovation, breaking new ground, leaders, catalytic change, reshape public attitudes, collective purpose, long-term, deep rooted beliefs, change agents, change society for the better, transform society, fundamental change, inspirational, resourceful, unlock societies potential, new opportunities, break through thinking, visionary ideas, solve significant social problems, long-term impact. Where the definitions diverge is in relation to the financial gain, but just because shared use businesses are profitable doesn't mean that they are not social enterprises.

A large body of work outlines the role of the entrepreneur in innovation and economic growth. Schumpeter describes the entrepreneur in having the defining characteristics of simply doing new things, or the doing of things in a new way, which he refers to as innovation (Schumpeter 1947, 151). A true social entrepreneur needs to understand the place for innovation and growth within their region or community. This relates to entrepreneurs mantra of seeing a problem, recognizing the need for a solution and creating a new and innovative way of solving the problem, that takes advantage of the resources in the community they are operating in. Perhaps the most focused interpretation of what it is that makes a social entrepreneur different from a traditional entrepreneur is the way they approach a problem. Social entrepreneurs "seek to shift a stable but sub-optimal equilibrium in a way that is neither entirely mandated nor entirely market-driven" (Martin and Osberg, 2015, p.16). Martin and Osberg present a framework of stages of transformation that begins with understanding the world, envisioning a new future, building the model for change and scaling the solution. These stages are critical to understanding how some shared use businesses can be considered social enterprises and those that create them social entrepreneurs.

The idea of contemporary social entrepreneurship can be traced to the events in the 1970s. Social consciousness began to evolve and erupted due to economic crisis and political unrest globally. Innovation is often the product of limited resources. As such, the expansion of government programs in the decades following World War II had created large bureaucratic programs that passed money through government corporations, independent agencies and non-profits resulting in a flush public sector that served many social issues. Both through the increased demand of services and the growing competition that ensued, coupled with government spending reductions, this gave rise to strained resources on the philanthropic sector. As a result the non-profit sector had developed a "creative response" (Schumpeter 1947). By promoting creative methods, charities increased funding through innovative and often entrepreneurial methods. This change has led to the creation of what we know refer to as the social entrepreneur. Coupled with this the internet and social media have allowed for greater diversity and choice in funding. But this has exacerbated the cry for help since there are so many options and competition for donors to place their money and more competition for limited grant funds. At the same time, governments have turned more frequently to the private sector to implement programs. Contemporary concepts of social entrepreneurship and enterprise in the literature began with Dennis R. Young, who referred to what is now considered social entrepreneurship, as non-profit entrepreneurship in his seminal 1983 work "If Not For Profit, For What: A Behavioral Theory of the Nonprofit Sector Based on Entrepreneurship". The field has come a long way since then and has grown into reflecting the grassroots movement of innovative entrepreneurs create for-profit and hybrid models to suit the growing demand for social responsible products and services.

This work began a discourse around social enterprise, social innovation, and social entrepreneurship that is still not close to a unifying definition in the literature. To illustrate this a study was undertaken by Short et al (2009) that found that a fifth of all work published between 1991 and 2009 related to descriptions or definitions of the concept of a social enterprise. Paul Light (2006) has attempted to define the sources of 'Entrepreneurial Intent' and which dimension has the largest impact on the spread of socially-entrepreneurial activity. Life experiences, demographic differences, entrepreneurial intent, tactics and strategies, cognitive biases and idea-management skills are the dimensions identified and the first three, life experiences, demographic differences, and entrepreneurial intent have a high impact on the spread of socially- entrepreneurial activity (Light 2006, p.21).

The state of the field is still heavily contested, particularly around what the characteristics are that makes a social enterprise different from a traditional business. However, this allows for flexibility in defining and connecting the basic concepts of social enterprise theory to new and emerging areas such as shared use businesses. There is no large scale empirical work to tease out the indicators of differentiation. There has been some agreement around a few key concepts; one is that social ventures are sustainable only through the revenue and capital that they generate, so their financial goals must balance with their social ones and a second is that the distinguishing characteristics are the funding or revenue sources and their missions (Bruno et al, 2014 p.174). Zahra et al (2009) argues that study of social enterprises still lack a clear understanding on how social entrepreneurs are able to use and access resources to enact their missions. Very little literature has even begun to look at the impact of social enterprises on policy and the interaction between social enterprises and traditional business or government.

With that said social enterprises for the purpose of this paper are defined as an enterprise which seeks to maximize social value creation while implementing a strategic surplus orientated plan. Social enterprises can be seen as having a bottom-up approach on the economy. In his review of the literature on social enterprise typologies, Young (2012) offers up no definitive typology of social enterprises that can be used to classify these forms of businesses, but does offer some more thoughtfully proposed examples from recent scholarship. Many of the models (Nash 2010, Alter 2007) offer up motivations as a key way to differentiate types of enterprise. This is similar when attempting to find a unifying definition. It is quickly surmised that the definition of social enterprise vary by cultural contexts and socio-economic conditions (Kerlin, 2009). They have flourished under smart entrepreneurs who have taken on the task of impacting society around them in a positive way. These are profitable businesses but they see their mission, to provide a social good, as just as important. A social entrepreneur is one who is innovative, networked, with a sophisticated level of knowledge sharing. Phillips (2006) brings to bear an important point in understanding the role of social enterprises in our modern economy. These are novel approaches that focus on regional comparative advantages, not a reduction in the ability of competitive advantage (Phillips 2006).

Innovation Driving Social Enterprise and Shared Use in the United States

Michael Porter and Mark Kramer (2011) offer the idea that "Shared value is not social responsibility, philanthropy, or even sustainability, but a new way to achieve economic success". There is no reason why a business, like Uber or Lyft needs to temper its financial success while offering a path forward for social benefits, while increasing shared value. Connecting existing social enterprise theory

with shared use business may prove to be a difficult task, but this paper is an attempt to begin that discussion.

There are many similarities in the development and purpose of shared use and social enterprise. Kerlin (2012) proposed a macro-model for social enterprise development that is useful for framing the idea of the development of the shared use economy in the US. Institutional influences impact culture, government, and stage of economic development, which feeds into the model of social enterprises. A democratic government that is innovation driven, such as the United States, will develop a highly diverse and autonomous model of social enterprise. This is characterized by businesses that are hard to define, whereas in other nations with different types of civil society, the models of social enterprise become clearer and more focused around a singular meaning. The United States is inherent of the characteristics of the autonomous diverse model. Shared use enterprises capture some of these macro level characteristics that are created out the diversity that the American model incubates. The United States is innovation driven, and a leader in technology, by identifying gaps and creating large scale change autonomously, share use businesses fit well into the macro model of social enterprise.

Given that the United States is an innovation driven we can then explore why shared use businesses have been able to develop and are experiencing success. As ride-sharing has moved away from traditional carpooling to a more mechanized automated system utilizing technology, many businesses have taken advantage of the advancement in technology and shifting trends. These transactions of commercial ventures can be referred to more accurately as “pseudo-sharing” as they often take on the term of sharing, like ‘car-sharing’ but are, more accurately, short term transactions or short term contracts of use (Belk 2014, p.1597). Shared use businesses take advantage of the reduction in transaction costs that they provide to both the provider and the client. Chandler, building on work by Oliver Williamson, argues that technology has had a “critical impact on the nature of the transaction cost”, much more than Williamson presented (Chandler, 128). The technological advancements in transportation and communication, as outlined by Chandler, are the precondition for the massive increase in such transactions. This has contributed to the development of shared use platforms. The technological ability of the platforms of firms such as Uber and Lyft allow for millions of transactions to occur instantaneously. Not only the actual financial transaction, but the customer matching, provider search, and reviews and ratings, are all at the customer’s finger tips, drastically reducing the transaction cost to the consumer. The service provider, in this case usually an independent contractor, has the benefit of not having to deal with collection of fees, customer acquisition is streamlined and easy, marketing, and other HR functions are taken care of by the company. The reduction of transaction costs through technology is very evident in this sector emerging in our economy. Schumpeter would recognize these firms as precisely the kind of firm that is representative of his capitalistic system. Capitalism thrives on innovation. A static system develops the bad types of monopolies and lazy, incumbent industries. New technologies shake up the market, forcing the incumbents to improve service, lower prices, and open up to competition. One could argue that the exact result of the introduction of shared use to the market is directly related to this decrease in transaction costs

Shared use is not a new innovation model, but it is part of the evolutionary process of business development. Shared use businesses capitalize on essentially absorbing the transaction costs for their users, both the clients and the service providers. The impact of technological change on the actual shared use business model is evident. The only product that many shared use companies provide, particularly the

largest ones, is the ability of clients and service providers to easily and quickly find each other and exchange payment for service. Companies such as Uber have grown considerably fast, and have valuations that are comparable to the largest incumbents in their respective industries. By moving quickly, these firms captured the market, becoming leaders in their industries. Uber, in 5 years, has US sales of over \$500 million annually (Hoovers, Oct 2015) with a valuation of \$51 billion and is now considered the world's most highly valued private company (Blumstein, 2015). These companies do resemble the traditional firm, with a centralized management core and subsidiaries, but have structures with low employment costs and little capital investment. Uber owns very few cars, Airbnb owns no property, and outside of the management team employs no one. This creates a changing dynamic of employment and accountability within the market.

Schumpeter's understanding of capitalism shows us a system where there is constant change, uncertainty, experimentation and diversity, leading to a system of large firms. Schumpeter argues that the idea of the large firm, or big business, have "to do with creating the standard of life" rather than "keeping it down" (Schumpeter, 82). There are many more small firms in the US than large ones, but the large firms provide the essential elements necessary for the strength and vitality of our economy. Small firms often rely on the large firms for employment of consumers who in turn purchase goods from the smaller firms, or are in fact, a partner of the large firm through supply chains. But in American society we have continued to demonize big business rather than recognize its benefit to society. An August 2014 article in Salon Magazine stated that "There's little doubt that Uber is the closest thing we've got today to the living, breathing essence of unrestrained capitalism"(Leonard 2014) The writer is in fear of an Uber monopoly: "What happens to labor — the Uber drivers — when they have no alternative but Uber?"(Leonard 2014). The author has fallen victim to what Schumpeter warns of. He has accepted the "momentary situation as if there were no past or future to think to it" (Schumpeter, 84). It is quite possible, and most likely will happen, that Uber will one day become a lazy monopoly. But if we take heart in Schumpeter's version of capitalism Uber will survive only to be unseated by an innovative new company that will challenge its position in the market. Our economy could not survive without large firms who innovate, grow and employ.

Emerging forms of businesses such as the firms that take on characteristics of sharing, or a shared platform, have received wide spread criticism of their business structure, market power, and employment practices. The largest shared use firms have drawn the most criticism for doing exactly what Schumpeter says must happen in order to sustain a capitalistic economy. These firms are the "fundamental impulse that sets and keeps the capitalist engine in motion" by, in and of themselves, creating new ways of doing things and providing services (Schumpeter, 83). Uber has been the center of multiple lawsuits, including a class action suit, claiming Uber has miss-classified its employees as independent contractors. The outcome of this decision will have profound effects on labor laws and regulations. The outcome has tremendous potential to change and evolve our understanding of what an employee is. If a company is handling the transaction costs for the contractor, but the contractor is choosing when and where to work, owning their own capital, where does the traditional definition of an employee fit? Through this ever changing system there will be a shift in capitalism once again.

The term shared use, though, may be misleading. As we look at business structure and practices of these companies they are far from 'sharing'. There is very little collaboration in the realm of purely private shared use companies at this point in time. There is greater collaboration between shared use

businesses that are operating at a public level, such as bicycle-share firms and other private-public partnerships in public transportation that are beginning to follow this model. Perhaps as the industry matures there will be more collaborative environment. In order to acquire first mover advantage and maintain it, Uber, most notably, has been determined to outpace its competition. Uber has been accused of using tactics such as ordering Lyft rides, then cancelling them and overt recruitment of Lyft drivers have been reported (Kerr, 2014). But one could argue that these practices are merely aspects of the capitalistic model, “the game is not like roulette, it is more like poker” (Schumpeter, 73). These companies are strategic in their model but also at undermining their competition to maintain market advantage.

Large firms have origins in the need for reducing transaction costs. The ability to innovate, according to Schumpeter, comes from the ability of large firms to exploit economies of scale. It could be said that large firms begin as agile, small firms that recognize the opportunity for innovation and the market. Shared use firms have disrupted the market, shifting the illusive equilibrium point of the neo-classical model. The destruction of the taxi business or hotel business will not occur in its totality but the reduction of market power, causing pressure and change within the incumbent industry will occur, and has already begun to occur. Capitalism continues to evolve, firms evolve, and the market evolves. In the shared use context it is argued here that the development of shared use is due to the role of technology in reducing transaction costs, and the role of the large firm, moving toward a monopoly, giving these companies power in the market, but also the room to innovate, and provide social benefits.

Fowler (2000) identifies “Integrated Social Entrepreneurship” which is when surplus generating activities simultaneously create social benefits (p. 645). These types of entrepreneurs introduce enterprises that produce linkages that in turn create additional development and economic benefits for both existing and wider array of people (Fowler 2000, 645). Shared use businesses do exactly that. They are generating surplus revenues or profit, and are at the same time creating social benefit through increased access to ‘private transportation’, create additional revenue streams to individuals who own a car but have lost jobs or are underemployed, give people an alternative to traditional forms of transportation, in an on-demand fashion, and offer health and environmentally friendly benefits and alternatives. This can be achieved by reducing vehicle travel, which increases efficiency of resources with less production. The typical personal vehicle is not in motion 95 percent of the time (Shoup 2005). Therefore, sharing in such a system reduces the need for parking, and increases asset utilization. Bicycle sharing specifically increases physical activity, while reducing emissions and congestion.

Shared Use Transportation Creating Shared Value: Evidence and Analysis

Dees and Anderson (2006) posit a social enterprise spectrum that illustrates the range of motives, methods and goals that exist in the social enterprise world. Dees and Anderson, building upon Michael Porter’s (1985) work on value chain framework, propose a simplified framework wherein a business can create shared value. The social enterprise spectrum illustrates where shared value can be created along the supply chain. The shared value chain moves through the stages: procuring supplies, employing workers, designed the product/service, producing the service and marketing to target customers. This is presented to hypothesize where the shared economy can be impactful in policy. This framework can be used to illustrate where Social Entrepreneurs can create social value, at any step in the process. This is where entrepreneurs can blend philanthropic and business methods to create or enhance shared value (Dees and Anderson, 2006).

Table 1:
Social Enterprise Spectrum

	Purely Charitable ←-----→	Purely Commercial	
Motives, Methods, and Goals	Appeal to the goodwill Mission Driven Shared Value Creation	Mixed Motives Balance of mission and market shared and economic value creation	Appeal to self-interest Market-driven Economic Value Creation
Key Stakeholders			
Target Customers	Pay Nothing	Subsidized Rate, and/or mix of full payers and those who pay nothing	Pay full market rates
Capital Providers	Donations and Grants	Below market capital and/or mix of donations and market rates capital	Market rate capital
Work Force	Volunteers	Below-market wages and/or mix of volunteers and fully paid staff	Market rate compensation
Suppliers	Make In-kind Donations	Special discounts, and/or mix of in-kind and full price	Charge full market prices

Source: Reproduced from Dees and Anderson (2006)

Much of the literature examining transportation sharing in various forms centers on the environmental benefit and building “sustainable mobility communities” (Firnkorn & Müller, 2011; Ornetzeder et al, 2008, Prettenhaler and Steininger 1999). It has also been found that when given the option of a car-share program users do decrease both car usage and car ownership in densely populated urban centers (Cervero & Tsai 2004, Millard-Ball, 2005, Martin, Shaheen and Lidicker, 2010). These social benefits can be claimed through not only fewer CO2 emissions, but also increasing health and activity levels, reducing congestion, saving people money and creating jobs.

Uber and Lyft have models that would, on this spectrum, fit more into the purely commercial categories. But upon further investigation into the companies it becomes unclear if they are purely commercial. Uber’s primary competition is the Taxi companies, but Lyft sees public transportation as their main competitor. This is in part due to Lyft co-founder Logan Green, who was quoted in a 2014 interview saying “Instead of public transit, we’re building what we call personal transit” (Wohlsen 2014). To dig deeper into the motivations, missions, and services of such shared use transportation companies, case studies are offered of Lyft, Uber and Capital Bikeshare. Transportation has dominated the discussion around the shared use companies. Uber and Lyft are the two most notable car-sharing companies and many major cities in the US and abroad have a form of a bicycle sharing company. Ride-sharing is not a new concept, but the incorporation of business where they utilizing real-time data, is. Transportation Network Companies (TNCs) are developing new innovative ways for ride sharing, ride sourcing and ride splitting that are creating social benefits across the value chain.

Lyft:

Lyft developed out of the company Zimride, a ride-sharing company geared toward long-distance trips that largely operated on college campuses using Facebook connect. Zimride is marketed toward universities and corporations offering unique benefits to both classes of users. The company partners with universities and corporations to develop a platform for ridesharing. Zimride encourages users to track their commuting to show how many pounds of carbon they have potentially saved by carpooling.¹ Zimride was bought by Enterprise Rent-A-Car in 2013. The founders, Logan Green and John Zimmer created Lyft in 2012 to address demand for short-term trips in urban areas.

Lyft, in particular, has elements that align within the hybrid section of the social enterprise spectrum. Lyft for Good is a program within Lyft whose main mission is to have social impact: “Lyft for Good program works with nonprofits and our driver community to create a positive social impact, one ride at a time.”(<http://blog.lyft.com/lyftforgood>). This program is based in empowerment, impact and local communities, with the goal to bring social value to the communities that Lyft operates in. Lyft for Good, on the surface may seem like a traditional social responsibility, but at its core it can be the way forward for delivering care and services to underserved populations. Lyft sources ideas from its customers and drivers for these initiatives, therefore responding to the needs of the community. Examples of the services are delivering disaster preparedness kits, Meals on Wheels, and other services to seniors who do not have access to regular transportation (<http://www.geekwire.com/2014/lyft-good/>).

Lyft’s motto: “A ride whenever you need one”, reflects the on demand and flexible use that these ride sharing companies exhibit. Lyft’s model, slightly different from Uber’s, where everyone has a private driver, is much more social in nature. Its recently launched Lyft Line allows other users to actually share your ride, if they are along the same route. Lyft Line lets ride seekers anywhere in the city get matched up with other would-be passengers traveling a similar route, allowing everyone in the car to pay less (Wohlsen 2014).

Uber:

Uber has captured demand in the market that could be considered latent demand, and has identified underutilized resources and matched them to willing customers. As Giuli and Maselli (2015) point out Uber is not the only firm undertaking this model. Other companies are identifying excess capacity in the market of cleaning services, personal assistants and delivery services (Giuli and Maselli 2015, p.3). In Washington DC Uber offers uberX, uberXL, uberBLACK, uberSUV, and UberTAXI. Fares and available services vary by location. In general base fees for uberX are between \$2.00 and \$6.00. In many smaller locations only uberX is offered, at higher rates than those offered in the big cities. Uber began as a luxury car service; it has transformed itself due to competition. Many see Uber as the aggressor but it only became a direct competitor with traditional taxi services after other competitors such as Lyft and Sidecar began encroaching upon Uber’s territory with lower priced alternatives (Lawler 2015).

To keep ahead, Uber opened up employment to drivers who were not licensed taxi or limo drivers. This has led to a rate decrease but also many legal struggles and criticism. While this has made

¹ For an example see <https://www.zimride.com/mason>

Uber more profitable it has seen a decrease in sales at the higher end and has become a low-cost alternative to a taxi service (Lawler 2013). This realization allows Uber to fit better with the idea of a social enterprise as it transition from a luxury brand to an everyday consumer product that innovates on its model. With this shift Uber has seen tremendous growth. With 2,300 employees and hundreds of thousands of drivers Uber has capitalized on a market that many thought was matured in the form of traditional taxi companies.

Capital Bikeshare:

In the Washington DC region, the bike share company is Capital Bikeshare. Bike-sharing services in the District of Columbia began as a private venture by SmartBike DC. Seizing on the demand and success of the idea the DC Department of Transportation formed a partnership with Arlington County, Virginia and created Capital Bikeshare. Capital Bikeshare has since partnered with Montgomery County, the District of Columbia and the City of Alexandria. Capital Bikeshare was originally a government owned business but has since formed a partnership with Alta Bike Share, initially launching in 2010. Alta Bike Share has since become “Motivate”. Capital Bikeshare has more than 350 stations in the WMA. And ridership is continuing to rise. Bikeshare is marketed as “clean, green, and healthy transport “that gives back to the community” (<https://www.capitalbikeshare.com/partners>). As ridership continues to rise there have been falling numbers elsewhere for public transit in DC since 2011 (See Figure 1). Bike ridership has increased rather highly in DC and could be attributed to a consistent addition of new membership to Capital Bikeshare.

Capital Bikeshare is already offering subsidies and benefits to low income users. Montgomery county residents can access funds through the Job Access Reverse Commute (JARC) program. In Arlington, the county is accepting cash for those who do not have a credit or debit card. Bikeshare, fits more on the middle of the spectrum of social enterprise motives, methods and goals. Shared value is being created along the value chain. Expansion on the Capital Bikeshare program is being undertaken by the counties as well. Montgomery County has submitted a TIGER grant that calls for increased electric bus service as well as 17 additional bikeshare stations (<http://www.montgomerycountymd.gov/DOT-Transit/Resources/Files/ROP%20Tiger%20Grant%20Application.pdf>).

In summary, each of these companies is creating shared value at some point in their value chains. Lyft has directly made an effort to address the communities that they operate in through Lyft for Good. Uber has created a push to reduce cars on the road. Capital Bikeshare, as a public private partnership is in many ways more socially minded than its car sharing counterparts, but operated on a revenue model as well.

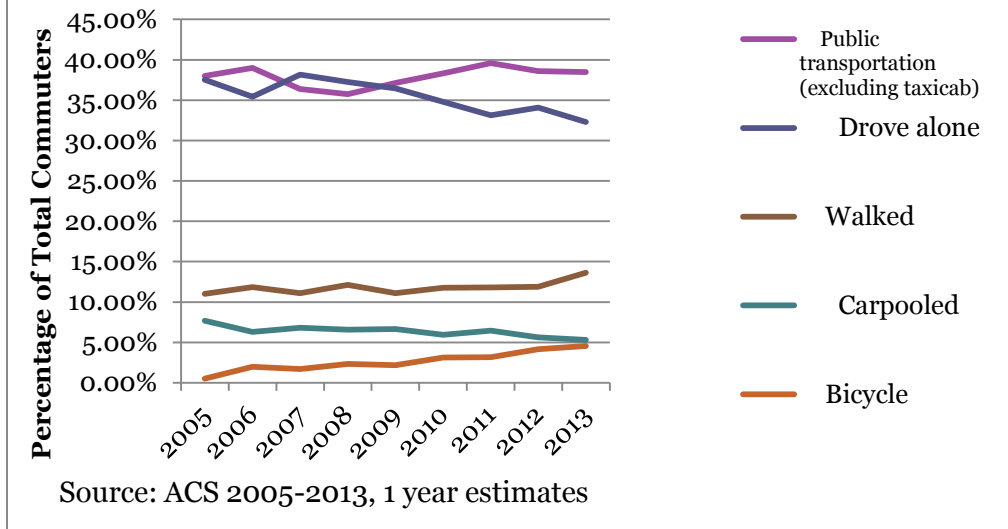
Table 2

Using the social enterprise spectrum to better understand shared use transportation

	LYFT	Uber	Capital Bikeshare
Motives, Methods, and Goals	Economic value Shared value creation Personal transit	Economic value Self-Interest Reduce 1 million cars (shared value)	Environmental appeal Shared Value Creation Economic Value
<u>Key Stakeholders</u>			
Target Customers	Pay full rates, LyftLine allows reduce fares, cheaper than taxis	Pay full rates, UberPool reduces fares, cheaper than taxis	Subsidies available, reduced fares for low income, full market rates
Capital Providers	Private equity, fee for service	Private equity, fee for service	Grants, fee for service
Work Force	Market rate compensation, Volunteers (Lyft for Good)	Market rate compensation, higher pay than competitors (taxis),	Market rate compensation
Suppliers	Charge full market prices	Charge full market prices	Charge full market prices

So why is this important and why should we look to shared use to increase social value? Transportation in the WMA is well known for its congestion and seemingly unexplained complexity. With the introduction of car and bike share programs around 2010 there has been a notable shift in the modes of transportation that commuters are using to get to work. A sharp increase in bicycle users, public transportation and even those walking to work is apparent. At the same time people driving alone has noticeably decreased. It should be noted that carpooling has decreased, but it is unclear whether or not those utilizing Uber and other programs consider themselves carpooling as they are being driven by, not with someone.

**Figure 1: Commuting to Work by Mode
Washington DC 2005 to 2013**



The Washington Metro Area (WMA) has been a point of activity for companies in this sector. The concentration of population, influx of a younger demographic to the urban core and long duration of commutes has prompted many residents to shift toward these modes of transport. Some of the companies have entered into Public Private Partnerships with various government authorities to offer and integrate their services into the public view, others have gone head-to head with entrenched forms of transport defying traditional regulatory schemes. The change has been occurring rapidly. The development of shared use businesses is in no large part due to the recessionary period between 2007 and 2009 and the aftermath where millions became unemployed and underemployed, left with debt and household possessions that could generate income. It's no surprise that the two most prevalent products that are being rented out in the shared economy are homes and cars; two of the largest assets that most American's own². The three shared use businesses examined for how they best fit into the social enterprise theory fit this description.

² Notable examples outside of transportation would be Airbnb, a lodging company that connects customers with people willing to rent out a room or other space in their home, often for a fee much less than an equivalent hotel room and service; DogVacay, a site where people basically operate a pet daycare in their home, claiming to be more hospitable than a business offering the same service; ParkingPanda rents out driveway space for parking in congested or high demand areas; Rentoid, an online marketplace that allows users to rent other people's possessions such as tents, car seats, etc.

Table 2:**Percent Change in Mode Choice for Commuting to Work from 2009 to 2013**

Statistic	District of Columbia	Montgomery County, Maryland	Prince Georges County, Maryland	Arlington County, Virginia	Fairfax County, Virginia	City of Alexandria, Virginia	Fairfax City, Virginia	Total
Workers 16 Years and over:	9%	6%	4%	5%	9%	4%	1%	7%
Car, truck, or van	-1%	5%	4%	2%	7%	0%	-5%	4%
Drove Alone	0%	5%	5%	4%	8%	0%	-3%	5%
Carpooled	-6%	4%	1%	-16%	-3%	2%	-16%	-1%
Public transportation (Includes Taxicab)	13%	7%	5%	7%	15%	3%	23%	9%
Motorcycle	27%	3%	10%	-11%	27%	205%	31%	21%
Bicycle	107%	35%	11%	56%	46%	44%	254%	68%
Walked	18%	3%	10%	7%	17%	39%	98%	14%
Other means	-16%	-13%	-20%	51%	63%	1%	-53%	11%
Worked at home	11%	29%	-1%	16%	27%	59%	14%	17%
Average	173%	-3%	-25%	42%	7%	19%	191%	27%
Commute Time to Work								

Source: ACS 2009 (5 Year Estimates), ACS 2013 (5 Year Estimates), Author's Calculations

Changes in commuting to work vary within the region, county by county. The District of Columbia and the Northern Virginia localities of Arlington, Fairfax and the City of Alexandria have greater increases in the change of modes of transportation, other than driving alone, than the localities located in Southern Maryland. As the overall workforce in the Washington DC area has increased by 7 percent between 2009 to 2013, mode choice for commuting to work has changed concurrently. The use of the bicycle is most notable, as it has increased 68 percent in total over that time period. The largest increase can be seen in the District of Columbia and Fairfax City, but has increased across all municipalities included in this sample. Table 1 shows the percent changes in each statistic. As data from ride-sharing companies are not accessible, the focus on shifts in commuting patterns concentrates on Capital Bikeshare data. This is a shift of people out of cars and onto bicycles and, to a lesser degree, to public transportation.

Changes to the frequency of commuting modes of motorcycles, bicycle, walking and those working at home have far outpaced the number of workers who are increasing their use of cars, trucks or vans and public transportation. This suggests that in a very short time, there has been a change to patterns of commuting in the Washington DC area. Washington DC, along with Fairfax County has seen the largest increase in workers over the age of 16. With the 7 percent increase of workers, commute time has

increased by 173 percent from 2009 to 2013. This is of interest since even though there is a lower rate of growth for those driving alone the average commute time across the region has increased by 27 percent. Bicycles, motorcycles, taxis and other means have grown in use in the District of Columbia and the Northern Virginia localities, while they have shrunk in Southern Maryland. Capital Bikeshare is not present in the Maryland County of Prince George's, which could explain the difference between the regions.

The increase in alternative modes of transportation is not just a younger-aged cohort push, it is occurring across all age cohorts in the District of Columbia and Northern Virginia. Those aged 25 to 44 years of age form the largest proportion of workers in the region. 48 percent of all workers in the jurisdictions selected above are 25 to 44 years followed by 22 percent who are 45 to 54 years of age. With 70 percent of workers between the ages of 25 and 54 the change in each jurisdiction is important when examining the overall infrastructure needs of the region. The changes in Table 2, as well as the trend line in Figure 1 for bicycle ridership coincide with the introduction of Capital Bikeshare into these communities in DC and Northern Virginia. Between September 2010 and January 2015, almost 9 million departures occurred in Bikeshare's system, with 8.2 million from stations located within the District of Columbia.³ During this time in the District of Columbia, the bicycle as a means of commuting to work as a share of the total commuting population has almost reached 5 percent, increasing from a negligible level less than ten years earlier. Beginning in 2010 with the introduction of the bike share program in DC, there has been a steady increase in commuters using bicycles as a means of transportation (See figure 1).

Table 3

Percent Change in Taxicab, Motorcycle, Bicycle as a Means of Commuting to Work 2010-2013

	DC	Arlington	Fairfax	Alexandria	Montgomery	PG	Total
Taxi, motorcycle, bicycle	46%	31%	23%	37%	6%	-2%	9%
16 to 19 years	88%	141%	26%	-15%	-36%	57%	12%
20 to 24 years	66%	21%	27%	55%	-21%	-13%	-2%
25 to 44 years	57%	29%	36%	47%	5%	-14%	9%
45 to 54 years	12%	33%	7%	34%	27%	-16%	9%
55 to 59 years	29%	42%	0%	46%	44%	50%	17%
60 to 64 years	25%	-1%	26%	-17%	9%	258%	19%
65 years and over	7%	71%	43%	18%	-23%	33%	12%

Source: ACS 2013 (5 Year Estimates) ACS 2010 (5 Year Estimates), Author's Calculations

³ For data downloads visit <https://www.capitalbikeshare.com/system-data>

To illustrate the impact that in just a short while Capital Bikeshare has had on the WMA an difference in difference model is undertaken to investigate and provide some evidence that that metro ridership decline coincides with bikeshare introduction. Public transportation is one of the sectors that is prime for disruptive activity and already is being attacked by social entrepreneurs who have identified the challenges that face the industry. Failing public infrastructure, problematic access to public transit by the suburban poor, the high rates of public spending on public transit which serves only 5 percent of the workforce (ACS 5 year estimates 2009 -2013) in the United States for daily commuting, are all problems with the current public transportation sector. This section examines the impact of the introduction of a Public-Private Partnership with local government agencies, on commuting trends and the use of public transportation. Indicating how these shared use businesses are transforming our mobility landscape, and why we should be mindful of their potential impacts, and where the potential is for social entrepreneurs to exploit the deficiencies of government to raise the sub-optimal equilibrium that exists in the transportation sector. The dependent variable is number of natural log of metro riders per population. The unit of analysis is municipality. The geographic area used is Washington DC, Arlington County, Virginia, City of Alexandria, Virginia, Montgomery County, Maryland and Prince George’s County, Maryland. The treatment group equals 1 if there Capital Bikestation has locations in that area. Time period 1 is from 2006 to 2009 and time period 2 is from 2010 to 2013. Data gathered is from the Capital Bikeshare database and Metro Annual releases.

Interestingly enough, although not significant (p value of .138), the introduction of capital Bikeshare has had a positive overall effect on Metro ridership, despite the declining numbers of riders all together. With that said: having a Capital Bikeshare station close by has had a negative effect on metro ridership (-.6413) coefficient. This aligns with Capital Bikeshare members who report a 61 percent decrease in their use of Metro since joining the program. Income and the percent of the population of people between 18 and 34 also have a positive effect on metro ridership, as one would expect.

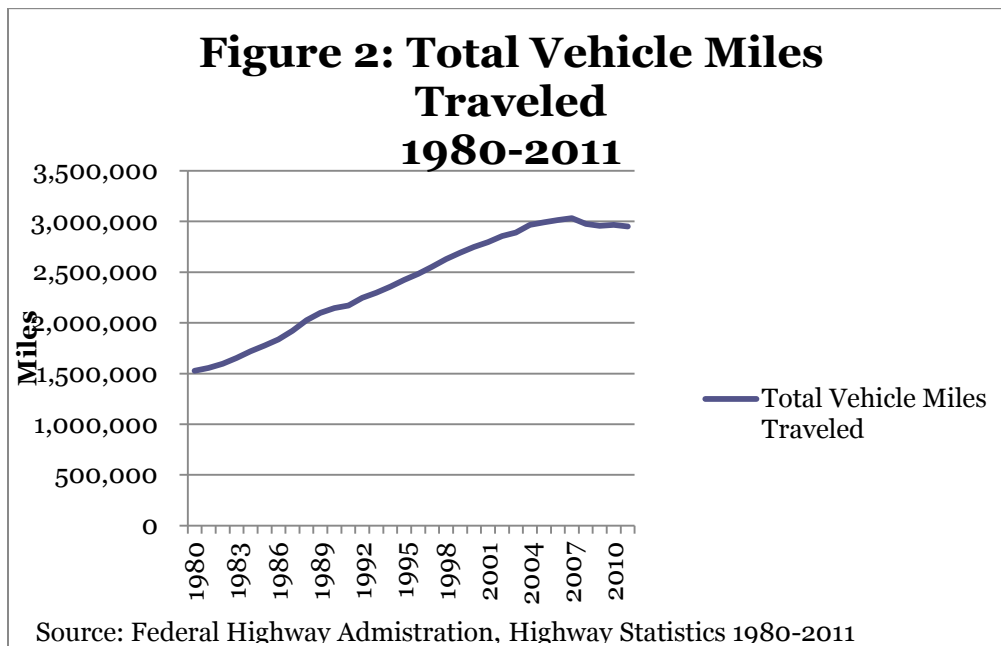
$$\ln\text{MetroRidership}_{it} = \beta_0 + \beta_1\text{CapBike}_{it} + \beta_2\text{Post2010}_{it} + \beta_3\text{CapBike}_{it}\text{Post2010}_{it} + \beta_4\ln\text{HHInc}_{it} + \beta_5\ln\text{Age18_34}_{it} + \beta_6\text{MetroStations}_{it} + \beta_7\text{BikeStations}_{it} + \varepsilon_{it}$$

Table 4

Regression Results of Difference in Difference Model

Metro Ridership (ln)	Coefficient	P Value
Capital Bikeshare * Post 2010	.1699	0.138
Capital Bikeshare (Treatment)	-.6413	0.000
Avg. HH Income (ln)	4.5812	0.000
Residents 18 to 34 (ln)	2.497	0.000
Number of Metro Stations	.1266	0.000
Number of Bike Stations	-.0047	0.000

In a recent study by Michael Sivak at the University of Michigan Transportation Research Institute examined the question of whether motorization in the U.S. had peaked. While he found that the absolute number of vehicles reached a maximum in 2008 and declined thereafter, in large part due to the economic downturn, he found that the maxima had occurred for vehicles per person, the number of licensed drivers and household has been reached between 2000 and 2006, prior to the economic downturn. According to the Federal Highway Administration (FHWA) the number of miles traveled by licensed drivers has steadily decreased since 2005.



If this is a continuing trend then the rise of the share use sector of transportation will become more important, traveling will become more social, and beneficial to society through decreased congestion, pollution, and increased physical activity. It also allows for the policy potential for increased equality in transportation. But it calls into question, what are these companies trying to accomplish? As was stated Uber appears to be in competition with Lyft, and imbedded taxi companies, whereas Lyft, while in obvious competition with Uber, has set its target on inefficient public transportation and to increase the use of on-demand carpooling. Recently, Uber has announced that its goal is to reduce cars in New York City by 1 million through the use of UberPOOL (Uber 2015). This is in competition with Lyft Line but also has the goal of eliminating the need for private ownership of automobiles and reduction of congestion in major cities. Capital Bikeshare, a Public-Private partnership, is in part a complement to existing public transportation but has been found to substitute for short –term trips (Martin and Shaheen 2014), and according to the analysis offered herein, is having mixed effects on metro ridership. According to a recent Bikeshare survey, users of the product were found to be, on average, younger, more likely to be male, Caucasian, highly educated and slight less affluent that the average Washingtonian (CB Member survey 2013 p.iii). 72 percent of bike share users heavily reliant on public transportation in 2013 noted a reduction in their Metrorail trips (See Table 1, CB Member Survey 2013). Surprisingly, riders reduced their use of car the least compared to other forms of transportation – this may be due to the fact that many do not own cars in the first place. The largest reductions come in the form of Metrorail usage. This could be indicative of a substitution problem, particularly for short trips. This is supported by recent

work by Martin and Shaheen (2014) that in Washington DC bicycle users have traditionally used other forms of public transit and are now shifting away from transit in favor of bicycles for short term trips.

Table 4
Reduction in Other Modes of Transportation when Utilizing Capital Bikeshare

Mode of Transportation	Reduction
Car use	50%
Taxi	60%
Metrorail	61%
Bus	52%
Walking	52%

Source: Capital Bikeshare 2013 Member Survey Report.

Potential Policy Shifts of Shared Use Toward Shared Value

How can we use shared use to maximize shared value? The companies profiled here in are driving innovative ideas that are disrupting the market. The business model has proven successful thus far, transaction costs are greatly reduced, the consumer is better off. Shared funding platforms through crowdfunding have already proved lucrative and successful for social entrepreneurs trying to bring their product to market. The combination of a socially orientated business structure with a socially minded goal should be a direction for social entrepreneurs to develop more cohesive surplus generated, value creation.

If we take into account potential policies that could easily be undertaken by these companies to form partnerships with the government or to accept benefit cards and other such subsidies, ride sharing, especially products such as Lyft Line, could greatly improve the social benefits for users. The companies could also very easily make an option for riders who pay the market price to ‘donate’ a portion of their fare or pay an additional dollar to go towards giving someone else a subsidized ride. The realization that small and medium sized enterprises were the lifeblood of the economy, and the ‘shop local’ movement has created a shift in cultural values that American consumers have moved closer to in the past twenty years. The idea behind a shared use business is to utilize existing capacity in the system, which is the underutilization of a good or service. Ride-sharing has been a long standing tradition in the transportation sector, including backing by policy makers to incorporate High Occupancy Vehicle (HOV) lanes and other variations of carpool lanes. The evolution of technology has allowed a further integration of shared used that is unprecedented in our modern economy. These businesses are disrupting the traditional flow of transportation services and innovating, bringing increased efficiency and connectivity to many urban transportation systems. But the model can be applied across a variety of social enterprises to further connect service providers with clients, and pushing those sub optimal equilibriums upward.

This is just a start at the investigation between social enterprises and shared use. Further research needs to be done into the structures and purpose of the shared use companies. But many are motivated by

connecting people with resources that they can't afford to own or have no need to own. The model of sharing with those in need or who can't afford the product is very much a social enterprise mentality. By understanding social enterprises as companies that create value and surplus instead of focusing on profit, even though profit is very important, and aligning with Porter's view that shared value is the new way to success, shared use businesses have great potential to lead the way in a Schumpeterian shift of capitalism and the understanding of how social value can impact the economy.

The rapid success of Uber in the United States and around the world is not surprising when we understand the cultural implications for such an innovation. Innovators and social entrepreneurs do not necessarily create the market, they respond to shifts in cultural values. Cultural change occurs along varying time frames at different levels, but technological change ushers in faster change during certain points in our history. Historically the introduction of the automobile transformed our social culture, as the railroads had before them. The new vehicle of change has become the internet and the advent of increasingly ubiquitous of access to the greater connectivity. With greater connectivity we see a greater consolidation of geographic space. Thomas Friedman in "The World is Flat" states that "if it's not happening, it's because you're not doing it" (Friedman 2007, p. 489).

Social connectivity has ushered in a new era of activists but social entrepreneurs have tremendous power in gaining access to a large market. Uber, Lyft and other sharing business undoubtedly understand this. Through social connectivity, businesses have the increased ability to be able to listen to their consumers more than ever, and through the sharing economy consumers have become the service providers as well. This coupled with the realization that by 2025, in less than ten years, 75 percent of the workforce will be millennials (Quirk 2014); there will be a shift in values and what the consumer wants. This paper opens the door for further research on whether the shared use companies highlighted in the paper are "true" social enterprises, how they are impacting employment, their regulatory impacts and the future of the industry. Shared use businesses are innovative, creating change and creating economic and social value. More importantly, this papers goal is to further the discussion on how social entrepreneurs can position themselves within the market as a shared use business to maximize shared value.

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