



The Expanding Transportation Network Company “Equity Gap”

Adverse Impacts on Passengers with Disabilities, Underserved Communities,
the Environment & the On-Demand Workforce

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ABSTRACT

This report provides an analysis and evaluation of the negative impacts that the proliferation of Transportation Network Companies (“TNCs”) have had on people with disabilities, underserved communities, the environment, social responsibility, and the sharing economy. Methods of analysis include: a look at the past and current climate of legislation and litigation, as well as the inherent shortcomings in the TNC business model, that have otherwise halted progress in achieving accessibility in public transportation for people with disabilities; a statistical examination exposing the practice of TNC drivers ignoring low-income, minority, rural, the unbanked and technologically deprived communities; the effects that vehicle proliferation and surge pricing have had on carbon emissions and congestion; the cost to taxpayers and governments resulting from TNC financial practices; and an overview of how the concept of the “sharing economy” does not, in fact, apply to TNCs despite their claims to the contrary. This report is a colloquy on the adverse impact of TNCs have had on transportation “equity,” and will demonstrate that the TNC template is nothing more than a privileged access model that operates to the detriment of those in most need of their services.

This report was originally published by the University Transportation Research Center (Region 2) of The City College of New York, at the City University of New York, was edited and solicited by New York University School of Law’s Labor and Employment Law Center and Cornell University’s School of Industrial and Labor Relations. This work is also scheduled to be republished in an upcoming book entitled: *Who is an Employee and Who is the Employer?: Proceedings of the New York University 68th Annual Conference on Labor* (LexisNexis, 2016) (series editor: Samuel Estreicher; volume editor: Kati L. Griffith).

The author gratefully acknowledges the support of these institutions, of the noted research contributors, and the findings and opinions of the author are shared by the peer reviewers of this report.

About the Author

Professor Matthew W. Daus Esq.

Distinguished Lecturer, University Transportation Research Center



Matthew W. Daus was appointed by former Mayor Rudolph W. Giuliani and unanimously confirmed by the New York City Council on August 22, 2001 as the tenth Commissioner/Chairman of the New York City Taxi and Limousine Commission (TLC). On July 23, 2003, Commissioner Daus was reappointed to a seven (7) year term by Mayor Michael R. Bloomberg and the New York City Council, which expired on January 31, 2010. Mr. Daus is the longest serving Chairman in TLC history, serving for 8 ½ years as Chief Executive Officer as well as counsel for a combined total of 14 years at the agency. Prior to his tenure as Commissioner/Chair of the TLC, Mr. Daus served as General Counsel to the Commission and Deputy Commissioner for Legal Affairs since 1998, and before that, as Special Counsel to the TLC Chairperson.

During his tenure at TLC, Commissioner Daus designed and implemented unprecedented reforms in the country's largest for-hire ground transportation industry – which includes the taxicab, black car, livery, limousine, paratransit and commuter van businesses. These multi-billion dollar industries transport approximately one million passengers daily, and the TLC licenses and regulates approximately 100,000 drivers, over 50,000 licensed vehicles and over 900 businesses. Commissioner Daus conceived and spearheaded numerous safety, technology, customer service and environmental initiatives, proactively responded to several crisis-related challenges, and effectively managed and streamlined a government agency with over 480 employees, a budget of over \$29 million and annual revenues in excess of \$40 million.

Under Commissioner Daus' leadership, TLC's accomplishments included:

- Taxi Technology – oversaw the installation of credit/debit card payment options, Global Positioning Systems, and passenger and driver information screens in all taxicabs, enabling data collection, lost property recovery and fare opportunities;
- Hybrid Taxicabs– saw the introduction of significant numbers of clean air taxicabs, which now comprise more than 23 percent of the fleet;

- Medallion Sales – several medallion sales yielding hundreds of millions of dollars in revenue to New York City’s General Fund;
- Accessible Taxi Dispatch System Pilot Program – wheelchair accessible taxi service for disabled passengers available by calling 311;
- Taxi Group Rides – passengers ride share at stands where passengers pay less and drivers earn more;
- Livery Stands Pilot Program – passengers obtain more efficient car services via dispatcher-staffed stands on private property;
- For-Hire Vehicle Passenger Reforms – established passenger bill of rights, increased vehicle and safety standards;
- Taxi of Tomorrow – development and issuance of a Request for Proposals for a custom-built iconic future taxicab;
- Transit Strike Contingency Plan – implemented successful ride-sharing plan during 2005 transit strike and private bus strikes;
- Distracted Driving Program – implemented first-of-its-kind program to promote safety and combat the problem of cell phone use by drivers; and
- 9/11 Business Recovery Plan – agency policies expedited economic recovery of regulated industries.

Since leaving the TLC, Mr. Daus has joined the City University of New York’s (CUNY’s) Transportation Research Center of The City College of New York as a Distinguished Lecturer. The Transportation Research Center is one of ten original University Transportation Centers established in 1987 by the U.S. Congress. These Centers and their faculty members provide a critical link in resolving national and regional transportation problems while training the professionals who address our transportation systems and their customers on a daily basis. It represents the U.S. Department of Transportation’s Region II, which includes New York, New Jersey, Puerto Rico and the U.S. Virgin Islands. Functioning as a consortium of twelve major universities throughout the region, the Center is located at the CUNY Institute for Transportation Systems at The City College of New York, the lead institution of the consortium. The Center supports research, education and the transfer of technology in the field of transportation.

Mr. Daus also continues to serve as President of the International Association of Transportation Regulators (IATR), a group of government professionals and regulatory agencies from around the world who share best practices and promote positive change in the for-hire ground transportation industry.

Mr. Daus joined City government in 1994 as a Prosecutor for the New York City Commission on Human Rights, where he represented the agency in the prosecution and mediation of discrimination complaints in the areas of employment, housing and public accommodation. Thereafter, he was appointed General Counsel of the New York City Community Development Agency (CDA), now known as the Department of Youth and Community Development (DYCD), where he supervised all procurement activities relating to government anti-poverty funding and social service contracts awarded to

community organizations. After serving at CDA, Mr. Daus was appointed Special Counsel to the New York City Trade Waste Commission, where he was responsible for assisting in the formation of this newly created agency designed to eliminate corruption within the private sanitation industry. Prior to joining City government, Mr. Daus began his legal career in private practice as a litigator specializing in tort law.

Mayor Bloomberg and the City Council appointed Mr. Daus as Commissioner of the Civil Service Commission, an independent quasi-judicial agency that hears and decides appeals under the New York State Civil Service Law. Mr. Daus has extensive experience in labor and employment law, including a Masters of Law (LL.M.) from N.Y.U. School of Law specializing in the field. He received his Juris Doctor (JD) degree from Touro School of Law and his Bachelor of Arts degree from CUNY, where he has also served as an Adjunct Professor of Business Law. Mr. Daus has published numerous legal articles in journals and periodicals on topics which include labor and employment law, mediation/alternative dispute resolution and transportation law.

About the Peer Reviewers

Patricia Gatling

Former New York State Deputy Secretary for Civil Rights

Former Chair/Commissioner, New York City Human Rights Commission



Patricia L. Gatling is the former Deputy Secretary for Civil Rights under New York State Governor Andrew Cuomo. She oversaw the operations of the Department of Civil Service, the Governor's Office of Employee Relations, the Division of Veterans Affairs, the Division of Human Rights, and the Public Employee Relations Board. For over a decade, Ms. Gatling served as the Commissioner and Chair of the New York City Commission on Human Rights under Mayor Michel Bloomberg and Mayor Bill de Blasio. As Commissioner, Ms. Gatling was charged with enforcing the Human Rights Law and combating discrimination in New York City. Ms. Gatling is also the Executive Producer of *Fighting for Justice: New York Voices* of the Civil Rights Movement, a series of groundbreaking documentary films for the New York City Commission on Human Rights and NYC Media's online Civil Rights Museum.

In addition, Ms. Gatling worked as a senior trainer with John Jay College of Criminal Justice, as part of the U.S. State Department's International Law Enforcement Academy (ILEA), teaching "Human Dignity and the Law" in newly emerging democratic countries, such as Botswana, Thailand, and Budapest, and at the Dubai Police Academy International Conference in the United Arab Emirates. She has served on the New York City Charter Revision Commission and is currently a member of the Board of Trustees for the New York Lawyers' Fund for Client Protection.

Isabelle Ducharme

Chairman of the Board, Kéroul



Ms. Isabelle Ducharme has been working on social integration of people with disabilities for more than 20 years. During the last ten years, Miss Ducharme has presented at various conferences and facilitated multiple workshops on creating awareness for integrating people with disabilities.

Her personal experience of living with a spinal cord injury since her car accident in 1988 gives her unique insight in the barriers many persons with disabilities face. She truly understands the different needs and accommodation needed to attain full integration.

She has a bachelor's degree in communications at *Université de Montréal* and a Master's degree in business and tourism planning at *Université du Québec à Montréal*. She also completed a course in "communication and leadership" from *Dale Carnegie* to further refine her presentation skills.

In the field of disabilities, she has delivered keynotes, has trained and consulted, specifically, she has:

- Delivered sensitivity awareness classes to workers of the travel industry.
- Created a new concept of accessible circuit to promote accessible venues: www.theaccessibleroad.com.
- Master trainer and leader of *My Toolbox*, a self-management workshops for people with chronic illnesses, including one adapted specifically for people with spinal cord injury.
- Created and hosted a radio show to keep people with disabilities informed of products and services available: *Accès libre* at *Canal M* of *Vues et Voix*.

Ms. Ducharme is Chairman of the Board at *Kéroul*, a Quebec based organization whose mission is to make tourism and culture more accessible for persons with limited physical abilities. She is also active on the Board of *Bibliothèque et Archives nationales du Québec*.

Maureen Koetz

**Former Acting Assistant Secretary and Principal Deputy Assistant Secretary,
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Principal, Koetz & Duncan



KOETZ AND DUNCAN is a small, woman-owned business that provides strategic consulting in all areas of enterprise management and public affairs pertaining to sustainable development and asset management.

KOETZ AND DUNCAN is led by Maureen T. Koetz, who formed the company after a distinguished career at the intersection of government, infrastructure, and energy management as an attorney, federal policymaker, and member of the Senior Executive Service.

Ms. Koetz is the former Acting Assistant Secretary, and Principal Deputy Assistant Secretary for Installations, Environment, and Logistics of the United States Air Force, managing a 10 million acre/\$250 billion asset portfolio in support of sustainable operations for the largest energy consumer in the federal government. In addition to overseeing multi-billion dollar construction, sustainment, sully, and environment programs, she also served as the Historic Preservation Official, the Natural Resource Trustee, and a Member of the Air Force Base Closure Executive Group.

During her service as a Presidential appointee, Ms. Koetz formulated advanced management and communications programs to address encroachment and excess operational costs resulting from diminished natural capital access and supply, in what would become a template for efficiency and effectiveness for enterprise sustainable development.

Ms. Koetz has also held positions as Environmental Counsel for the Senate Energy and Natural Resources Committee, and Counsel to U.S. Senator Pete Domenici. She resides in Lower Manhattan, and was the Republican candidate for the 65th Assembly District in New York in 2014 against the now-disgraced Sheldon Silver.

Dr. Jonathan R. Peters

Associate Professor, College of Staten Island of the City University of New York



Jonathan R. Peters is an associate professor of finance in the Business Department at The College of Staten Island of The City University of New York and a Research Fellow at The University Transportation Research Center at The City College of New York. He received his Ph.D. in Economics from the City University of New York and his Masters in Economics from Hunter College.

Dr. Peters previously worked in the Finance Division of AT&T Corporation where he was a subject matter expert on immigration and international finance. He serves on the Economics of Pricing Subcommittee of the National Academies of Science Transportation Research Board and the Board of the City University Institute for Urban Systems. His work on public-private partnerships was published in 2006 by the New York State Department of Transportation. He has previously published in The Journal of Applied Finance, Transportation Quarterly and most recently in Public Works Management & Policy. He currently conducts research in the areas of regional planning, road and mass transit financing, corporate and public sector performance metrics, capital costs and performance management.

Michel Trudel

Urban Planner and Consultant, Kéroul

Former President, The International Association of Transportation Regulators



Michel Trudel is a geographer and urban planner.

He is a consultant in tourism and transportation, especially for Kéroul, an organization devoted to the development of inclusive tourism. He was in charge of the organization of the first World Summit Destinations for All held in Montreal in October 2014.

Previously, he worked for the Department of Transport of the Province of Quebec where he developed an expertise in transport regulation. From 1992 to 2000, he was member of the Board of Directors of the International Association of Transportation Regulators (President from 1992 to 1994).

He worked also at the Quebec Department of Tourism in regional development and then as director of the Tourism Promotion of Quebec.

It is in the course of his duties to the Government of Quebec, in transportation and tourism, he met André Leclerc, the founder and CEO of Kéroul.

About the Editors

Samuel Estreicher

Dwight D. Opperman Professor of Law, New York University School of Law

Director, New York University School of Law Center of Labor and Employment



Samuel Estreicher is Dwight D. Opperman Professor of Law at New York University School of Law, director of its Center for Labor and Employment and co-director of its Institute of Judicial Administration. He has published over a dozen books including casebooks in labor law and employment discrimination and employment law; written treatises in employment law and in labor law; edited global issues in labor law, global issues in employment law, global issues in employment discrimination law, and global issues in employee benefits law; edited conference volumes on sexual harassment, employment ADR processes, and cross-global human resources; and authored over 150 articles in professional and academic journals. He received his AB from Columbia College, his MS (Industrial Relations) from Cornell University, and his JD from Columbia Law School, where he was editor-in-chief of the Columbia Law Review. After clerking for the late Harold Leventhal of the US Court of Appeals for the DC Circuit, practicing for a year with a union-side law firm, and then clerking for the late Lewis F. Powell Jr. of the US Supreme Court, Estreicher joined the NYU faculty in 1978. He is the former secretary of the Labor and Employment Law Section of the American Bar Association, a former chair of the Committee on Labor and Employment Law of the Association of the Bar for the City of New York, and chief reporter of the new Restatement of Employment Law, sponsored by the American Law Institute. In 2010, the Labor and Employment Relations Association awarded Estreicher its “Susan C. Eaton Outstanding Academic-Practitioner Award.” Estreicher has delivered named lectureships at UCLA, Chicago-Kent, Case Western and Cleveland State law schools, testified twice before Secretary of Labor Reich's and Secretary of Commerce Brown's Commission on the Future of US Worker-Management Relations, and has run over 100 workshops for federal and state judges, US Department of Labor lawyers, NLRB lawyers, EEOC lawyers, court law clerks, employment mediators and practitioners generally. Among his many teaching offerings, he has started NYU Law's Supreme Court Litigation Clinic.

He is also of counsel to Paul Hastings in their labor and employment and appellate practice groups. His practice focuses on the wide range of issues affecting the employment relationship, including designing ADR systems, training supervisors for

performance-based management and employee involvement initiatives, advising clients in OFCCP, EEO, and labor relations compliance, and representing clients in individual, global HR management, and class EEO and Wage and Hour litigation.

Estreicher's appellate practice includes victory in the Supreme Court in the *Circuit City v. Adams* litigation, broadening the availability of employment arbitration; victory in the Second Circuit overturning an interest arbitration award in the Daily News litigation; amicus representation of international law experts and oral argument in the Second Circuit's Talisman Energy, opening up the issue of corporate liability under the Alien Tort Statute and a similar representation of international law experts in the Kiobel litigation in the Supreme Court. He has also engaged in other amicus representation (before the NLRB and in the Supreme Court) of the American Civil Liberties Union, Cato Institute, the Center for Public Resources, DaimlerChrysler, Ford, GM, the US Chamber of Commerce, the Society for Human Resources Management, the National Association of Manufacturers, the Black Alliance for Educational Options, the American Jewish Committee, and the Council for Employment Law Equity. Estreicher is also a member of the arbitration/mediation panels of the American Arbitration Association and Center for Public Resources, and is a fellow of the College of Labor and Employment Lawyers. He has been recognized in Human Resources Executive, Superlawyers, and Best Lawyers in America publications.

Kate Griffith

Associate Professor of Labor & Employment Law, Cornell Industrial and Labor Relations School



Professor Griffith is Associate Professor of Labor & Employment Law at Cornell's Industrial and Labor Relations (“ILR”) School and a Research Fellow affiliated with NYU’s Center for Labor & Employment Law. Griffith's scholarship focuses primarily on the intersection of immigration and workplace law at the subfederal, federal and international levels. She has published in both social science and legal journals and is a co-author (along with Michael Harper and Samuel Estreicher) of the textbook *Labor Law: Cases, Materials, and Problems*, 8th Edition (Walters Kluwer). She teaches courses on labor & employment law, immigration law and legal issues affecting low-wage and contingent workforces. She has twice received a Cornell ILR MacIntyre Award for Exemplary Teaching and was selected by a Merrill Presidential Scholar in 2010 as the faculty member who had the most positive influence on his education at Cornell University.

Griffith joined Cornell’s ILR faculty in the Fall of 2007 after completing a Skadden Fellowship as a Staff Attorney at the Workers’ Rights Law Center of New York, Inc. in New York’s Hudson Valley. Prior to the Skadden Fellowship, Griffith served as a Law Clerk for the Honorable Rosemary S. Pooler in the U.S. Court of Appeals for the Second Circuit. She is a cum laude graduate of NYU School of Law, where she was a Root Tilden Public Interest Scholar, received the Sol D. Kapelsohn Prize for highest excellence in writing in the field of labor law and served as the Editor-in-Chief of the N.Y.U. Review of Law and Social Change. Before earning her J.D. from NYU, Griffith conducted research on women workers and labor law in Mexico as a Rotary Scholar and in El Salvador as a Fulbright Scholar.

About the Contributing Researchers

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Economist, Ph.D. candidate at École Polytechnique, France



Brook is a PhD. Candidate at École Polytechnique in Paris, France, with a research area that focuses on High Growth Entrepreneurial Firms. Brook has a law degree from the University of London at the School of Oriental & African Studies in London, England; European Master in Law and Economics from University of Ghent, Belgium; Master in Economic Analysis of Law and Institutions from Université Paul Cézanne Aix - Marseille III, France; and Master in Law and Economics from University of Bologna, Italy.

Brook has extensive experience working as a legal and economic analyst in the transportation industry covering regulatory matters, including for-hire ground transportation logistics, planning, licensing, enforcement, technology implementation, operational issues and regulatory reform.

Jason R. Mischel

Former Commissioner & General Counsel, NYC Mayor's Office of People with Disabilities



Jason was Acting Commissioner and former Deputy Commissioner and General Counsel of the New York City Mayor's Office for People With Disabilities, and served as an Advisor to the Mayor on all disability-related issues for nearly a decade. Commissioner Mischel was responsible for advising the NYC Department of Transportation and the NYC Taxi and Limousine Commission on all disability related transportation law and policy issues.

During his tenure, Commissioner Mischel's accomplishments included the following projects, legislation and initiatives:

- Metropolitan Transportation Authority's (MTA's) pilot program that allows Access-a-Ride passengers to use yellow taxicabs for pick-up and drop-off using pre-paid debit cards;
- NYS Department of Transportation's successful grant proposal for Federal New Freedom grant money for the city's Taxi Smart Card Program;
- NYC Department of Transportation's Accessible Pedestrian Signal project and the installation of detectable warning strips at project sites;
- NYC Accessible Taxi Dispatch program that allows wheelchair users to reserve an accessible taxi in advance through a number of platforms;
- NYC Taxi & Limousine Commission's inclusion of critical accessibility features in the city's taxi fleet for people with different disabilities;
- Accessible Taxi Tax Credit signed into law in January 2012;
- NYC ferry legislation ensuring docks, piers, slips and terminals that receive and unload passengers are accessible for people with disabilities (2005);
- Legislation mandating that NYC increase the number of accessible taxis, implement an education campaign and annual information workshop, and requiring accessible taxis and for-hire vehicles to display accessibility insignia (2006);
- NYC Accessible Parking Education Program initiative;
- Disability Rent Increase Exemption signed into law in July 2005;

- Ensured accessibility in major city projects such as the new Yankee Stadium, the Barclays Center, the 9/11 Memorial and the 3-stage High Line project; and
- NYC's first Restaurant Access Program that highlights wheelchair-friendly restaurants (with NYC & Company, the city's official tourism bureau).

Commissioner Mischel has authored the following publications and resources:

- NYC's Official Accessibility Guide and the NYCGo Accessibility website (nycgo.com/accessibility), each containing critical accessible transportation information, resources and options for people with disabilities (in partnership with NYC & Company); and
- Inclusive Design Guidelines New York (<http://shop.iccsafe.org/inclusive-design-guidelines-new-york-city-1.html>), a comprehensive reference standard for architects, engineers and the construction industry that is now being utilized as a template by municipalities globally.

As an accomplished public speaker, Commissioner has served on Continuing Legal Education, housing, construction, transportation and cultural affairs panels, and frequently testified before the New York City Council. In addition, Commissioner Mischel has served as an advisor and member of the following boards and committees:

- MTA's Paratransit Advisory Committee and ADA Compliance initiatives; and
- Accessibility Committee of the 2008 NYC Building Code and its Revision Process;

Before joining NYC government, Mr. Mischel was a litigator in private practice, with experience in a wide array of areas, including, but not limited to, commercial lease negotiation and drafting, intellectual property, contract drafting and analysis, employment litigation, complex commercial litigation, state and federal appeals, Interstate Commerce Act litigation involving common carriers, copyright and trade secrets, warranties, eminent domain, choice-of-law and jurisdiction and consumer fraud.

EXECUTIVE SUMMARY

The proliferation of Transportation Network Companies (“TNCs”) has had a profound effect on the way people make their transportation choices. What was once a traditional system involving the raising of a hand to hail a taxicab or a call to a dispatcher to pre-arrange a livery or black car trip has morphed into a fully technologically-based paradigm whereby the use of a smartphone app to match a passenger with a driver (who in some jurisdictions can operate completely outside a regulatory framework) has become the new normal. Equity implies giving as much advantage, consideration, or latitude to one party as it is given to another. Along with economy, effectiveness, and efficiency, Equity is essential for ensuring that extent and costs of funds, goods and services are fairly divided among their recipients.¹

Companies such as Uber and Lyft utilize a business model that purports to provide an easy alternative “for all;” yet, when one pulls back the layers of what is actually occurring, it is apparent that the end result falls far short. In general, equity has is defined as fairness and impartiality towards all concerned, based on the principles of evenhanded dealing. In fact, it eliminates progress for equivalent service and quality of life improvements.

As this report will show, the playing field has been skewed in favor of TNCs to the detriment of the traditional taxicab and for-hire vehicle industry. The term “Leveling the Playing Field” (between TNCs and taxi companies) has developed into common parlance among the incumbent industry stakeholders, elected and appointed officials, the media, and academics when discussing the for-hire transportation industry. Transportation equity is a civil and human rights priority. Access to affordable and reliable transportation widens opportunity and is essential to addressing poverty, unemployment, and other equal opportunity goals such as access to good schools and health care services. However, current transportation spending programs do not equally benefit all communities and populations. And the negative effects of some transportation decisions— such as the disruption of low-income neighborhoods — are broadly felt and have long-lasting effects. Providing equal access to transportation means providing all individuals living in the United States with an equal opportunity to succeed.²

This new term of art seeks to address the uneven regulatory and financial resource competitive advantages that TNCs have over small businesses (i.e. the incumbent taxicab, for-hire vehicle and limousine industries), all of which are engaging in virtually the same exact regulated activity, albeit with different standards. In most jurisdictions, TNC are able to avoid licensing procedures and fees, commercial insurance costs, fingerprint based background checks, and a host of other requirements mandated for the taxicab and FHV industry. There are a variety of ways that a “level playing field” can be accomplished; with many jurisdictions nationwide implementing new legislation and many individuals looking to the courts for balance in the marketplace.

¹ <http://www.businessdictionary.com/definition/equity.html#ixzz4EI02sc2p>

² <http://www.civilrights.org/transportation/?referrer=https://www.google.com/>

In many jurisdictions across the United States, stakeholders from the traditional FHV industry have filed lawsuits against their local governments, challenging whether unequal regulatory schemes violate their right to equal protection under the laws. The Equal Protection Clause of the 14th amendment of the U.S. Constitution, as well as similar clauses in many state constitutions, prohibit states from denying any person within its jurisdiction equal protection of the laws.³ On a basic level, this requires that the government must treat similarly situated individuals in the same manner.

In an ongoing case, the Illinois Transportation Trade Association filed a lawsuit to challenge the TNCs ordinance in the City of Chicago.⁴ The taxi operators said the ordinance should be illegal because it violates their right to equal protection, as it unfairly holds the TNCs to a lesser regulatory standard than their competitors in the traditional taxi business.⁵ If equal protection lawsuits are successful, it would force jurisdictions to reconsider applying two different regulatory schemes for TNCs and traditional FHV, and in doing so, have the effect of leveling the playing field. The lack of equal standards across all for-hire transportation industries has led to externalities and inequities among those in competition with TNCs, and the members of the public who rely on for-hire transportation.

Moreover, an alarming result of the proliferation of TNCs is the undeniable adverse impact on people with disabilities, underserved communities, the environment, social responsibility, and the labor force of the so-called “on-demand sharing economy.” This report sets forth disturbing concerns of the unintended consequences for the accessibility and underserved communities due to the TNC business model, and demonstrates that the TNC template is nothing more than a privileged access model that operates to the detriment of those in most need of their services.

The methodology utilized in the report included: a look at the past and current climate of legislation and litigation, as well as the inherent shortcomings in the TNC business model, that has otherwise halted progress in achieving accessibility in public transportation for people with disabilities; statistical examination exposing the practice of TNC drivers not adequately servicing low-income, minority, rural, unbanked and technologically deprived communities; the effects that vehicle proliferation and surge pricing have had on carbon emissions and congestion; the social costs to taxpayers and governments resulting from TNC financial practices; and an overview of how the concept of the “sharing economy” does not, in fact, apply to TNCs despite their claims to the contrary.

As is fully explained in the report with concrete data and evidence, the following is a list of the unfortunate results and social consequences that continue to result from the continued proliferation and existence of TNCs:

³ See U.S. Const. Amend. XIV.

⁴ <http://cookcountyrecord.com/stories/510720143-judge-taxi-drivers-have-constitutional-beef-but-won-t-issue-injunction-regarding-city-regulation-of-uber-lyft>. (Accessed on July 12, 2016).

⁵ *Id.*

Wheelchair Accessibility Not a TNC Priority

- The proliferation of TNCs has greatly slowed, if not halted, progress being made to convert a large portion of taxicabs in New York City to wheelchair-accessible vehicles and creates challenges in jurisdictions throughout the United States and Canada;
- TNCs continue to argue that the Americans with Disabilities Act (“ADA”), a law designed to provide inclusiveness for all, does not apply to their operations in any way;
- TNC vehicles and drivers rarely have the capability to accommodate electric wheelchairs and scooters; and
- TNCs are not held to the same accessibility mandates as the traditional For Hire Vehicle industry.

Underserved, Low Income & Minority Communities Are Left at the Curb by TNCs

- One result of TNC “surge pricing” is that communities with limited or no TNC access, such as low-income and minority communities, may be “redlined” since drivers may choose not to operate in those areas;
- Rural communities, where low population density and a host of other factors disincentivize drivers from expanding service, will be largely excluded from TNC service;
- Unbanked and under-banked communities, in which individuals have little or no access to the financial institutions required to pay for TNCs, will be unable to access TNC services;
- Individuals without smartphone access, or who do not possess the technological expertise necessary to request TNC service, will also be unable to access TNC services; and
- A severe reduction in taxicab service, due to competition from TNCs, could exacerbate transportation disadvantages for those who do not have access to TNC services and had previously relied on taxi service.

TNCs Cause Traffic Congestion, Harm the Environment & Augment Negative Externalities

- TNC proliferation threatens cities’ efforts to reduce the number of personal motor vehicles on the road, setting back decades of transportation planning and policy aimed at mitigating congestion and pollution, and encouraging shared mobility and mobility management;
- Unregulated TNC growth could cause congestion and harmful environmental impacts through the proliferation of nitrogen oxides, fine particulate matter, volatile organic compounds, carbon monoxide, sulphur dioxide, greenhouse gases and air toxics;

- In the United States, vehicles are responsible for 27% of hydrocarbon emissions, 51% of carbon monoxide (CO) emissions, 20% of nitrogen oxide (NOx) emissions and 18% of carbon dioxide (CO₂) emissions;
- In the NYC FHV market, Uber’s reported for-hire vehicle numbers were the basis of a modest assumption of various parameters the cumulative impact of Uber and other app based companies’ growth in NYC’s environment for some context, which produces estimates that 1,590,146 pounds of CO₂ are generated daily;
- Congestion has resulted in losses to local businesses and government taxpayers impacted by it, with additional time and public funds spent on road repair, while labor force activity, business and government operations are negatively impacted by traffic jams and gridlock;
- Congestion is further exacerbated by TNCs’ usage of so-called “surge pricing” due to the incentive for all or most part-time on demand economy TNC vehicle drivers being fiscally rewarded by working already congested areas during peak business period (a/k/a rush hour in central business districts of urban environments);
- Urban areas are projected to continue growing at a rapid rate, and, as a result, policy makers must take into consideration how they will allow TNCs to continue to grow to avoid a “collision course” with environmental and sustainability policy; and
- Although TNCs and regulators have embraced the concept of “ridesharing” and TNCs have sought to capitalize on that term by promoting services such as UberPool and Lyft Line, the reality is that there is not much sharing going on—trip requests are generally one-to-one like other for-hire services.

TNCs Lack Social Corporate Responsibility & Ethics

- TNCs market themselves as socially responsible businesses when, in reality, they have built a highly sophisticated crafted web of tax avoidance depriving cities and nations out of hundreds of millions in tax revenue;
- Local taxicab and for-hire vehicle transportation providers are obliged to pay their local taxes, which increases their cost burden and forces them to charge higher fares than the TNCs are able to offer, putting the traditional industry at a competitive disadvantage for fulfilling its civic duty;⁶ and
- Without the advantage of a TNC’s tax structure, local taxicab and for-hire vehicle providers are forced out of business, further decreasing the tax revenue to the government.

⁶ In some cases, TNCs pass along the tax burden to drivers while keeping the non-taxed portion of the bulk of the fare.

Not Sharing in the Sharing Economy – The TNC Gig Worker and Economic Disadvantage

- The use of the term the “sharing economy” to define the services provided by TNCs has led to a policy divergence in how these services should be regulated;
- TNCs have utilized this definitional mismatch to proliferate their vehicles and drivers in many cities arguing that their service is different from the traditional for-hire services by augmenting the rideshare concept to meet their marketing strategy;
- The source of the definitional mismatch is a deliberate advocacy by TNCs and in part by the media which finds its genesis in the Napster peer-to-peer file sharing model;
- TNCs service is best described as an access economy, where these companies facilitate access to FHV service through their app based platform;
- The cost of the misconstrued sharing economy model is exhibited on the dwindling driver income, where TNCs are inappropriately using the independent contractor model to extract maximum value of relationship with driver leading to driver unrest and multiple litigations;
- TNCs unregulated expansion has also impacted the environment and the labor market with cities being engulfed with thousands of vehicles;
- The continued expansion strategy by TNCs and the reduction of minimum fares has meant that average driver income may be reduced significantly; and
- Driver turnaround and the majority of TNC drivers being part-time has created a driver pool that is overly represented by inexperience, with a direct negative consequence on safety and quality of service on the long run.

In order to address these growing concerns, stakeholder organizations and representatives must be aggressive and act quickly in communicating the data in this report to governmental decision-makers and the public at large. TNCs must end their questionable practices so that all can enjoy the benefits of public transportation without the escalating costs to taxpayers and the environment. Without a focused attention on these issues, history may prove that the TNC proliferation movement will leave this world worse off – especially for the disabled, poor and underserved – than it was before Uber became known in the transportation lexicon.

Despite the negative consequences of the transportation technology disruption movement initiated by TNCs, there is an opportunity at hand to not only solve these problems, but to help create a new regulatory and transportation paradigm from the ashes, a sort of shared-eco-multi-modal mobility Phoenix which could bring together all of the recommendations and observations in this report to engage in both short and long-term planning as well as immediate corrective actions. Legislators, regulators and other policymakers must work together with various stakeholders, including both new entrant technology companies and incumbent private transportation providers, accessibility, environmental and equity advocates, as well as regional planning organizations, to develop a long-term strategic mobility plan that incorporates real ride-sharing, leveling

the playing field once and for all by having equal licensing standards for TNCs and taxis/for-hire vehicles, multi-modal integration, engage in environmental studies on the growth of all vehicles, identify mitigating measures, promote safety incentives and standards for our roads, ensure equal access for persons with disabilities as well as a “liveable wage” for TNC drivers. The future could involve more silo planning, with various modes and sub-modes operating independently, using politics, lobbying and special interests to manipulate grass roots political opinion, with the effect of usurping professional urban transportation and mobility planners, or everyone can work together to find solutions that benefit all, or most, in a fair and equitable manner to encourage competition, better and less expensive service. It is up those reading this report to share it with the right people and take action, not sit on our hands while an opportunity passes us by and let those with vested business interests plan our transportation future to the detriment of our most vulnerable passengers and citizens.

I. Transportation Network Companies' Failure to Adequately Serve Passengers with Disabilities

Transportation Network Companies (“TNCs”) do not provide the same service to people with disabilities when compared to their service for those who are non-disabled. Any internet search of the terms “Uber” and “accessibility” reveals myriad news articles, blog entries, and litigation references supporting this proposition. Whether it be through litigation, legislation, or the flaws in the TNC business model, the issue of whether TNCs can or will provide equal service to the disabled community is one that continues to be fought vigorously by these parties.

The below analysis of the TNCs’ widespread failure to provide equivalent service to people with disabilities will include a focus on substantial accessibility progress that has now been halted by the proliferation of the TNCs; litigation by disability stakeholders such as advocates for people with disabilities that attempts to hold TNCs liable for providing equivalent service; legislation enacted (or not) that further alienates people with disabilities; and an examination of how the TNC business model affects the plight of people with disabilities who desire access to TNC service.

A. Accessibility Progress Halted

Although this report will provide information regarding initiatives from around the United States and beyond, arguably the most relevant case example regarding how the proliferation of TNCs has disrupted much of the hard-fought progress made in providing wheelchair-accessible taxicab and for-hire transportation can be found in New York City, which contains over 60% of the passenger car service industry in North America, and over 30% of the industry worldwide.⁷ An analysis of New York City’s current progressive approach to accessibility has its roots in local human rights laws in addition to developments at the federal level.

The United States federal government enacted laws such as Section 504 of the Rehabilitation Act of 1973⁸ and the Americans With Disabilities Act (the “ADA”) which prohibit discrimination on the basis of disability in, among other areas, transportation, and which require government-sponsored/subsidized transportation to provide accessible transportation for all U.S. residents, including for individuals with disabilities. The United States Department of Transportation (“USDOT”), which contributed to the language in the ADA, acknowledges that accessible taxicab service is important to individuals with disabilities, and encouraged taxi fleets to offer accessible cabs, but stopped short of mandating a requirement for taxicabs to be fully accessible, since it concluded that it would be unreasonable to enforce such a requirement.⁹ Mass transportation entities are required to make efforts to purchase or lease wheelchair-accessible vehicles, although this mandate does not apply to private entities providing

⁷ INTRODUCTION: *A brief summary of the taxi and for-hire industry in the United States and New York City*. TLC Magazine, July 2014, Vol. XXIII, No. 7. http://tlc-mag.com/TLC_home.html.

⁸ Section 504, *Rehabilitation Act of 1973*. United States Department of Labor. <http://www.dol.gov/oasam/regs/statutes/sec504.htm>.

⁹ Preamble—*Transportation for Individuals With Disabilities* [September 6, 1991]. US Department of Transportation Federal Transit Administration. http://www.fta.dot.gov/12876_4058.html

taxi service.¹⁰ However, the ADA is not completely silent on taxicab service for individuals with disabilities, and does, in fact, specifically address the issue of private entities that provide taxicab service. In this case, a passenger cannot be discriminated against due to his or her disability and must be provided this service at the same cost and without any refusal by the driver to stow mobility devices.¹¹ This is also true for private entities that provide other transportation services, such as limousines and car services.¹²

Although taxi drivers are not required to purchase wheelchair accessible vehicles, the ADA provides that when a vehicle is purchased for use as a taxicab that is not considered an automobile (i.e. a minivan), the vehicle must be accessible unless the provider can demonstrate that it is providing equivalent service under the “Equivalent Service Standard,” which states that providers of taxi service will be in compliance with the ADA if individuals with disabilities are provided the following service characteristics in an equivalent matter to individuals who are not considered disabled:

Response time;

Fares;

Geographic area of service;

Hours and days of service;

Availability of information;

Reservations capability;

Any constraints on capacity or service availability; and

*Restrictions or priorities based on trip purpose.*¹³

As of October 2013, New York City’s taxi fleet consisted of 13,237 vehicles,¹⁴ of which only 231 taxicabs were wheelchair-accessible.¹⁵ However, twenty-two (22) months earlier in December 2011, Governor Andrew M. Cuomo signed into law the Street Hail Livery Law (the “SHLL,” upheld by the New York State Court of Appeals on June 6, 2013), which sought to address two key issues: (1) the lack of accessible vehicles for City residents and non-residents with disabilities, and (2) the lack of availability of yellow cabs in the four (4) boroughs outside Manhattan (or the “outer boroughs”), as well as the areas of Manhattan outside of its Central Business District (“CBD”). The law authorizes the TLC to auction 2,000 yellow taxicab medallions for accessible taxicabs, as well as 18,000 “green” taxicabs, 3,600 (or 20%) of which must be accessible, and which are permitted to pick-up street hails in all boroughs.

The SHLL vehicle outer borough permits are to be sold over the course of three (3) years, as follows: 6,000 permits each year to existing livery vehicle owners and/or

¹⁰ Part 37—Transportation Services for Individuals With Disabilities. US Department of Transportation Federal Transit Administration. http://www.fta.dot.gov/12876_3906.html.

¹¹ *Id.*

¹² 42 U.S.C. §12184: US Code – Section 12184: Prohibition of discrimination in specified public transportation services provided by private entities. <http://codes.lp.findlaw.com/uscode/42/126/III/12184>.

¹³ Part 37—Transportation Services for Individuals With Disabilities. US Department of Transportation Federal Transit Administration. http://www.fta.dot.gov/12876_3906.html.

¹⁴ Notice of Completion of the Final Environmental Impact Statement. New York City Taxi & Limousine Commission, October 24, 2013. http://www.nyc.gov/html/tlc/downloads/pdf/feis_notice_of_completion.pdf.

¹⁵ Goulden, Steven. Notice of Public Hearing and Opportunity to Comment on Proposed Rules. New York City Taxi & Limousine Commission, December 18, 2013. http://www.nyc.gov/html/tlc/downloads/pdf/tlc_proposed_accessibility_rules_capa_certified_121913.pdf.

drivers who have been in good standing with the New York City Taxi & Limousine Commission (the “TLC”) for one (1) year. Further, although the SHLL requires that a minimum of twenty percent (20%) of all outer borough livery vehicles be wheelchair accessible, the TLC has stated in its long term disability plan that this percentage will reach 50%, or 9,000 vehicles by 2020.¹⁶ Purchasers of SHLL licenses will also be eligible to apply for grants up to \$15,000 to either purchase a wheelchair accessible vehicle, or to retrofit their existing vehicle to make it wheelchair accessible.¹⁷

On April 30, 2014, the TLC adopted rules that provide that 50% of the City’s yellow taxicab fleet be wheelchair accessible by 2020¹⁸ pursuant to a settlement brought about from litigation by disability advocates against the City for lack of accessibility in the City’s yellow taxicab fleet.¹⁹

Progress in providing accessibility in the taxicab industry has been made elsewhere. For example, in Philadelphia, all 150 medallions to be sold extra over the next ten (10) years must be accessible,²⁰ and a rule has been proposed that all taxicabs of retirement age are to be replaced by an accessible taxicab with an ultimate goal of a 100% accessible fleet by 2024.²¹

In San Francisco, there is an incentive program in its paratransit program that provides taxicab drivers with: i) \$10 for each wheelchair accessible taxicab trip used for a paratransit trip; ii) a \$10 per trip credit off the cost of a medallion down payment if 10 or more paratransit trips through wheelchair-accessible taxicab are made; and iii) an airport short line pass upon completion of two (2) wheelchair accessible taxicab paratransit trips per month in outlying neighborhoods.²²

In Chicago, anyone who owns 20 or more taxicab medallions must have 5% of that fleet be wheelchair accessible, and by 2018, anyone who owns 10 taxicab medallions must have at least one (1) wheelchair accessible vehicle.²³ There is also a wide-ranging incentive program, including awarding its medallion owners \$15,000-\$20,000 for accessible conversions or purpose built vehicles.²⁴

Other progress within the United States includes accessibility requirements in Miami (3% of its taxicab fleet must be accessible and must be connected to a fixed base call center operating 24 hours a day, 365 days per year)²⁵ and Washington, DC (all taxicab companies with 20 or more vehicles must dedicate 20% of their fleet to wheelchair-accessible vehicles by 2018).²⁶

¹⁶ <http://www.nydailynews.com/new-york/nyc-taxis-accessible-tlc-plan-article-1.1817161>.

¹⁷ *New York State Assembly Bill A8691A-2011*.

http://assembly.state.ny.us/leg/?default_fld=&bn=A08691&term=2011&Summary=Y&Actions=Y&Text=Y.

¹⁸ *Notice of Promulgation of Rules*. New York City Taxi and Limousine Commission.

¹⁹ http://www.nyc.gov/html/tlc/downloads/pdf/newly_passed_rule_accessibility_and_surcharge.pdf.

²⁰ *Noel v. New York City Taxi & Limousine Comm’n*, 837 F. Supp. 2d 268 (S.D.N.Y. 2011).

²¹ <http://www.philapark.org/2014/05/ppa-committed-to-wheelchair-accessible-taxicabs/>

²² http://articles.philly.com/2015-07-04/news/64070927_1_cabs-wheelchair-accessible-vehicles-ppa

²³ <https://www.sfmta.com/sites/default/files/PCC%20minutes%20March%202012.pdf>

²⁴ <http://www.cityofchicago.org/city/en/depts/bacp/provdrs/vehic/news/2014/sep/wheelchairaccessibletaxicabs.html>

²⁵ http://www.cityofchicago.org/city/en/depts/mopd/provdrs/advoc/news/2016/april/Financial_Incentives_to_Increase_Number_of_Wheelchair-AccessibleTaxicabs.html

²⁶ <http://www.miamidade.gov/business/taxicab-wheelchair-accessible.asp>

²⁷ http://dfhv.dc.gov/sites/default/files/dc/sites/dc%20taxi/page_content/attachments/DC%20Taxicab%20Comission%20Disability%20Advisory%20Committee%20Comprehensive%20Report%20022014%20FINAL%20w%20Addendum.pdf

Canada has also embraced accessibility in its taxicab industry. In British Columbia, its stated goal is to have wheelchair accessible taxicabs in fleets containing eight (8) or more vehicles.²⁷ Ontario requires all municipalities to consult with their municipal accessibility advisory committee to determine the proportion of on-demand accessible taxicabs required in the community,²⁸ and the city of Toronto has mandated a fully accessible taxicab fleet by 2024.²⁹ Ottawa and Vancouver have steadily increased their accessible taxicab requirements resulting in both having 16% of their taxicab fleets wheelchair-accessible.³⁰

Despite the above-described progress in transportation accessibility exhibited for taxicabs and the for-hire vehicle industry, the proliferation of TNCs (whether actually operating as a TNC or not) has begun to display signs that this progress may be halted. For example, in New York City, only 350 of the 2,000 yellow accessible medallions authorized in the SHLL and only 1,800 of the 3,600 accessible permits for the outer borough vehicle permits have been sold, and demand and policy decisions may have been affected by the unprecedented growth of Uber.³¹ Although the New York City model is not a pure “TNC” model, New York City is an example of how a statute may be enacted to increase accessibility, yet the desired outcome is in jeopardy through the unchecked growth of the TNCs.

Further, Uber, for example, does not have a viable and real solution for motorized wheelchair users (or those who cannot be transferred from their wheelchairs to the car seat), in NYC or elsewhere, due to its business model, which, like all TNCs, is as follows: a TNC such as Uber provides a smartphone application platform for passengers to connect with independent contractor drivers who use their own vehicles in order to coordinate transportation from a place of origin to a desired location. Uber will also facilitate an electronic payment for the transaction, but does not allow for cash payments in the vast majority of cities it operates in. Electronic payments are exclusively accepted, and drivers are not capable of altering the Uber-dictated fare charged to the passengers, a percentage of which is collected by Uber with the remainder of the fare deposited in the driver’s bank account.

An inherent problem with the TNC business model, as per the issue of providing accessible transportation for people with disabilities, especially those who use motorized wheelchairs or are otherwise unable to be transferred from their wheelchair to the car seat, rests with the “drivers who use their own vehicles.” Unfortunately, there are so few TNC drivers who operate a wheelchair-accessible vehicle, and even those who do so are simply not properly trained to deal with the needs of a passenger with a disability – including, but not limited to, proper safety precautions with loading, unloading, and securing the passenger; maintenance of the equipment within the vehicle; and disability etiquette (it may be of concern that a wheelchair-user who would like to participate as an Uber driver would have some difficulty with the physical demands of assisting a wheelchair-user who is a passenger). Indeed, in a post on its own website entitled “Greater accessibility for riders and drivers,” Uber, while making the general claim that

²⁷ http://www.th.gov.bc.ca/ptb/operational_policies.htm#IV_1

²⁸ <https://www.ontario.ca/laws/regulation/r11191#BK35>

²⁹ <http://www.toronto.ca/legdocs/mmis/2015/di/bgrd/backgroundfile-79596.pdf>

³⁰ http://documents.ottawa.ca/sites/documents.ottawa.ca/files/documents/otlrsr_accessibility_en.pdf

³¹ <http://www.amny.com/transit/only-350-of-2-000-wheelchair-accessible-cab-medallions-have-been-sold-letter-1.10963759>

“all drivers on the Uber platform are able to accommodate folding wheelchairs,” makes no further promise regarding those who use motorized wheelchairs or who otherwise cannot be transferred from the wheelchair to the car seat.³²

Further, in the seven (7) cities that Uber has entered into a pilot program utilizing its uberWAV or uberASSIST – app options to provide drivers who are “knowledgeable of accessibility needs” – only two (2) cities, Chicago³³ and San Diego,³⁴ claim that vehicles with ramps or hydraulic lifts are available for passengers who require them. Additionally, a closer look at the uberWAV option reveals that Uber itself does not provide wheelchair-accessible vehicles. In fact, it farms out the trips to operators of existing wheelchair-accessible green outer borough taxicabs in New York City,³⁵ wheelchair-accessible taxicabs in Chicago³⁶ and paratransit vans in Philadelphia.³⁷

The TNC business model further challenges the regulations that face the traditional taxicab and for-hire vehicle industry, creating a disproportionate accountability mechanism between this industry and TNCs. For example, as stated above, New York City’s taxicab industry is undergoing a mandated sea change whereby 50% of its fleet is to be wheelchair accessible by 2020, a goal that is being accomplished through a forced lottery for the conversion of medallions to require the operation of a wheelchair-accessible vehicle.³⁸ New York City’s licensed for-hire vehicle bases, including licensed bases required of those companies operating as TNCs elsewhere, must have the capability to dispatch a wheelchair-accessible vehicle.³⁹ By and large, TNCs in other jurisdictions, where the TNC model is fully utilized, are not subject to these requirements.

Despite the progress that has been made in accessibility in the United States and Canada, the proliferation of TNCs and their increasing popularity threatens to derail this progress, as exhibited by the statutory accessibility mandates in New York City that are now threatened to actually become a reality. This trend that could repeat itself in the mandates described above in other jurisdictions within the United States and Canada.

The open question is how TNCs will address concerns from the members of the disabled community and offer their own wheelchair-accessible vehicles. One indication can be found in their settlement with Seattle, which allowed the legal proliferation of TNCs in exchange for, among other things, a \$0.10 surcharge on every trip to provide funding wheelchair-accessible taxicabs.⁴⁰ This follows a similar solution in New York City that applies a \$0.30 surcharge on each taxicab trip that is ostensibly funneled into an account that funds increased accessibility in the City’s taxicab and for-hire vehicle industry⁴¹ (albeit not otherwise funded by TNCs). However, throwing money at the problem, by TNCs even paying for wheelchair accessible service, is not the same for persons with disabilities, as these individuals would like to take TNCs as well.

³² <https://newsroom.uber.com/greater-accessibility/>.

³³ <https://newsroom.uber.com/us-illinois/uberaccess-expanding-transportation-options/>.

³⁴ <https://newsroom.uber.com/us-california/uberaccess-sd/>.

³⁵ <https://newsroom.uber.com/us-new-york/wheelchair-accessible-rides-with-uberwav/>.

³⁶ <https://newsroom.uber.com/us-illinois/uberaccess-expanding-transportation-options/>.

³⁷ <https://newsroom.uber.com/us-new-york/wheelchair-accessible-rides-with-uberwav/>.

³⁸ http://www.nyc.gov/html/tlc/downloads/pdf/newly_passed_rule_accessibility_and_surcharge.pdf.

³⁹ http://www.nyc.gov/html/tlc/html/faq/faq_access_veh.shtml.

⁴⁰ <http://www.geekwire.com/2014/seattle-legalizes-uber-lyft-operate-without-caps/>.

⁴¹ http://www.nyc.gov/html/tlc/downloads/pdf/newly_passed_rule_accessibility_and_surcharge.pdf.

Equivalent service applies on a per company basis, and the best solution is not to palm off responsibility to other related industries with different fare models and regulatory responsibilities.

B. Litigation Against TNCs by Disability Advocates

On November 12, 2014, the California chapter of the National Federation of the Blind (“NFB”), a not-for-profit organization dedicated to improving the quality of life of those who are blind, filed its First Amended Complaint (the “Complaint”) in the United States District Court, Northern District of California, against Uber (a case entitled *National Federation for the Blind v. Uber Technologies, Inc.*), alleging: 1) violation of Title III of the ADA; 2) violation of the California Unruh Civil Rights Act (“UCRA”); and 3) violation of the California Disabled Persons Act (“CDPA”), as well as a request for declaratory relief.

The outcome of this case could have had far-reaching consequences for the ability of Uber to operate in other jurisdictions. NFB alleged a violation of Title III of the ADA, which, *inter alia*, prohibits discrimination on the basis of disability: 1) by owners of places of public accommodation (entities that are open to, and used by, the public);⁴² and 2) in the full and equal enjoyment of public transportation services provided by a private entity that is “primarily engaged in the business of transporting people and whose operations affect commerce.”⁴³ NFB also alleged that Uber violated Title III of the ADA by its failure to make reasonable modifications in its policies, practices or procedures when such modifications are necessary to afford its services to individuals with disabilities.⁴⁴

The U.S. Department of Justice filed a Statement of Interest in this matter on December 23, 2014,⁴⁵ addressing the alleged ADA violations by Uber and its statement in a Motion to Dismiss stating that the Complaint should be dismissed “to the extent it is based on the allegation that Uber’s app or website constitutes a place of public accommodation or that (Uber) own(s), lease(s) or operate(s) a place of public accommodation under the ADA.” To wit, the United States government argued that it was irrelevant whether Uber is a “public accommodation” or not, as Uber’s liability fell under NFB’s allegation that Uber is discriminating against people with disabilities by preventing them from the full and equal enjoyment of public transportation services provided by a private entity that is “primarily engaged in the business of transporting people and whose operations affect commerce”⁴⁶ and that does not have to be considered a “public accommodation.” This was also explained by the U.S. Department of Justice that the applicable section of Title III applied to private entities primarily engaged in the business of transporting people that provide “demand responsive service,” which is defined as “any system of providing transportation of individuals by a vehicle, other than...a fixed route system.”⁴⁷

⁴² 42 U.S.C. §12182(a).

⁴³ 42 U.S.C. §12184(a).

⁴⁴ 42 U.S.C. §12182(b)(2)(a)(ii); 42 U.S.C. §12184(b)(2)(A).

⁴⁵ https://www.ada.gov/briefs/uber_soi.pdf

⁴⁶ 42 U.S.C. §12184(a).

⁴⁷ 42 U.S.C. §12181(3).

Additionally, the U.S. Department of Justice explained its rationale that Uber was liable for ADA violations because the US Department of Transportation's ("DOT") regulations (which incorporate the tenets of the ADA) state that to "operate" a demand responsive service includes "the provision of transportation services by the private entity itself or by a person under a contractual or other arrangement or relationship with the entity."⁴⁸ Further, the DOT regulations specifically state that these entities "shall permit service animals to accompany individuals with disabilities in vehicles."⁴⁹

The parties in *National Federation for the Blind v. Uber Technologies, Inc.* entered into a settlement before the court could rule, which, while providing some relief for passengers who use guide dogs, could otherwise have been the premier landmark case potentially mandating that TNCs provide accessibility for all people with disabilities.⁵⁰

There is also litigation pending in federal court in Texas, entitled *Salovitz v. Uber Technologies, Inc.*, whereby a wheelchair-user is suing Uber for failing to provide a wheelchair-accessible vehicle, thus "den(ying) Plaintiff and others similarly situated, because of their disability, the opportunity to participate in or benefit from a good, service, facility, or accommodation that is equal to that afforded other individuals."⁵¹ Further, in New York City, a disability rights advocate has filed a complaint with the New York City Commission on Human Rights against Uber also accusing it of discriminating against people who use motorized wheelchairs, and alleging that the uberWAV platform is not a "reasonable accommodation" because it is both difficult to find in the Uber app and charges an extra \$2.00 booking fee.⁵² Each of these lawsuits may lead to a ruling that holds TNCs accountable for providing wheelchair-accessible vehicles and equal service to people with disabilities.

C. TNC Legislation Further Alienating Passengers with Disabilities

While people with disabilities continue to fight in the courtroom, they have been forced to open a second front within the confines of legislation being passed into law, or not, around the country that allows TNCs to operate while avoiding an accessibility mandate. For example, just months ago, the New York City Council proposed five (5) bills purporting to regulate the for-hire vehicle industry, including entities that use "any website, smartphone application, software program accessed through an electronic device, or similar publically-available, passenger-facing booking tool."⁵³ To the consternation and outrage of disability advocates, none of the legislative proposals addressed the issue of mandating an accessibility requirement.⁵⁴ Unfortunately, this lack of action mirrors the lack of legislative progress made in terms of mandating TNCs provide wheelchair accessible vehicles. For example, some municipalities, such as

⁴⁸ 49 C.F.R. §37.3.

⁴⁹ 49 C.F.R. §37.167(d).

⁵⁰ <https://nfb.org/groundbreaking-settlement-end-discrimination-against-blind-uber-riders-who-use-guide-dogs>.

⁵¹ <http://www.leagle.com/decision/ln%20FDCO%2020141017C40/SALOVITZ%20v.%20UBER%20TECHNOLOGIES,%20INC>

⁵² https://www.buzzfeed.com/johanabhuiyan/disability-rights-advocate-files-discrimination-complaint-ag?utm_term=.ieb5D20k0#.dijqKQ4Q

⁵³ <http://legistar.council.nyc.gov/LegislationDetail.aspx?ID=2576131&GUID=C503B21D-F38E-47CA-AC4F-6BB21D575035>

⁵⁴ <http://www.nydailynews.com/new-york/disability-advocates-mad-pols-nyc-cab-regulations-article-1.2546966>.

Portland, Oregon⁵⁵ and Minneapolis,⁵⁶ allow TNCs to simply contract with a permitted operator of wheelchair accessible private for-hire vehicles (thus permitting a farming out of the mandate), while others, such as Austin⁵⁷ and Seattle,⁵⁸ have simply decided that TNCs should be required to pay a surcharge to be put in a general “accessibility fund” in order for others to achieve some kind of vague accessibility mandate. These so-called “solutions,” involving TNCs simply “passing the buck” on providing accessible service, simply do not mirror the many accessibility mandates that exist for the traditional for-hire industry.

D. Conclusions

The proliferation of TNCs has greatly slowed, and threatens to halt, actual progress being made to provide wheelchair-accessible vehicles in the for-hire industry throughout the United States and Canada, in the following ways:

- The proliferation of TNCs has greatly slowed, if not halted, progress being made to convert a large portion of taxicabs in New York City to wheelchair-accessible vehicles and creates challenges in jurisdictions throughout the United States and Canada;
- TNCs continue to argue that the Americans with Disabilities Act (“ADA”), a law designed to provide inclusiveness for all, does not apply to their operations in any way;
- TNC vehicles and drivers rarely have the capability to accommodate electric wheelchairs and scooters; and
- TNCs are, by and large, not held to the same accessibility mandates as the traditional For Hire Vehicle industry, and are allowed to either farm out accessibility requirements or throw money at the problem by paying into a fund that others would utilize to provide accessibility for passengers who require it.

⁵⁵ https://www.portlandoregon.gov/citycode/?c=28593#cid_562752

⁵⁶ <http://www.ci.minneapolis.mn.us/www/groups/public/@regservices/documents/webcontent/wcms1p-129014.pdf>

⁵⁷ <http://www.austintexas.gov/edims/document.cfm?id=219353>

⁵⁸ <http://www.seattle.gov/business-regulations/taxis-for-hires-and-tncs/transportation-network-companies/tnc-companies>

II. The Business Model of TNCs: Hiding Data and “Surge Price”

The pricing model that Uber and most other TNCs implement has been referred to as “dynamic pricing” or “surge pricing.” Surge pricing refers to TNCs increasing their prices in certain areas, or at specific times, in response to local demand. Surge pricing has resulted in nightmares for many consumers who unknowingly agree to pay exorbitant prices for relatively short rides, and then only notice the steep charges until after the ride is complete. This occurs during peak demand times, with the greatest surges often following large events and holiday celebrations. For example, every year on New Year’s Day a host of disgruntled consumers shares their stories of excessive surge price charges from the night before. Customer receipts show numerous examples in which the “surge” increased the rate to 9.9 times the normal fare, and what would have normally cost a rider \$20.71, resulted in a \$205.03 charge for the roughly 20 minute trip.⁵⁹

In theory, surge pricing takes place when demand for service exceeds the number of available vehicles. TNCs argue that the higher fares incentivize drivers to providing trips when there are more ride requests than drivers looking for fares by encouraging drivers to be available in areas where they typically would not have been otherwise. Predictably, fares that surge to multiple times the average price can have the effect of pricing out certain population segments, resulting in drivers choosing not to operate in certain areas altogether, a practice known as redlining.⁶⁰ In other words, drivers may refuse to operate in communities where there is less of an opportunity to earn large fares, and thus discouraging drivers from providing services in what have traditionally been underserved areas. Because TNCs strictly control their data -- and much of the data they release to the public portrays them in a positive light -- it is difficult to definitively determine the net effects of surge pricing on the wider transportation industry, its consumers and stakeholders.

In January 2015, UberX announced that it would start sharing anonymized trip data with the City of Boston on a quarterly basis as part of the company’s new national data-sharing policy.⁶¹ This information could have potentially been very helpful in analyzing the net effects of surge pricing in the Boston community.⁶² The goal of the agreement was to give Mayor Martin J. Walsh’s administration unique insight into how people get around the City of Boston, and assist in the development of the City’s transportation policy and planning goals.⁶³ Unfortunately, Uber’s failure to provide useful data has made it difficult to conduct any worthwhile analysis.⁶⁴ Uber agreed to hand over all trip data on a quarterly basis, but in addition to failing to cooperate at times, the data handed over does not show specifically where riders’ trips began or ended.⁶⁵ Instead, the pick-up and drop-off locations only provide the zip codes, not the actual

⁵⁹ https://www.buzzfeed.com/stephaniemcneal/uber-hangover?utm_term=.ehx3W62jqM#.woOg8a4yKN.

⁶⁰ “Redlining” refers to the formal or informal practice of establishing geographical borders where service will not be offered.

⁶¹ Badger, E. (2015, January 13). Uber offers cities an olive branch: your valuable trip data. *The Washington Post*.

⁶² <https://www.boston.com/news/business/2016/06/16/bostons-uber-partnership-has-not-lived-up-to-promise>.

⁶³ *Id.*

⁶⁴ *Id.*

⁶⁵ Note: Emails show that the city agreed to the zip code limitations as the agreement was drafted in early 2015. <https://www.boston.com/news/business/2016/06/16/bostons-uber-partnership-has-not-lived-up-to-promise>.

address.⁶⁶ Because Boston’s zip code areas are too large, the current data sets do not allow for analysis of how proximity to public transit affects Uber usage, how a new building affects transportation patterns, or how service in particular neighbors has been effected by surge pricing.⁶⁷

On December 11, 2015, the Transportation Research Board officially released its report entitled “Between Public and Private Mobility – Examining the Rise of Technology-Enabled Services,” which takes a deep dive in analyzing the effects of the proliferation of TNCs and will be cited throughout this report.⁶⁸ As mentioned in the report by the Transportation Research Board, the data and research currently available regarding TNC services, while increasing, is far less developed than is the case for other modes of transportation.⁶⁹ This is due, in part, to the fact that TNCs have been growing at a rapid pace, and, in doing so, sharing relatively little information with the public. Given the fast pace of TNC development and expansion, coupled with the lack of reliable public datasets, this analysis of TNCs’ impact on underserved communities draws upon news articles and blogs from reputable sources for context and additional information.

A. Underserved Communities

Innovative mobility options, such as TNCs, while having the potential to increase access to transportation services, may also leave those who are already transportation disadvantaged even further behind.⁷⁰ Individuals who cannot utilize these new services due to affordability or lack of proximity to areas served will be relatively worse off. Furthermore, the rise of TNCs may reduce the availability of some existing services, potentially leaving those who cannot access or afford TNCs without the transportation services they previously relied on, thus, again, making the transportation disadvantage to an individual even worse than before the arrival of TNCs.

In analyzing the TNCs’ impact on underserved communities, the following subsections will focus on communities that have been traditionally underserved (low-income, minority, rural communities), and those whose access has been restricted by the TNC business model (requiring the use of a smartphone and access to banking facilities).

The underserved communities our analysis will focus on include: (i) Low-Income Communities; (ii) Minority Communities; (iii) Unbanked Populations;⁷¹ (iv) People Without Smartphone Access; and (v) Rural Communities.

i. Low-income communities

Low-income communities were often already disproportionately transportation disadvantaged before the advent of TNCs, which has only appeared to exacerbate the issue. A study by the Brookings Institute found that only one quarter (25%) of low and

⁶⁶ *Id.*

⁶⁷ *Id.*

⁶⁸ Between Public and Private Mobility: Examining the Rise of Technology-Enabled Transportation Services, Special Report 319, The National Academies of Sciences, Engineering, and Medicine, page 6, 2015.
< <http://onlinepubs.trb.org/onlinepubs/sr/sr319.pdf> >.

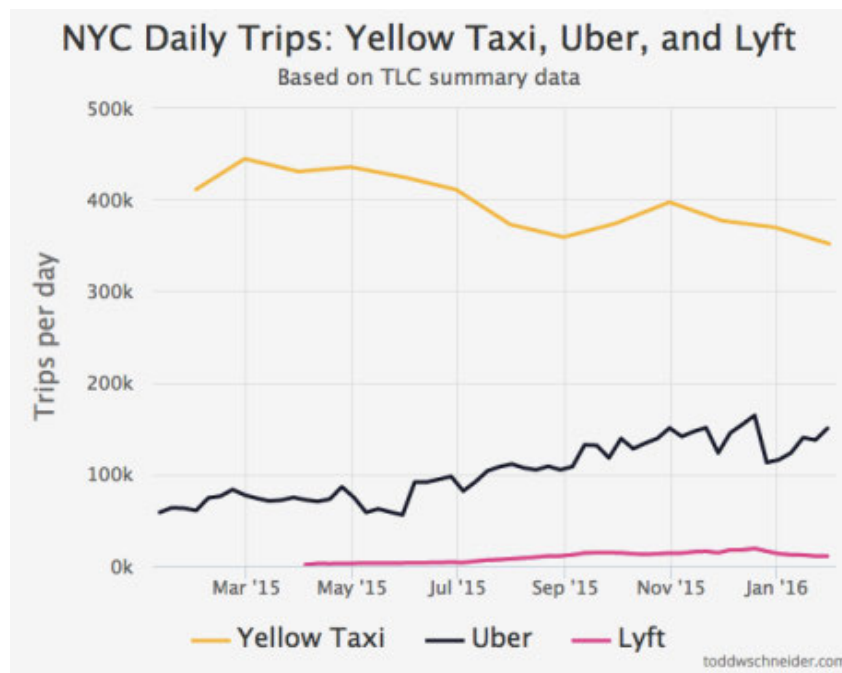
⁶⁹ *Id.*

⁷⁰ *Id.* at page 81.

⁷¹ The term “unbanked” refers to people who lack credit or bank accounts.

moderate-skilled jobs in America are reachable by public transit within 90 minutes.⁷² This situation leaves those individuals with the option to take public transit over a very long commute; or to adopt a more costly but efficient means of travel, such as by car. Although personal vehicles provide the greatest ease and convenience of travel, the cost burden of owning vehicles is significant, especially for lower-income households.⁷³ For those who are unable to afford a personal vehicle, taxicabs and TNCs are commonly used to fill their transportation needs.⁷⁴ However, as TNCs continue to grow rapidly and infiltrate and disrupt the regulated for-hire industry in markets all over the world, traditional transportation services—particularly taxicabs—have been dramatically impacted.

Many cities with a significant TNC presence have already seen a stark decline in the number of taxicab trips, posing many challenges for transportation and regulatory policy makers. *For example, since ride-hailing services began operating in Los Angeles three years ago, the number of taxicab trips arranged in advance has fallen by 42%, according to city data, and the total number of trips has plummeted by nearly a third.*⁷⁵ In New York City, data from the TLC reporting for-hire vehicle usage demonstrates that yellow taxicabs provided 60,000 fewer trips per day in January of 2016, than they did in the same period in 2015.⁷⁶ Uber's affiliated vehicles, by comparison, made 70,000 more trips per day in January 2016 than they had the previous January, as reflected in the below chart:⁷⁷



⁷² http://www.brookings.edu/~media/research/files/reports/2011/5/12-jobs-and-transit/0512_jobs_transit.pdf.

⁷³ Between Public and Private Mobility: Examining the Rise of Technology-Enabled Transportation Services, Special Report 319, The National Academies of Sciences, Engineering, and Medicine, page 87-89, 2015.

< <http://onlinepubs.trb.org/onlinepubs/sr/sr319.pdf> >

⁷⁴ *Id.*

⁷⁵ <http://touch.latimes.com/#section/-1/article/p2p-86538324/>.

⁷⁶ <https://www.dnainfo.com/new-york/20160406/kips-bay/uber-is-eating-up-all-rides-yellow-cabs-are-losing-study-says>.

⁷⁷ *Id.*

According to a study by Uber's head of policy research, Jonathan Hall, and Professor Alan Kreuger of Princeton University, 42% of UberX drivers are working, at most, 15 hours per week, and another 34% are working 16 to 34 hours per week.⁷⁸ The average taxi medallion, often used by multiple drivers who lease the taxicab, is in service 29 days per month, 14 hours per day.⁷⁹ This indicates that while taxicabs are being displaced because of a decline in ridership, the TNC drivers who are attempting to substitute for taxicab service are picking and choosing when they drive, often electing to work during peak price periods. As stated above, the likely result is a service gap in areas and communities that drivers view as potentially less profitable.

A decline in taxicab service in places where underserved communities rely on taxicabs for lifeline services and job stability could very well result in severe consequences and greater transportation disadvantage.⁸⁰ If TNCs do not provide service in these communities, and competition continues to squeeze out traditional taxicab services, underserved communities could be forced to endure even greater transportation hardships.

Some have questioned whether TNCs, such as Uber (and their drivers) have, in fact, taken up the practice of redlining, or excluding, certain geographical areas from their services.⁸¹ A study commissioned by Uber reported that its UberX rides are available in 21 low-income neighborhoods at “less than half the price of taxis and arrive in less than half the time.”⁸²

The findings are from a sample of low-income neighborhoods in only one large city, Los Angeles, and should be viewed as preliminary and not definitive.⁸³ This type of study requires independent replication in other cities and different types of low-income neighborhoods to produce credible findings about the relative geography, service quality, and price of TNC and taxicab service. Further, some familiar with the for-hire transportation industry questioned both the authenticity of the data, as well as the analysis, as Uber has the resources necessary obscure any unfavorable results.

Additionally, while the study shows that Uber services are conceivably available in low-income neighborhoods, the data does not indicate whether Uber's services are actually utilized in the very neighborhoods analyzed.⁸⁴ Mark Kleiman, co-author of the study and Chairman of the policy analysis firm Back of the Envelope Calculations (“BOTEC”), admitted the utilization is “not very high” in those 21 low-income neighborhoods.⁸⁵ While he also stated that his researchers did not see any evidence of redlining in the 21 neighborhoods under study, he admitted there may have been redlining in other, possibly dangerous, areas that were no-go zones in the study.⁸⁶ For instance, although the neighborhoods in the study had average incomes of \$50,000 or

⁷⁸ <http://dataspace.princeton.edu/jspui/handle/88435/dsp010z708z67d>.

⁷⁹ *Id.*

⁸⁰ Between Public and Private Mobility: Examining the Rise of Technology-Enabled Transportation Services, Special Report 319, The National Academies of Sciences, Engineering, and Medicine, page 1, 2015.
< <http://onlinepubs.trb.org/onlinepubs/sr/sr319.pdf> >.

⁸¹ <http://m.cartalk.com/blogs/do-uber-and-lyft-redline-low-income-communities>.

⁸² *Id.*

⁸³ *Id.*

⁸⁴ *Id.*

⁸⁵ *Id.*

⁸⁶ *Id.*

less, the neighborhoods selected were not those with the highest crime rates.⁸⁷ The simple fact that Uber paid for a study to investigate its impact and availability in low-income areas, and then redlined certain areas from being considered in the study, is revealing; if certain dangerous areas were intentionally excluded from the study, the chances that Uber would encourage a driver to provide service in those areas, or a driver voluntarily doing so, seems unlikely.

TNC drivers determine their own service hours and the areas in which they will operate, and are incentivized by Uber's business model to service the safest and wealthiest areas in which ride requests are made. A 2014 study by Renne and Bennett found that taxicab trips by the lowest-income households in urban areas are the shortest compared with those of other income groups, averaging just 4.3 miles.⁸⁸ TNC drivers, who have an opportunity to increase their wages through longer trips and surge pricing, may not voluntarily provide services to low-income communities where they would likely earn less. TNC service in low-income communities is not monitored as carefully as it tends to be for taxicabs, and some are concerned that Uber's dominance may sap the political will of the public to improve taxicab service as they struggle.⁸⁹ If this trend continues, it will likely lead to substantially reduced and lower quality services for those who either do not have access (for any of the reasons discussed below) or cannot afford to use TNCs, and the expansion of luxury options for those who can.⁹⁰

Without additional government oversight and consumer protection, there is little evidence that TNCs would adequately and affordably substitute for taxicab service or public transit (specifically, in low-income and other underserved communities), potentially leaving these communities further underserved and transportation disadvantaged.

ii. Minority Communities

Much like low-income communities have been underserved by TNCs, minority communities have also seen a dearth of TNC services. An analysis of one month of uberX data throughout Washington D.C. suggests that neighborhoods with better service -- defined as those places with consistently lower wait times -- have larger white populations.⁹¹ Uber surge pricing and wait time data was collected via the Uber API between February 3, 2016, and March 2, 2016, covering 276 locations in Washington D.C. The map below indicates that wait times are generally shorter in the center of the District and longer in the outskirts.⁹²

⁸⁷ *Id.*

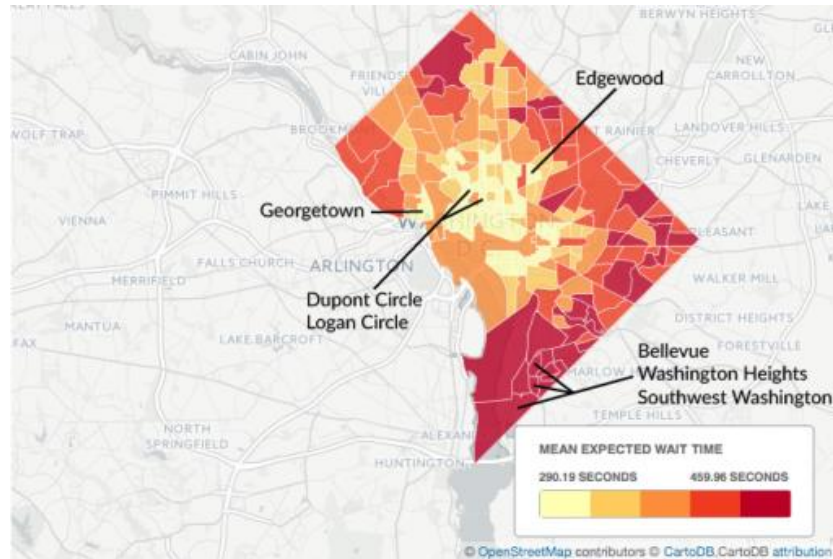
⁸⁸ John L. Renne and Peter Bennett, "Socioeconomics of Urban Travel: Evidence from the 2009 National Household Travel Survey with Implications for Sustainability," *World Transport Policy and Practice*, Volume 20.4, September 2014: page 7 – 25. < <http://www.eco-logica.co.uk/pdf/wtpp20.4.pdf> >

⁸⁹ <http://mic.com/articles/124648/uber-vs-cabs-in-nyc-neighborhoods-in-one-chart#.XE17RGQJ2>.

⁹⁰ *Id.*

⁹¹ <https://www.washingtonpost.com/news/wonk/wp/2016/03/10/uber-seems-to-offer-better-service-in-areas-with-more-white-people-that-raises-some-tough-questions/>.

⁹² *Id.*



Census tracts with more minority populations (including Black/African American, Asian, Hispanic-Black/African American, and Hispanic/Asian) have longer wait times.⁹³ The analysis demonstrates, in short, that those living in neighborhoods with more minority populations will wait longer for an UberX vehicle because: 1) these areas typically do not surge price as commonly, drivers often neglect these areas; and 2) riders are forced to wait longer for a ride. In contrast, majority-white tracts, including Dupont Circle, Logan Circle and Georgetown, have the shortest wait times, averaging just over four minutes.⁹⁴ Additionally, these areas have surge pricing 43% of the time, thus attracting many drivers who want to earn more.⁹⁵ The correlation between minority populations and wait times holds true even when accounting for household income, poverty rates, and population density.⁹⁶ Accordingly, when comparing tracts where income, poverty and density are the same, the areas with increased minority populations will still experience longer average wait times. Uber also recently introduced a new delivery feature offered only in Northwest and Southeast Washington D.C., which ThinkProgress has called “*very selective in choosing whiter, more affluent neighborhoods.*”⁹⁷

In addition, poverty levels were shown to reinforce increased wait times in areas with a higher minority population. In areas with a higher percentage of minority populations *and* a higher percentage of poverty, passengers wait even longer for an UberX car.⁹⁸

TNC drivers often use online forums to discuss how they “play the system” in order to optimize their earnings, including actively avoiding non-surge areas, and only going online in areas that typically surge. Some drivers even admit to strategically going

⁹³ *Id.*

⁹⁴ *Id.*

⁹⁵ *Id.*

⁹⁶ *Id.*

⁹⁷ ThinkProgress is a news blog founded in 2005 for the Center for American Progress, a progressive public policy research and advocacy organization.

< <http://thinkprogress.org/economy/2014/08/19/3473323/uber-is-making-life-a-little-bit-easier-for-washington-dcs-white-people/>>.

⁹⁸ <https://www.washingtonpost.com/news/wonk/wp/2016/03/10/uber-seems-to-offer-better-service-in-areas-with-more-white-people-that-raises-some-tough-questions/>.

offline in order to avoid receiving requests in certain areas, particularly if they are more dangerous, surge less often, or are lower-income. Both Uber and Lyft have no policies that prevent or discourage drivers from discriminating against individuals living in particular areas, which may be a contributing factor to the lack of available services in those neighborhoods.⁹⁹

In Chicago, the taxicab industry filed a federal suit against the City in 2015 that included allegations that Uber is not serving the entire City, specifically alleging that its vehicles and drivers “*are heavily concentrated downtown and in affluent wards of the City, while neglecting poorer and minority wards.*”¹⁰⁰ Chicago’s taxicab industry also maintains that while the City has regulated it, requiring them to serve all of the City’s wards, for close to a century, Uber and Lyft are exempt from these rules and monitoring.

Current anti-redlining laws apply to the taxicab industry, banks, mortgage lenders, and licensed contractors, which have been deemed necessary to avoid the result of low-income and minority communities becoming more isolated from the services benefitting wealthier and “whiter” communities.¹⁰¹ In this vein, some argue that government regulation outlawing the type of redlining behavior displayed by TNCs is a necessary tool for reducing de-facto discrimination. Benjamin Edelman and Michael Luca, Assistant Professors of Business Administration at Harvard Business School, state that economies that rely on reputation and personal information built into business transactions may result in unintended consequences. To demonstrate this conclusion, Edelman and Luca co-published a study comparing African-American and non-African-American Airbnb hosts with similar apartments, photos and ratings. The study found that the non-African-American hosts tended to charge and earn 12% more than their African-American peers, suggesting that African-American Airbnb hosts were suffering from negative social selection and/or internal biases.¹⁰²

Much like Edelman and Luca’s case study of Airbnb, the facts suggest that race does play a role in predicting the service quality of TNCs in different neighborhoods.¹⁰³ Title VI of the Civil Rights Act of 1964 states that: “No person ... shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.” These protections have since expanded to include additional protected classes, such as religion, age, gender, pregnancy, citizenship, familial status, disability, and veteran status.¹⁰⁴ Ensuring equity may also require a number of other groups, such as low-income individuals and communities, to be protected from discriminatory practices.¹⁰⁵ Title VI was amended in 1987 to apply the non-discrimination requirements to all recipients of federal aid, and not exclusively to programs and activities funded with federal funds. TNCs are beginning to receive more direct monetary and non-monetary support from local, state, and federally funded agencies (e.g., free or reduced cost parking

⁹⁹ <http://www.dailykos.com/story/2014/05/27/1302417/-Ridesharing-and-Redlining-Uber-Lyft-Race-and-Class#>.

¹⁰⁰ <http://m.cartalk.com/blogs/do-uber-and-lyft-redline-low-income-communities>.

¹⁰¹ <http://www.dailykos.com/story/2014/05/27/1302417/-Ridesharing-and-Redlining-Uber-Lyft-Race-and-Class#>.

¹⁰² Edelman, Benjamin and Michael Luca. “*Digital Discrimination: The Case of Airbnb.com*” Harvard Business School Working Paper, No. 14-054, January 2014.

¹⁰³ <https://www.washingtonpost.com/news/wnk/wp/2016/03/10/uber-seems-to-offer-better-service-in-areas-with-more-white-people-that-raises-some-tough-questions/>.

¹⁰⁴ <http://www.ops.fhwa.dot.gov/publications/fhwahop16022/fhwahop16022.pdf>.

¹⁰⁵ *Id.*

from public transit agencies), and extending non-discrimination requirements to TNCs could make significant strides towards ensuring greater transportation equity.¹⁰⁶ As Uber and other TNCs begin public-private partnerships with cities like Boston, regulatory agencies must further consider the steps that must be taken to ensure equitable access to these services.¹⁰⁷

iii. Rural Communities

As private, for-profit businesses, TNCs have generally elected to enter large metropolitan areas where customer demand is greatest.¹⁰⁸ As discussed above, TNC drivers typically choose to operate in the most densely populated areas of cities with large numbers of potential customers who can financially afford the services.¹⁰⁹ Because the average trip distance is much longer in rural areas, residents of these areas must rely more heavily on private vehicles relative to urban or suburban residents.¹¹⁰ Public transit is available to only about 13% of those in rural communities and to 37% of the small urban areas population.¹¹¹ Those living in rural areas without access to a public transit system or a personal vehicle, may ultimately find their ability to travel significantly restricted.¹¹²

While some have proposed that the TNC model could help meet a demand in very low-density areas, it is simply unlikely that TNC drivers would voluntarily expand service to rural residents,¹¹³ as the incentive of lucrative surge pricing often solely occurs in a densely populated area. Uber drivers in rural areas such as Martha's Vineyard also complain about a lack of passenger demand, long drives between fares and trip revenue that does not cover gas or vehicle upkeep.¹¹⁴ In addition, other factors such as unreliable cell service; Uber's resistance to small town regulations; local resistance to change, including a fear of exorbitant price hikes after Uber's elimination of any competition; and, most significantly, the lack of a reliable supply of drivers and customers, have been obstacles to TNCs' success in rural areas.¹¹⁵

An Uber spokesperson recently confirmed that the rural communities of upstate New York would be among the "last places" in the country Uber would be making a strong push.¹¹⁶ In fact, while Uber claims to cover 75 percent of the U.S. population, it maintains its goal is to cover all Americans.¹¹⁷ However, Harry Campbell, who hosts a popular website and podcast known as "The Rideshare Guy," postulates that Uber's true goal is to seek a growth in influence at the expense of providing transportation to the

¹⁰⁶ *Id.*

¹⁰⁷ *Id.*

¹⁰⁸ Between Public and Private Mobility: Examining the Rise of Technology-Enabled Transportation Services, Special Report 319, The National Academies of Sciences, Engineering, and Medicine, page 82, 2015.
< <http://onlinepubs.trb.org/onlinepubs/sr/sr319.pdf> >.

¹⁰⁹ *Id.*

¹¹⁰ Between Public and Private Mobility: Examining the Rise of Technology-Enabled Transportation Services, Special Report 319, The National Academies of Sciences, Engineering, and Medicine, page 90-91, 2015.
< <http://onlinepubs.trb.org/onlinepubs/sr/sr319.pdf> >.

¹¹¹ *Id.*

¹¹² *Id.*

¹¹³ *Id.*

¹¹⁴ http://www.nytimes.com/2015/09/06/travel/uber-marthas-vineyard.html?_r=1.

¹¹⁵ <https://www.thezebra.com/insurance-news/2140/uber-in-small-towns-the-good-the-bad-and-theinevitable/>.

¹¹⁶ <http://www.theverge.com/2015/10/23/9603324/uber-coverage-rural-areas-dominance-plan>.

¹¹⁷ *Id.*

underserved by stating that "drivers aren't making a ton money in these small towns; the dominance effect is what they're really going after."¹¹⁸

iv. Unbanked and Underbanked Populations

A significant number of Americans are currently underserved by TNC services because of their lack of access to credit and/or bank accounts. The Federal Deposit Insurance Corporation (the "FDIC") has done extensive research on the so-called "underbanked" and "unbanked" populations, whom they collectively term the "underserved."¹¹⁹ Nearly 33% of all Americans are considered unbanked or underbanked and are therefore unable to utilize TNCs.¹²⁰ The FDIC estimates that 17 million people, or 8%, of U.S. households are unbanked. Further, the percentage of unbanked households has remained fairly steady since 2009 (7.6% in 2009, 8.2% in 2011, and 7.7% in 2013), indicating that this rate is likely to remain consistent in the near term.¹²¹

The reasons for a population of unbanked or underbanked citizens are related to both income (i.e. insufficient funds, costly services for low-balance customers) and what the FDIC refers to as "attitude" (i.e. lack of trust in institutions and privacy concerns).¹²² Low-income consumers using traditional banking services spend nearly three times as much on banking fees as their unbanked peers, discouraging many from continuing use of these services.¹²³ Should TNCs desire to expand their availability to all passengers that are willing to pay, alternative payment options for those without credit or bank accounts must be part of the solution.¹²⁴ TNCs have appeared, to date, to have put forth little effort into finding alternative ways to address the financially underserved.¹²⁵ However, Uber is launching a pilot project in India where passengers can pay in cash in the city of Hyderabad, which will be the first instance in which Uber will accept cash payments.¹²⁶

It should be noted that there are, of course, drawbacks to the seemingly well-intentioned policy to increase access for the unbanked community that the taxicab industry can attest to, as it could inadvertently undermine TNC driver safety if not implemented with safeguards.¹²⁷ For instance, by requiring a credit card, TNCs eliminate passenger anonymity, thus increasing driver safety. In situations where passengers are permitted to use cash, identifying the passenger becomes more difficult should an incident, such as a robbery, occur.¹²⁸

¹¹⁸ *Id.*

¹¹⁹ Between Public and Private Mobility: Examining the Rise of Technology-Enabled Transportation Services, Special Report 319, The National Academies of Sciences, Engineering, and Medicine, page 89-90, 2015.

< <http://onlinepubs.trb.org/onlinepubs/sr/sr319.pdf> >.

¹²⁰ <http://www.americanbanker.com/bankthink/lets-start-from-scratch-in-designing-products-for-unbanked-1078311-1.html>.

¹²¹ Between Public and Private Mobility: Examining the Rise of Technology-Enabled Transportation Services, Special Report 319, The National Academies of Sciences, Engineering, and Medicine, page 89-90, 2015.

< <http://onlinepubs.trb.org/onlinepubs/sr/sr319.pdf> >.

¹²² *Id.*

¹²³ <http://www.americanbanker.com/bankthink/lets-start-from-scratch-in-designing-products-for-unbanked-1078311-1.html>.

¹²⁴ Between Public and Private Mobility: Examining the Rise of Technology-Enabled Transportation Services, Special Report 319, The National Academies of Sciences, Engineering, and Medicine, page 89-90, 2015.

< <http://onlinepubs.trb.org/onlinepubs/sr/sr319.pdf> >.

¹²⁵ *Id.*

¹²⁶ <https://news.slashdot.org/story/15/05/13/0159212/uber-drivers-in-india-will-start-accepting-cash>.

¹²⁷ Between Public and Private Mobility: Examining the Rise of Technology-Enabled Transportation Services, Special Report 319, The National Academies of Sciences, Engineering, and Medicine, page 89-90, 2015.

< <http://onlinepubs.trb.org/onlinepubs/sr/sr319.pdf> >.

¹²⁸ *Id.*

One such proposed solution would mimic how public transit agencies and bike share operators deal with alternative payment options, including acceptance of prepaid debit cards, working with nonbanking institutions such as check cashing services, or continuing to offer cash as an alternative payment while installing additional safeguards such as security cameras.¹²⁹ For example, Greyhound's 2011 partnership with PayNearMe (a private electronic cash payment service that allows members to pay for their membership using cash through a local convenience store in lieu of an online credit card) and 7-Eleven provides an option that allows for both secured cash payments and online purchases with applicable Internet discounts.¹³⁰

v. People Without Smartphone Access

TNC services are app-based and operate almost exclusively through smartphones, which, in turn, means that individuals without a smartphone do not have access to such transportation services.¹³¹ In 2015, 64% of Americans owned smartphones compared to 35% only four (4) years earlier.¹³² Notably, smartphone access varies more by age than by income, with only 27% of American adults over age 65 using a smartphone, in comparison to only 18% in 2013, rendering smartphone use among the this age group at roughly 50% of the level of the next lowest age category.¹³³

Elderly and low-income tends to drive down the rate of smartphone use, as demonstrated by the following chart:

¹²⁹ *Id.*

¹³⁰ *Id.*, <Greyhound.com (2011)>.

¹³¹ Between Public and Private Mobility: Examining the Rise of Technology-Enabled Transportation Services, Special Report 319, The National Academies of Sciences, Engineering, and Medicine, page 82, 2015.

< <http://onlinepubs.trb.org/onlinepubs/sr/sr319.pdf> >.

¹³² *Id.*

¹³³ *Id.*

Smartphone Ownership, White vs. African American

% of adults in each group who have a smartphone

	White	Black	Difference
Total 18+	53	56	not sig
Gender			
Male	55	54	not sig
Female	51	58	+7
Age			
18-29	79	85	not sig
30-49	69	67	not sig
50-64	46	41	not sig
65+	18	18	not sig
Education			
High school grad or less	38	36	not sig
Some college	58	71	+13
College+	67	75	+8
Household income			
<\$30,000	34	48	+14
\$30,000-\$74,999	53	64	+11
\$75,000+	74	81	not sig
Other demographics			
Parents	70	68	not sig
Students	76	81	not sig

Pew Research Center's Internet Project July 18-September 30, 2013 tracking survey. N=6010 adults ages 18+. For results based on all adults, n=4,223 for whites and n=664 for African Americans.

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These statistics indicate that the elderly and those with low-incomes are most likely to not own a smartphone and therefore lack access to TNC services. Although general access to smartphones continues to increase on an annual basis, it does not appear that there has been a concerted effort to find ways to grant access to those in this currently underserved community.¹³⁴

Cursory attempts have recently been made to address some of the issues faced by transportation disadvantaged communities, including a recent initiative by the Pinellas Suncoast Transit Authority ("PSTA"), which was awarded a \$300,000 grant from the Florida Department of Transportation to provide free Uber rides to low-income individuals who require late night transportation.¹³⁵ As part of the program, the PSTA will utilize new technology called Uber Central, which allows riders who do not have access to a smartphone or credit card to call PSTA to have the agency 'e-hail' them a

¹³⁴ *Id.*

¹³⁵ http://www.bizjournals.com/tampabay/news/2016/06/10/local-transit-authority-wins-grant-for-free-uber.html?ana=e_vert_st_20160613.

ride.¹³⁶ While this is an example of the type of progressive policy solutions that should be more thoroughly implemented in order to reduce the transportation disadvantage, this program is confined to a very limited geographical area, is only available at limited times, with limited funds, and includes various other restrictions. Moreover, the government is providing the TNC (Uber in this case) with the incentive to participate, and further, is required to implement an agency middleman to place the ride requests to Uber Central.¹³⁷ Outside the confines of this limited grant program, this initiative will do nothing to expand TNC access to the unbanked or those without smartphone access in the greater transportation market. Rather than independently searching for and implementing widespread alternative solutions to cater to the disproportionate number of low-income and elderly who lack access to smartphones, it appears TNCs may be satisfied with the ability to serve the 64% of Americans with smartphones until local governments fund access programs, or a combination of technological advances and social and economic market factors expand smartphone use to become ubiquitous.¹³⁸

B. TNC Impact on the Taxicab Industry

In communities where access to public transportation is limited and few people have access to personal vehicles, many rely on taxicabs, a service which has been in severe decline in jurisdictions across the country. This is widely attributed to taxis having to compete against TNCs that operate under uneven regulatory schemes at significantly reduced costs. This has allowed TNCs to undercut taxis on price, and along with an oversupply of the market, has resulted in many taxis being driven out of competition.¹³⁹ For example, a fare from an Uber that would cost about \$4 in Costa Mesa, California, would cost an estimated \$20 in a taxi.¹⁴⁰ The graph below shows that before Uber and Lyft entered the Orange County market in 2013, there were 1,576 registered taxi drivers, but now only 795 remain.¹⁴¹

¹³⁶ *Id.*

¹³⁷ *Id.*

¹³⁸ *Id.*

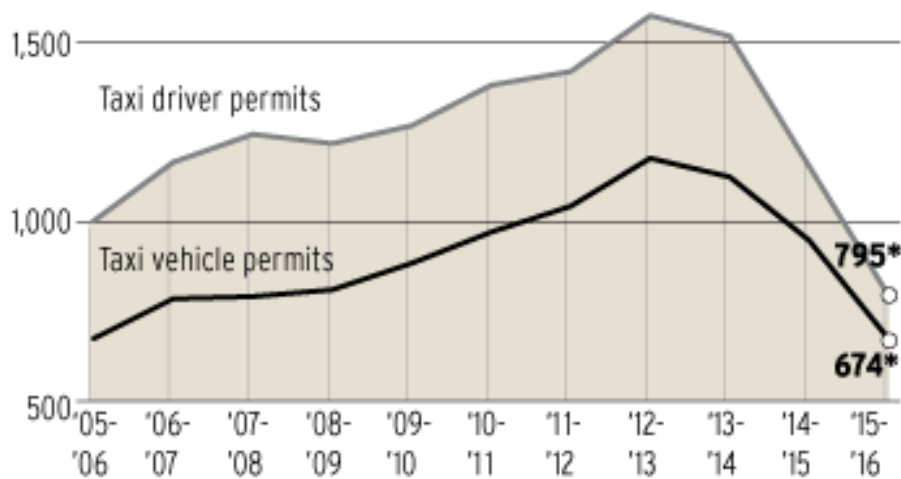
¹³⁹ <http://america.aljazeera.com/articles/2015/9/16/taxi-wars-uber-destroying-the-taxi-industry.html>.

¹⁴⁰ <http://www.ocregister.com/articles/uber-713672-cab-taxi.html>.

¹⁴¹ *Id.*

The Uber effect

Taxi services in Orange County have felt the impact of Uber and Lyft's presence with driver and vehicle permits plunging by nearly 50 percent within the last three years.



*Year to date

Source: OCTA Media Relations Specialist

STAFF GRAPHIC

According to the San Francisco Municipal Transportation Agency, the number of trips taken by taxi in San Francisco plummeted 65 percent in just 15 months between 2012 and 2014.¹⁴² The average number of trips per taxi has been on a steady downward trajectory, from 1,424 per month in March, 2012, to 504 per month in July, 2014.¹⁴³

Perhaps the biggest impact of TNCs in San Francisco has been the severe decline in the number of taxi rides taken by people in ramp taxis, which transport people in wheelchairs.¹⁴⁴ As the number of TNC vehicles have grown, and the number of taxis has diminished, so has the availability of the costlier wheelchair-accessible taxi. The number of pickups in ramp taxis declined from a high of 1,378 in March, 2013, to just 768 in July, 2014.¹⁴⁵ As previously discussed, TNCs are not legally mandated to pick up people in wheelchairs in many jurisdictions, therefore further disadvantaging an already underserved community. Instead of imposing new requirements on TNC services, SFMTA officials have offered incentives to cab companies to keep more ramp taxis on the road.¹⁴⁶

If TNC service is not offered as an alternative to taxi service in areas where taxi service has been displaced, then already underserved communities will suffer further. The

¹⁴² <http://www.sfgate.com/bayarea/article/Taxi-use-plummets-in-San-Francisco-65-percent-in-5760251.php>.

¹⁴³ *Id.*

¹⁴⁴ *Id.*

¹⁴⁵ *Id.*

¹⁴⁶ *Id.*

dramatic decline in taxi service throughout San Francisco, and many other jurisdictions, indicates that those who were forced to rely on taxi service due to lack of proximity to public transportation, or any other number of reasons, would be further transportation disadvantaged if options were to be further reduced by the elimination or reduction of taxi service. If TNC competition drives out alternative modes of transportation, including taxis, and TNCs themselves do not find it profitable or worthwhile to expand services to the persons and areas previously serviced, there could potentially be little to no services remaining in certain underserved communities.

C. Conclusions

The focus in reducing the “transportation disadvantage” has been to reduce an individual’s predominant reliance on private car use while shifting resources to expand the use and availability of public transportation, walking and cycling. A success in this initiative will lower the overall cost of transportation to society; eliminate the disadvantages faced by those not eligible for, or who do not otherwise possess, a driver’s license; and ensure those without a personal vehicle will still have access to affordable transportation.

Many without personal vehicles also rely on taxicabs, a service that has been decimated in many jurisdictions across the country, including San Francisco. If TNC service is not offered as an alternative to taxi service in areas where taxi service was relied on but has now been displaced, then an already underserved community will suffer further.

With respect to TNC access, the elimination of surge pricing and the introduction and enforcement of regulatory oversight to prevent “redlining” would reduce TNCs’ incentives to avoid serving certain communities, and could help to increase TNC affordability and access among certain transportation disadvantaged persons and communities. Expanding access to TNCs will require a variety of approaches including enhanced government oversight of the regulatory framework, more robust consumer protection initiatives (such as the elimination of surge pricing), implementation of alternative payment systems, and a combination of technological advances and social and economic market factors to ensure that the playing field is leveled for the following communities that may desire to utilize a TNC service, but currently have limited or no access, including the following:

- One result of TNC “surge pricing” is that communities with limited or no TNC access, such as low-income and minority communities, may be “redlined” since drivers may choose not to operate in those areas;
- Rural communities, where low population density and a host of other factors disincentivize drivers from expanding service, will be largely excluded from TNC service;
- Unbanked and under-banked communities, in which individuals have little or no access to the financial institutions required to pay for TNCs, will be unable to access TNC services;

- Individuals without smartphone access, or who do not possess the technological expertise necessary to request TNC service, will also be unable to access TNC services; and
- A severe reduction in taxicab service, due to competition from TNCs, could exacerbate transportation disadvantages for those who do not have access to TNC services and had previously relied on taxi service.

III. The Devolution of Sustainable Transportation

Progress – Adverse Effects of TNCs on the Environment and Cities

A. The History of Policy to Reduce Public Motor Vehicle Usage

Over the last few decades, cities have been working hard to decrease the use of public motor vehicles (“PMVs”), including automobiles, while increasing reliance on mass public transportation modes such as subways, buses, and ferries. With the rise of TNCs, there is considerable concern that these efforts will be reversed with a deleterious effect on congestion and the environment.

PMVs are known to impact the environment in several ways. For example, road traffic is the most common source of community noise, causing no less than noise pollution. Noise disturbs the population’s ability to work, relax and sleep, resulting in mental stress and, in some severe cases, chronic exhaustion, high blood pressure and heart disease.¹⁴⁷ PMVs also produce greenhouse gases such as carbon dioxide, nitrous oxide and methane, contributing to climate change and global warming. Environmental statistics demonstrate that 28% of greenhouse gas emissions in the United States are generated by transportation, 34% of which are generated by passenger automobiles.¹⁴⁸ Further, PMVs affect air quality by releasing pollutants¹⁴⁹ into the environment that cause negative health effects, especially for individuals with allergies or respiratory conditions, including asthma; hay fever; sinusitis; and respiratory and lung conditions commonly associated with the elderly, with research suggesting that certain pollutants are carcinogenic.¹⁵⁰

Congestion is another major effect of the increase in the amount of PMVs on the road, especially as the design capacities of our roads have been exceeded. Although highway funding in the United States increased by 100% in the last 25 years, congestion has increased by 300%,¹⁵¹ causing many negative effects, including extra travel time that may decrease productivity.¹⁵² Congestion also increases business costs, as an increase in the amount of time a PMV is on the road leads to higher payments towards fuel and vehicle repairs.¹⁵³ Even worse, emergency services, such as ambulances, police cars and fire engines, experience a more difficult challenge to function effectively to provide their services to those in need, as they struggle to overcome traffic concerns caused by the increase in congestion.¹⁵⁴ Lastly, and most tragically, PMVs are responsible for

¹⁴⁷ <https://www.racv.com.au/wps/wcm/connect/racv/internet/primary/my+car/environment/reduce-your-impact/impact+of+cars+on+the+environment>.

¹⁴⁸ <http://www.pubtrantravel.com/whyuse.html>

¹⁴⁹ Nitrogen oxides (NOx); Fine Particulate Matter (PM2.5, formed both during combustion or in atmospheric chemical reactions post exhaust; Volatile organic compounds (VOCs); Carbon Monoxide (CO); Sulphur Dioxide (SO2); Greenhouse Gases (CO2); and air toxics such as benzene, 1,3-butadiene, formaldehyde, acetaldehyde, acrolein, polycyclic organic matter (POM), naphthalene, and diesel particulate matter.

¹⁵⁰ <https://www.racv.com.au/wps/wcm/connect/racv/internet/primary/my+car/environment/reduce-your-impact/impact+of+cars+on+the+environment>.

¹⁵¹ <http://www.pubtrantravel.com/whyuse.html>.

¹⁵² http://www.economicsonline.co.uk/Market_failures/Road_congestion.html.

¹⁵³ *Id.*

¹⁵⁴ *Id.*

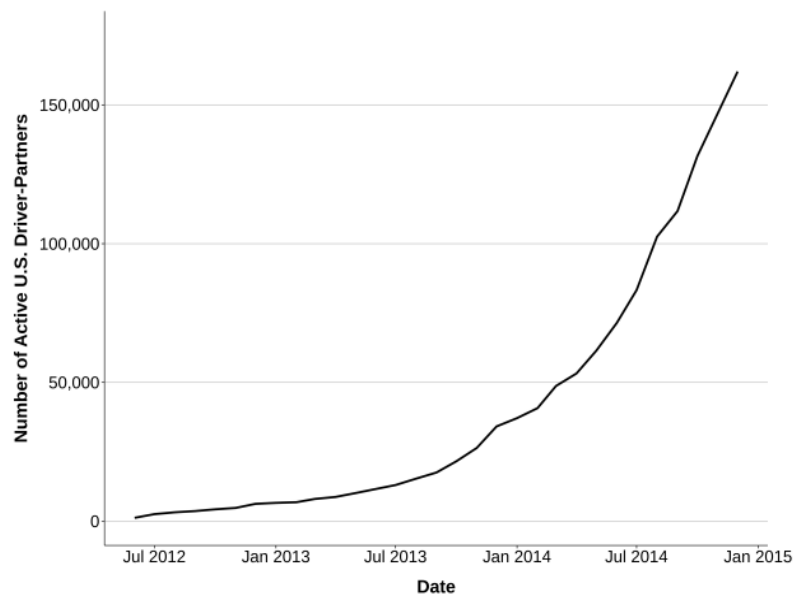
thousands of deaths each year. In the United States alone, 32,675 deaths occurred as a result of PMV crashes in 2014.¹⁵⁵

As a result, cities around the world have come to realize that dependence on PMVs is neither beneficial to the environment nor society at large. Furthermore, increasing numbers of the populace are realizing that PMV dominance is not pre-ordained, and that alternative modes of transportation can be developed to decrease our reliance on PMVs.

B. Unregulated Uber-Growth – The Lack of a Vehicle Cap and Adverse Environmental Impacts

While cities are attempting to decrease the use of PMVs such as automobiles, TNCs have grown at a near exponential rate, adding a significant amount of automobiles on the streets of already congested cities. For example, Uber grew from zero (0) drivers in 2012 to 160,000 actively partnered drivers (defined as drivers that have completed more than four trips per month) by the end of 2014 in the United States alone.¹⁵⁶ As demonstrated in the graph below, the rate of growth has risen rapidly since July 2012:

Figure 1: Number of Active Driver-Partners in United States Each Month



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In the past, municipalities considering the introduction of new taxi medallions to their respective markets would conduct environmental impact studies. For example, in 2012, New York City (“NYC”) wanted to take advantage of the passage into law of the SHLL described earlier in this report that would increase the number of accessible taxi medallions by 2,000 to the NYC taxi fleet. However, before going forward with the initiative, an environmental impact study was carried out¹⁵⁸ that concluded that while the increase in medallions would have a significant adverse effect on congestion, solutions

¹⁵⁵ <http://www.iihs.org/iihs/topics/t/general-statistics/fatalityfacts/state-by-state-overview>.

¹⁵⁶ https://s3.amazonaws.com/uber-static/comms/PDF/Uber_Driver-Partners_Hall_Kreuger_2015.pdf.

¹⁵⁷ *Id.*

¹⁵⁸ http://www.nyc.gov/html/tlc/downloads/pdf/statement_of_findings_11_04_2013.pdf.

were available that would mitigate certain, but not all, intersections that could absorb the increase in traffic. One researcher from the Tri-State Transportation Campaign, estimated that the proliferation of the 2,000 additional medallions would cause a 12% decrease in travel speeds in NYC.¹⁵⁹ Armed with this information, it is puzzling that NYC did not conduct a similar study before allowing TNCs¹⁶⁰ open entry into the NYC market, in light of the City's most recent PlaNYC initiative publication determining that: 1) in 2012 transportation fleets decreased carbon emissions due to "fleet size reduction measures;" and 2) per capita vehicle miles increased between 2012 and 2013, resulting in an increase of 0.22 million tons in carbon dioxide emissions.¹⁶¹

This unregulated vehicle growth may have a detrimental impact on the environment, and may potentially increase vehicle related carbon emissions. Emissions may increase as vehicles spend more time in traffic, idling or crawling, and undergoing numerous acceleration and deceleration events.¹⁶² Several studies have shown that vehicles contribute more to air quality problems than any other source in the United States. Between 1990 and 2014, greenhouse gas emissions in the transportation sector increased more in absolute terms than any other sector (i.e. electricity generation, industry, agriculture, residential, or commercial).¹⁶³ In the United States, vehicles are responsible for 27% of hydrocarbon emissions, 51% of carbon monoxide (CO) emissions, 20% of nitrogen oxide (NOx) emissions and 18% of carbon dioxide (CO₂) emissions.¹⁶⁴ The number of active vehicles on the streets and the growth of vehicles for the sole purpose of providing for-hire transportation, which will inherently require longer than average vehicle miles, have been a concern for policymakers who seek to improve air quality, reduce pollution, and combat global climate change. Recent epidemiological studies have also shown elevated risks of non-allergic respiratory morbidity, cardiovascular morbidity, cancer, allergies, adverse pregnancy and birth outcomes, and diminished male fertility for drivers, commuters, and individuals living near roadways.¹⁶⁵

The lack of sufficient data to correctly measure the impact of the expansion rate of Uber and other TNCs in many cities has exacerbated the problem. These companies do not provide data to substantiate the claims they make about their success in reducing the number of vehicles on the roads, despite the public representations that their core business is developed based on TNC claims of being "everyone's private driver."¹⁶⁶

In New York City, the number of for-hire vehicles ("FHV's") has grown significantly over the past four years. Since Uber's entry in NYC, the Taxi and Limousine Commission has licensed over 37,000 new FHV's.¹⁶⁷ Even though it is difficult to accurately determine the impact of these new vehicles on NYC's environment and their direct contribution to carbon emissions without app companies' data, it is

¹⁵⁹ <http://blogs.reuters.com/great-debate/2012/01/20/more-taxis-mean-more-traffic/>.

¹⁶⁰ It should be noted that NYC regulations do not permit the TNC model of peer to peer rides, TNCs such as Uber and Lyft operate as black car and limousine bases licensed by the New York City Taxi and Limousine Commission.

¹⁶¹ http://www.nyc.gov/html/planyc/downloads/pdf/NYC_GHG_InVENTORY_2014.pdf.

¹⁶² <https://sph.uth.edu/kaizhang/files/2014/02/Zhang-2011-AE.pdf>

¹⁶³ <http://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P1000NBL.pdf>

¹⁶⁴ <http://onlinepubs.trb.org/onlinepubs/sr/sr264.pdf>

¹⁶⁵ http://www.euro.who.int/_data/assets/pdf_file/0006/74715/E86650.pdf

¹⁶⁶ <https://medium.com/@felixsalmon/the-economics-of-everyones-private-driver-464bfd730b38#.orq4df9gv>

¹⁶⁷ <https://data.cityofnewyork.us/Transportation/For-Hire-Vehicles-FHV-Active-and-Inactive-Vehicles/8wbx-tsah>

possible to make reasonable assumptions by utilizing various primary and secondary data sources. As such, this report will attempt to highlight the issue by utilizing the NYC FHV market, specifically Uber's vehicle numbers, as a case study incorporating available data.

First, in order to estimate the daily CO₂ emission of additional FHVs in NYC from app companies like Uber and Lyft one can utilize the U.S. Energy Information Administration (EIA) data that estimates 19.64 pounds of carbon dioxide are produced from burning a gallon of gasoline that does not contain ethanol.¹⁶⁸ Second, one can derive the total average distance traveled by new FHVs while providing transportation services. In order to determine average distances, one can use data from a report issued by SherpaShare¹⁶⁹ that estimated the average Uber trip length in the top U.S. cities is between 4.4 and 8.9 miles. This report took the average of this estimate to account for regional and city based disparities. For the purpose of calculating the average distance, this report conservatively estimates that the average Uber trip that will be used in this report is 6.6 miles. The report also incorporated the recent findings from New York City TLC T-PEP data that identified 44 average trips per driver per week for Uber drivers to derive the number of trips per day. For the purpose of this report, it is estimated that Uber drivers have performed an average of 6.2 trips per day.

Third, upon reviewing the current Uber vehicle fleet in NYC and taking a sample from 407 approved vehicles we calculated the average miles per gallon fuel usage ("AMPG"). The current NYC TLC rule permits any vehicle that passes inspection to be part of the FHV fleet.¹⁷⁰ However, Uber only accepts vehicles that are 2006 model year or newer to be part of its fleet.¹⁷¹ This report has incorporated a cautious approach to derive AMPG cognizant of the fact that there are multiple vehicle types with different models and fuel consumption capacity. To account for any disparity, the report utilized the MPG reports of the sampled vehicles as reported on their marketing packages and, assuming most of the vehicles are new, with the maximum capacity to efficiently utilize fuel as advertised. Based on the sample of vehicles studied and their MPG fuel usage advertised when operated, it is estimated that the AMPG utilization of Uber vehicles in NYC is 18.7 per vehicle.

Therefore, the following formula was used to calculate the CO₂ emission of Uber vehicles in NYC per day.

$$\text{Pounds of CO}_2 \text{ per Day} = ((\text{Miles Traveled} \times \text{Number of Trips}) / \text{Average Miles per Gallon}) \times \text{CO}_2 \text{ per Gallon}$$

Following the above formula and as shown below, it is estimated that an Uber vehicle potentially produces 42.97 pounds CO₂ per day in NYC alone.

$$42.97 = ((6.6 \times 6.2) / 18.7) \times 19.64$$

¹⁶⁸ <https://nnsa.energy.gov/sites/default/files/nnsa/08-14-multiplefiles/DOE%202012.pdf>

¹⁶⁹ <http://www.sherpashareblog.com/2016/02/uber-trips-are-becoming-longer-and-faster-but-are-they-more-profitable/>

¹⁷⁰ http://www.nyc.gov/html/tlc/downloads/pdf/proposed_rules_fhv_bills_package.pdf

¹⁷¹ <http://driveubernyc.com/vehicles/full-list/>

As discussed above, there are currently over 37,000 new FHV's in NYC, with a majority of them operated by Uber. The cumulative impact of Uber and other app-based companies' growth in NYC's environment is estimated to generate daily emissions of 1,590,146 pounds of CO₂ in the atmosphere. Furthermore, when considering the millions of vehicles currently operating for Uber all over the world, the extent of the environmental damage caused by the company is evident. If the same moderate estimate of 42.97 pounds of CO₂ emissions per vehicle per day is applied to Uber's more than one million vehicles worldwide, the increased carbon footprint could be as much as 42,970,000 pounds of CO₂ emissions per vehicle per day produced by Uber's vehicles across the globe.

Uber has more than 35,000 affiliated vehicles in NYC as of February 2016.¹⁷² Although Uber claims that only 1,900 vehicles are active at any given time, experts have projected that these additional 1,900 vehicles result in a 7.7% decrease in NYC travel speeds.¹⁷³ To put this into perspective, each additional mile driven by an Uber vehicle in the Central Business District ("CBD") in Manhattan adds an extra 10 minutes to all other vehicles on the road at the time.¹⁷⁴

Numerous cities have been working to reduce emissions by converting taxi fleets to "clean" vehicles. For example, in 2013, San Francisco announced that taxicabs in the city were up to ninety-seven percent (97%) clean, which is up from fifteen percent (15%) in 2008.¹⁷⁵ Chicago, NYC and Los Angeles have also all made significant efforts to increase the percentage of taxicab fleets that use alternative fuels¹⁷⁶ due to incentives and regulations enacted for the fleets. Unfortunately, however, the unregulated rise of TNCs has countered these efforts. The TNC business model mostly relies on drivers using their own personal vehicles, which typically neither utilize an adequate number of alternative fuel vehicles nor wheelchair accessible vehicles. While the number of TNC trips is significantly increasing and, in turn, reducing taxicab market share, society at large is taking a step in the wrong environmental direction by substituting many trips that would have occurred in government mandated alternative fuel taxicabs for typically less environmentally- sustainable personal vehicles. Multiple cities previously experimented with a similar deregulation in allowing open entry of vehicles into the taxicab market in the last half-century; these attempts, however, proved to be unsuccessful, resulting in an oversupply of taxicabs and deterioration of vehicle quality, thus leading to the eventual re-regulation of the industry.¹⁷⁷ It remains to be seen whether history will repeat itself.

C. Surge pricing - Maximizing Congestion and Pollution

Surge pricing, or, as Uber describes it, "dynamic pricing,"¹⁷⁸ is the notorious TNC economic model that raises fares based on demand at a given time. As Uber admits, the

¹⁷² <http://www.theverge.com/2016/2/1/10888734/uber-driver-strike-nyc-fare-cut-february-2016>.

¹⁷³ <http://www.streetsblog.org/2015/07/22/ubers-own-data-reveals-it-slows-manhattan-traffic-9-percent/>.

¹⁷⁴ <http://www.streetsblog.org/2015/07/08/uber-and-manhattan-gridlock-are-rising-together/>.

¹⁷⁵ <http://www.environmentalleader.com/2013/10/28/how-green-is-your-ride/#ixzz45IO2aLyT>.

¹⁷⁶ *Id.*

¹⁷⁷ *Id.*

¹⁷⁸ <https://newsroom.uber.com/guest-post-a-deeper-look-at-ubers-dynamic-pricing-model/>.

entire idea behind surge pricing is to increase the supply of drivers to match demand. Bill Gurley, a Board Director at Uber, explained that surge pricing was created as a model in 2012, when Uber noticed in Boston there was a gap in the supply of drivers at 1:00 a.m. resulting in unfulfilled requests. Uber then conducted an experiment to see what would happen if the company increased prices for that time. The experiment concluded that surge pricing increased the on-the-road supply of drivers by 70-80%.¹⁷⁹

Thus, by Uber's own admission, the surge/dynamic pricing model is designed specifically to increase the number of drivers. By increasing the number of vehicles on the road by such large percentages, especially in highly congested CBDs, the results will invariably be increased travel times and emissions coupled with diminished air quality, altogether decreasing the quality of life and health of the populace.

D. A Collision Course between Urban Population and TNC Growth in Cities

Cities are rapidly growing in population, a trend that is expected to continue, resulting in an ever-increasing population density and demand on transportation needs. Currently, fifty-four percent (54%) of the world's population lives in urban areas; it is projected that by 2050 this will rise to sixty-six percent (66%), and with continuing population growth and the movement of people to urban areas, urban populations are expected to increase by another 2.5 billion people by 2050 and surpassing a total of 6 billion people by 2045.¹⁸⁰ As the United Nations Department of Economic and Social Affairs notes, "[m]anaging urban areas has become one of the most important development challenges of the 21st Century."¹⁸¹

The growth of TNCs will only cause more environmental problems, as an increase in demand will lead to an increase in traffic congestion. In order to avoid a "collision course" between urban populations and the growth of TNCs, city regulators must have a "well-managed" planning agenda¹⁸² that takes into account the growth in population by focusing on mass transit solutions and the effect of TNC growth on the infrastructure.

To highlight the importance of this conclusion, John Wilmoth, Director of the United Nations Department of Economic and Social Affairs' Population Division states as follows:

*"Managing urban areas has become one of the most important development challenges of the 21st century. Our success or failure in building sustainable cities will be a major factor in the success of the post-2015 UN development agenda."*¹⁸³

¹⁷⁹ *Id.*

¹⁸⁰ <http://www.un.org/en/development/desa/news/population/world-urbanization-prospects-2014.html>.

¹⁸¹ *Id.*

¹⁸² *Id.*

¹⁸⁴ <http://www.nyc.gov/html/onenyc/downloads/pdf/publications/OneNYC.pdf>

E. Increased Congestion, Carbon Footprint and Reports

Despite the above narrative clearly demonstrating the negative impact of the proliferation of TNCs on the environment, there have been various reports purporting to demonstrate that this conclusion is not empirically true; rather, TNCs either cause no environmental impact at all or there is not enough information to draw a conclusion. A closer analysis of these reports, however, reveals that an ever-increasing TNC carbon footprint remains a highly likely scenario.

In 2015, New York City Mayor Bill de Blasio released his OneNYC sustainability plan which among other things established goals for improving economic and environmental sustainability. The report explained that the number of FHV's in the City has increased by approximately 53% between 2011 and 2015, and that the City will evaluate the impact of such a rapid increase on air quality, traffic congestion and parking.¹⁸⁴ As a result, the City commissioned a four-month study by McKinsey and Company to ascertain the effect of TNCs on traffic in the City. The study determined that TNCs did not increase congestion in the City. The reasoning was that the number of trips by all vehicles in the Central Business District (the "CBD") of Manhattan remained flat between 2014 and 2015. Moreover, trips by TNCs were alleged to largely substitute for yellow taxi trips in the CBD, so it was concluded that TNCs did not increase the total vehicle miles travelled in the CBD.¹⁸⁵ However, some have questioned the research model used for the McKinsey Study. Critics have noted that the \$2 million report did not include links to spreadsheets or include additional data for the public.¹⁸⁶

A report by the Transportation Research Board ("TRB") makes no conclusive determinations about the environmental impact of TNCs, but does hint at TNCs' causal connection to congestion.¹⁸⁷ The TRB report notes that TNCs may attract passengers who currently travel in more energy-efficient buses and trains.¹⁸⁸ Put differently, TNCs "may be increasing total travel, congestion, and emissions in the near term by replacing walking and transit trips[.]"¹⁸⁹ Thus, although the TRB Report makes the vague statement that TNCs "may...support the trend toward...broader environmental benefits," it also concedes the likelihood of "increases in vehicle-miles traveled ("VMT"), congestion and GHG emissions."¹⁹⁰

In September 2013, the California Public Utilities Commission ("CPUC") adopted rules to allow TNCs to operate legally in a state of the United States for the first time.¹⁹¹ During hearings before the CPUC, TNC loyalists argued that TNCs were, in fact, following "green" initiatives and would "reduce the negative environmental impacts of driving."¹⁹² However, the CPUC has also noted that TNC drivers do not have a common or incidental purpose with their passengers. Rather, drivers transport passengers

¹⁸⁴ <http://www.nyc.gov/html/onenyc/downloads/pdf/publications/OneNYC.pdf>

¹⁸⁵ <http://www.theverge.com/2016/1/15/10774878/uber-nyc-bill-de-blasio-traffic-study-failure>.

¹⁸⁶ <http://www.nytimes.com/2016/01/16/nyregion/uber-not-to-blame-for-rise-in-manhattan-traffic-congestion-report-says.html>; <http://www.streetsblog.org/2015/07/22/ubers-own-data-reveals-it-slows-manhattan-traffic-9-percent/>.

¹⁸⁷ Between Public and Private Mobility: Examining the Rise of Technology-Enabled Transportation Services, Special Report 319, The National Academies of Sciences, Engineering, and Medicine, page 19, 2015.
< <http://onlinepubs.trb.org/onlinepubs/sr/sr319.pdf> >.

¹⁸⁸ *Id.*

¹⁸⁹ *Id.*

¹⁹⁰ *Id.*

¹⁹¹ <http://www.environmentalleader.com/2013/10/28/how-green-is-your-ride/#ixzz4632WAPsY>.

¹⁹² *Id.*

entirely at the passenger's convenience.¹⁹³ In other words, there is no shared interest in so-called "ride sharing" trips since the passenger is unilaterally dictating terms just as they would in any other for-hire ride.

In what could be a landmark report, a widely-reported study will be released this fall by the Natural Resources Defense Council and the University of California Berkeley's Transportation Sustainability Research Center, with support from the Hewlett Foundation and the San Francisco County Transportation Authority (but no financial support from Uber or Lyft)¹⁹⁴ that will look into the climate impacts of Uber and Lyft using these TNCs' own data.¹⁹⁵ The study, however, will not be analyzing congestion or air pollutants.¹⁹⁶ Time will tell as to whether we will be closer to a definitive answer regarding the carbon footprint ramifications of the proliferation of TNCs.

Uber and Lyft started using the term "ridesharing" prior to launching their UberPool and Lyft Line services in 2015, neglecting what the term entails in its general usage. When both companies started their services, they were matching a for-hire vehicle transportation request of a passenger with a vehicle that was unoccupied and close to the request for service area. At the time, despite promoting themselves as ridesharing services the ride request and service delivery were one-to-one. The companies diverted inquiries into their models and used misleading by highlighting that their concept of ridesharing emanates from the fact that their less expensive services, such as UberX and Lyft, were being delivered by a driver who is part-time and traveling to a pre-planned destination that is not on demand, and the passenger is being matched with the driver to utilize an empty car seat that is available in the vehicle.

As a direct consequence of the confusion and misdirection that followed with the expansive use of the term ridesharing, many policy makers and legislative bodies have failed to delve into the working structure of these companies that permitted the proliferation of Uber and Lyft services. The misapplication of the term was further exacerbated by the media's embrace of the term without factually ascertaining if there is indeed any sharing occurring. As a result, finally after several years of widespread and inaccurate or careless reporting by journalists, the Associated Press issued a stylistic advisory by indicating that these services can be called ride-hailing and ride-booking services but not ridesharing.¹⁹⁷

In 2015, when Uber and Lyft finally launched their UberPool and Lyft Line services, which conceptually can be categorized as ridesharing. These new services appear to be stagnant for now, with a very limited coverage and usage rates. For example, a recent study that utilized the data from the NYC market has found that, compared to medallion taxis and an app based company where its sole business model is based on transporting multiple passengers on a predetermined route, both Uber and Lyft perform poorly. As the study indicated, when measuring average trips per driver per week, Uber and Lyft had 44 trips and 23 trips, respectively. However, average trips per driver per

¹⁹³ *Id.*

¹⁹⁴ <https://www.nrdc.org/experts/amanda-eaken/nrdc-urban-solutions-lead-first-climate-analysis-uber-and-lyft>.

¹⁹⁵ <http://www.theguardian.com/environment/2016/jan/21/uber-lyft-helping-hurting-environment-climate-change>.

¹⁹⁶ *Id.*

¹⁹⁷ "Ride-hailing services such as Uber and Lyft let people use smartphone apps to book and pay for a private car service or in some cases, a taxi. They may also be called ride-booking services. Do not use ride-sharing" <https://www.apstylebook.com/http://greatergreaterwashington.org/post/25405/the-ap-bans-the-term-ride-sharing-for-uber-lyft/>

week provided by taxis compared to a company with service based on providing ridesharing service show that they provided 91 trips and 108 trips, respectively. Despite the limitation of the above study in failing to isolate UberPool and Lyft Line services from other services that the companies provide to appropriately show the disparity on vehicle and driver utilization rates per passenger, the significant contrast of utilization when compared to taxicabs and a true ridesharing service is a testament of the failure of the model of ridesharing implemented by Uber and Lyft.

Additionally, there have been multiple reports that show both riders and drivers may not desire to use UberPool, where drivers claim it is not worth the hassle to pick up two separate riders for a fare that will generate less income when compared to two entirely separate UberX rides. On the other hand, passengers may need to make economic decisions about the money they could potentially save. They would then weigh that cost against the likelihood of getting matched with someone else, as well as the uncertainty of being matched may bring in terms of personal safety, longevity of the total ride, and comfort of service.¹⁹⁸ Despite the continued push by Uber and Lyft to represent themselves as ridesharing companies and their attempt to move to deflect the inquiry as to the appropriateness of the use of the term, it is clear that these companies provide is a traditional for-hire service. This alignment of the ridesharing definition and the move to use the terms like ride-sourcing, ride-hailing, or booking services will permit a clear policy discussion on how to 1) regulate these companies and similar services, 2) identify what their role is in enabling improved mobility of city dwellers, and 3) remedy any imbalance of regulation that may negatively impact incumbent businesses.

F. Conclusions

Policy makers have been laboriously working to improve sustainable transportation to decrease pollutants and congestion within cities; however the TNC model threatens to negatively offset all such efforts, including:

- TNC proliferation threatens cities' efforts to reduce the number of personal motor vehicles on the road, setting back decades of transportation planning and policy aimed at mitigating congestion and pollution, and encouraging shared mobility and mobility management;
- Unregulated TNC growth could cause congestion and harmful environmental impacts through the proliferation of nitrogen oxides, fine particulate matter, volatile organic compounds, carbon monoxide, sulphur dioxide, greenhouse gases and air toxics;
- In the United States, vehicles are responsible for 27% of hydrocarbon emissions, 51% of carbon monoxide (CO) emissions, 20% of nitrogen oxide (NOx) emissions and 18% of carbon dioxide (CO₂) emissions;
- In the NYC FHV market, Uber's reported for-hire vehicle numbers were the basis of a modest assumption of various parameters the cumulative impact of Uber and other app based companies' growth in NYC's environment for some context, which produces estimates that 1,590,146 pounds of CO₂ are generated daily;

¹⁹⁸ <http://motherboard.vice.com/read/why-drivers-and-riders-hate-uberpool-and-lyft-line>

- Congestion has resulted in losses to local businesses and government taxpayers impacted by it, with additional time and public funds spent on road repair, while labor force activity, business and government operations are negatively impacted by traffic jams and gridlock;
- Congestion is further exacerbated by TNCs' usage of so-called "surge pricing" due to the incentive for all or most part-time on demand economy TNC vehicle drivers being fiscally rewarded by working already congested areas during peak business period (a/k/a rush hour in central business districts of urban environments);
- Urban areas are projected to continue growing at a rapid rate, and, as a result, policy makers must take into consideration how they will allow TNCs to continue to grow to avoid a "collision course" with environmental and sustainability policy; and
- Although TNCs and regulators have embraced the concept of "ridesharing" and TNCs have sought to capitalize on that term by promoting services such as UberPool and Lyft Line, the reality is that there is not much sharing going on—trip requests are generally one-to-one like other for-hire services.

IV. TNCs' Lack of Social and Corporate Responsibility

TNCs market themselves as socially-conscious brands that help boost the local economies in which they operate. For example, one of the pages on Uber's own website is called "helping cities" where it makes the overarching boast "Uber helps revitalize local economies."¹⁹⁹ However, as will be shown below, a closer analysis of Uber's tax practices reveals a highly sophisticated crafted web of tax avoidance with a far-reaching magnitude. Uber's business model and structure is built in such a way to allow it to minimize its tax liability by keeping hundreds of millions of dollars away from the markets it operates in while avoiding domestic taxes on foreign endeavors, all despite Uber being a domestic San Francisco-based company. Not only does this practice minimize its Value Added Tax ("VAT") and corporate tax liability, but in some jurisdictions Uber unfairly places its sales tax burden on its drivers alone with very little accountability.

Recently, the world's largest economies, through the Organisation for Economic Co-operation and Development ("OECD"), launched a project entitled Base Erosion and Profit Sharing ("BEPS"), acknowledging that large multinational corporations such as Uber, Google and Amazon are avoiding taxes through tax shells and havens, as well as through attempts to reform the international tax system to affect tax avoidance.²⁰⁰ Conversely, local for-hire transportation providers such as taxicabs and black car services are not privy to these tax structures and are thus obliged to pay their local taxes, increasing their cost burden and forcing them to charge higher fares than the TNCs are able to offer, putting them at a competitive disadvantage simply because they are fulfilling their civic duty. An additional consequence arises as Uber's tax strategies deprive the localities in which they operate of significant revenue, resulting in a large potential loss of services to be offered to the public, including to those who require these services the most.

A. TNC Tax Avoidance Practices

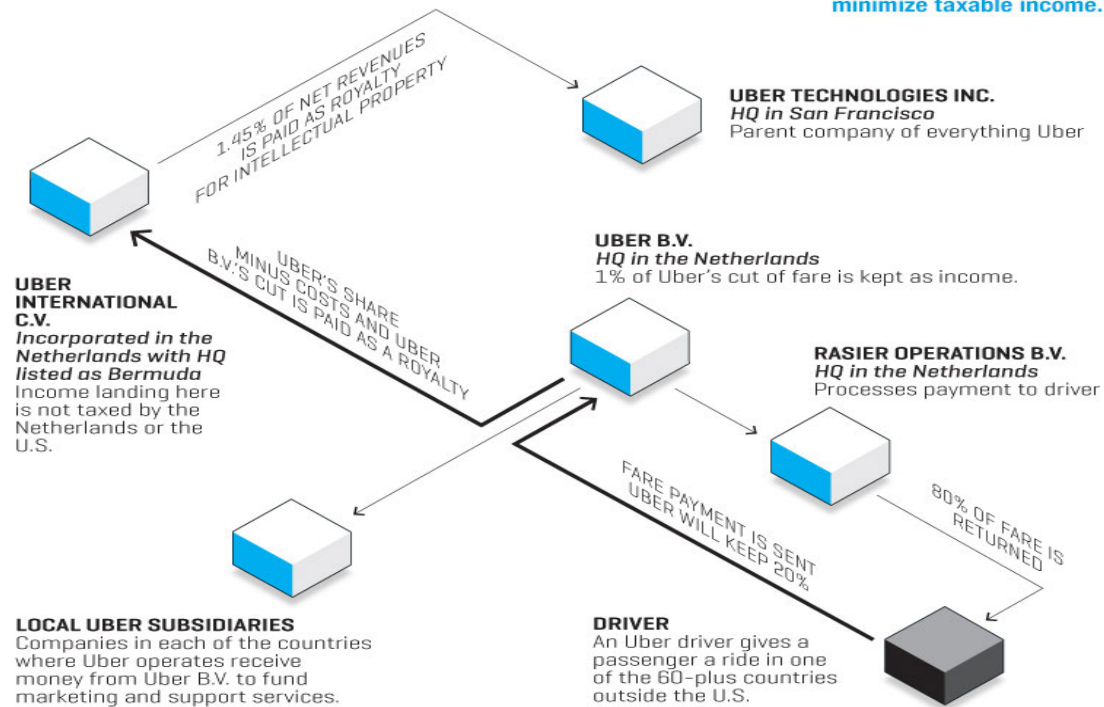
Through the years, Uber has created a complex web of global subsidiaries, limited partnerships and holding companies, and has entered into separate and distinct agreements with these entities, in order to shield itself both from taxes in the foreign jurisdictions it operates in and domestic taxes on foreign income. The following diagram by Fortune Magazine depicts the tax minimization business structure utilized by Uber:

¹⁹⁹ <https://www.uber.com/helping-cities/>.

²⁰⁰ <http://www.oecd.org/ctp/beps.htm>.

REVENUE DO-SI-DO

Beyond America's borders, Uber has set up a string of subsidiaries, many in the Netherlands, that effectively minimize taxable income.



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As is depicted in this diagram, most of Uber's foreign operations utilize a "double-dutch" tax structure in which the local branch of the company, such as Uber London, is actually owned by Uber International Holdings, B.V., located in the Netherlands, which is in turn owned by Uber International B.V. ("Uber B.V."), also located in the Netherlands.²⁰² All payments made by passengers in London go directly to Uber B.V., allowing Uber to escape both the 20% U.K. VAT and corporate tax. Uber B.V. then remits a small percentage to Uber London to cover the costs of marketing and support services, and forwards the rest of the income as a royalty payment to Uber International C.V. ("Uber C.V."), to yet another subsidiary incorporated in Bermuda²⁰³ where the corporate tax rate is 0%. Uber C.V. pays 1.45% of its income as a royalty for intellectual property to Uber's San Francisco-located flagship company Uber Technologies Inc., while the remainder remains in Bermuda tax-free.²⁰⁴ Thus, Uber only pays domestic taxes on the royalty fees its international subsidiaries remit.

Has anything been done as a result of Uber's tax avoidance scheme? The issue was raised by UK House of Commons Member of Parliament Margaret Hodge in a letter to the Mayor of London.²⁰⁵ Additionally, the London Private Hire Car Association ("LPHCA"), representing 15,000 minicab drivers, submitted a letter to the Chief

²⁰¹ <http://fortune.com/2015/10/22/uber-tax-shell/>.

²⁰² <http://www.48hills.org/2014/07/10/ubers-tax-avoidance-strategy-costs-government-millions/>.

²⁰³ Note that while the diagram states that Uber C.V. is incorporated in the Netherlands, additional research demonstrates that it is incorporated in Bermuda. See <https://www.scribd.com/doc/232316997/Uber-International-CV-1-of-4>.

²⁰⁴ <http://fortune.com/2015/10/22/uber-tax-shell/>.

²⁰⁵ <http://www.bbc.com/news/business-28615392>.

Executive and Permanent Secretary of Her Majesty's Revenue & Customs (the "HMRC") requesting a probe into Uber's tax structure, claiming that it is "tax avoidance on an industrial scale."²⁰⁶ In a letter response, the HMRC explained that as of January 1, 2015, digital services are now taxed the VAT in the customers' Member State, rather than in the supplier's Member State, and that an electronic service must be conducted entirely automatically with little or no human intervention. The letter goes on to explain that in the case of a supply of transport the VAT is due in the Member state in which the journey takes place.²⁰⁷ Accordingly, Uber should be collecting and remitting VAT for all services provided in the UK to the UK, yet it still seems to presume to not be liable for this tax. Additionally, the UK enacted a "Diverted Profit Tax" under the Finance Act of 2015²⁰⁸ that taxes income generated in the UK but collected abroad (usually in a tax haven state); while Google and Amazon have both agreed to pay this Tax, there has been no mention of Uber's compliance.

Another method of tax avoidance employed by Uber is exemplified by its operations in Canada. Most goods and services in Canada are subject to the Goods and Services Tax ("GST"), and, in some provinces, the federal GST is combined with the provincial sales tax to form one Harmonized Sales Tax (the "HST"). Few goods and services are exempt from HST or have a 0% HST rate; a person or entity is, however, exempt from HST if it has "small supplier status," which is maintained as long as a person, partnership or corporation has gross sales that are less than \$30,000 per any four consecutive quarters of a year, or in any one-quarter year. Once the \$30,000 threshold is passed within one quarter or in a fiscal year, small supplier status is lost, and the person, partnership or corporation must register with the Canadian Revenue Agency ("CRA") and begin paying HST.

The CRA does not permit either a taxicab or a limousine provider to claim small supplier status, and each is required to register for GST/HST from the date it initially provides its services, and must remit the tax for each fare. The CRA defines a taxicab business as "a business of transporting passengers by taxi for fares that are regulated by federal or provincial laws."²⁰⁹ Some provinces give the authority to regulate taxicab fares to local municipalities; however, the taxicab provider is still provincially regulated by the CRA, and therefore the HST applies. Even though they do not have meters, limousines are considered taxicabs by the CRA since the government regulates limousine fares.²¹⁰

TNCs currently operate outside the law in Canada (except for Toronto, Edmonton and Calgary) as they purportedly contravene municipal and provincial laws by transporting passengers for hire without being properly licensed in most jurisdictions. However, as a registered business in Canada, Uber is still liable to pay the HST for the

²⁰⁶ <http://www.ft.com/cms/s/0/c63f9500-1965-11e4-9745-00144feabdc0.html#axzz3tIGY9fuM>.

²⁰⁷ Letter from Lin Homer, Chief Executive of Her Majesty Revenue & Customs to Steve Wright, Chairman of Licensed Private Hire Car Association, dated January 28, 2015. Full quote:

"When digital services are supplied to a UK VAT-registered customer, they must account for UK VAT as a reverse charge. Electronic services are automatically-delivered over the internet or an electronic network, with little or no human intervention. A service that is not automatically-delivered electronically is not an electronic service, even if the supplier uses the internet or other electronic means to communicate or facilitate trading. The rule changes do not affect supplies of transport. VAT will still be due in the Member State in which the journey takes place. The VAT treatment of any commission payments will depend on a number of factors, including whether the recipient is based in the UK and whether an individual or a business is paying the commission."

²⁰⁸ <http://www.legislation.gov.uk/ukpga/2015/11>.

²⁰⁹ <http://www.cra-arc.gc.ca/tx/bsnss/tpcs/gst-tps/txlmns/menu-eng.html>.

²¹⁰ *Id.*

services they provide. Under the CRA's definition, TNCs would not be considered taxicabs or limousines because the government currently does not regulate their fares. Therefore, the standard HST applies to a TNC's services if it earns more than \$30,000 per quarter or per fiscal year.

Uber, for example, claims that it has factored the HST into the fares charged to each passenger and that it is the driver's responsibility to remit the tax to the CRA. Uber receives the full payment through its digital network, pays itself first, and then subsequently pays its driver the remainder, who is responsible for the HST. For example, if a passenger is charged \$100 for a ride, Uber receives the entire fare (\$100) and then pays the driver his or her portion. The driver is then required to pay the HST/GST rate on the total fare (13% of \$100) even though he or she has only received a portion of the fare after Uber collects its own portion. Essentially, Uber's drivers are required to pay the full tax while Uber itself benefits from taking its percentage from an increased fare (because the fare was increased to factor in the HST/GST) while not paying the HST/GST on the percentage it collected.

Uber may argue that it does not provide transportation services in Canada, in that it is merely the platform based in the United States that is utilized to connect the drivers and the passengers, and to facilitate the transaction in Canada. Regardless, it is arguable that Uber is still liable to remit the HST for the revenue it collects for providing the income opportunity to its drivers in Canada via the platform. In the United Kingdom, for example, Uber has even experimented with calling the drivers "Customers" and stating that drivers are paying Uber to allow them to use the platform.²¹¹ In Uber's own words, the portion of the fare that Uber collects is called a "service fee;" thus, Uber admits that it is providing a service for which it receives payment. Whether Uber's drivers are "Partners" or "Customers," it appears that Uber may have an obligation to pay the HST to the CRA for the portion of each fare received from Uber passengers.

Moreover, even though Uber claims that the HST is calculated into each fare charged to its passengers, Uber does not present this to its passengers in the fare estimates on its website²¹² or within the mobile application, nor is it itemized on the receipts received after each transaction, possibly raising a transparency issue between Uber and its passengers. Additionally, Uber's claim that it enables "driver-partner-friendly economics" is puzzling. Since drivers are not provided the breakdown of taxes-to-income for each fare, they must calculate how much HST they have to remit for each fare themselves. Consequently, drivers may be left with the burden of having to pay more than their share of the HST, without any assistance from the TNC to calculate said share, or any mechanism of oversight to ensure that they are, in fact, remitting the proper amount of the HST.

It should be noted that drivers who operate as independent contractors are only liable to collect the HST if their own personal income reaches more than \$30,000. According to Uber, the majority of Uber's drivers work less than 10 hours per week, therefore most drivers may never need to remit the HST to the CRA. The possibility exists that the HST may be calculated in the fare (which, as stated above, is neither paid by Uber directly to the CRA nor paid by an Uber driver because he or she has not reached

²¹¹ <http://www.theguardian.com/technology/2015/nov/16/uber-worlds-biggest-ride-sharing-company-no-drivers>.

²¹² <https://www.uber.com/cities/toronto>.

the \$30,000 income threshold), thus exposing Uber's passengers to the risk of being overcharged to include a tax that is never remitted to the CRA.

B. Harmful Effects of TNC Tax Practices

Governments around the world are waking up to the reality that the largest, most profitable companies in the world are hoarding massive amounts of revenue in their jurisdictions without paying their fair share of taxes, robbing nations of billions of dollars of revenue annually. The Organisation for Economic Co-operation and Development ("OECD"), in collaboration with the Group of Twenty ("G20"), launched the Base Erosion and Profit Sharing ("BEPS") Project in 2013, and issued their final reports and recommendations in 2015 which concluded that national tax laws are outdated in today's interconnected world. The report explains that with the rise of the digital economy, global corporations and fluid capital movement the current national tax laws leave gaps and mismatches that could be exploited to generate double non-taxation undermining the integrity and fairness of tax systems. The practice of utilizing tax planning strategies to exploit the gaps and mismatches in tax rules, artificially shifting profits to low or no-tax locations despite little or no economic activity at said location, to achieve little or no overall corporate taxation is referred to as BEPS.²¹³ Further, the OECD estimated that global revenue losses from BEPS are between \$100 billion and \$240 billion annually, equivalent to between 4% and 10% of global revenues from corporate income tax.²¹⁴ To further highlight the destructive effects Multinational Enterprises' ("MNEs") use of BEPS (i.e. Uber's tax minimization business structure), the OECD/G20 further explained that BEPS is harmful to everyone; to the governments by reducing tax revenues and raising the cost of ensuring compliance; to the people because they must shoulder a greater tax burden on their own; and even the MNEs utilizing BEPS risk reputational harm from the public when they discover that their tax practice create an uneven playing field for competing domestic companies who are forced to comply with the taxes avoided by the MNE.²¹⁵

For even more perspective, PricewaterhouseCoopers estimates that the so-called "sharing-economy" businesses generated \$15 billion in revenue in 2014 and are expected to reach \$335 billion in 2025.²¹⁶ Uber is currently valued at more than \$62.5 billion²¹⁷ and has generated \$1.5 billion in net revenue in 2015 alone.²¹⁸ In an opinion piece in *The Guardian*, Evgeny Morozov states:

"To put it bluntly: the reason why Uber has so much cash is because, well, governments no longer do." Instead, this money is parked in the offshore accounts of Silicon Valley and Wall Street firms... Compare this with the dire state of affairs in which most governments and city administrations find themselves today. Starved of tax revenue, they often make things worse by committing themselves to the worst of

²¹³ <http://www.oecd.org/ctp/beps-about.htm>.

²¹⁴ <http://www.oecd.org/ctp/policy-brief-beps-2015.pdf>.

²¹⁵ <http://www.oecd.org/ctp/policy-brief-beps-2015.pdf>.

²¹⁶ <http://www.bloomberg.com/news/articles/2016-04-06/the-sharing-economy-doesn-t-share-the-wealth>.

²¹⁷ <http://www.theguardian.com/commentisfree/2016/jan/31/cheap-cab-ride-uber-true-cost-google-wealth-taxation>.

²¹⁸ <http://www.businessinsider.com/report-uber-15-billion-revenue-in-2015-2016-1>

austerity politics, shrinking the budgets dedicated to infrastructure, innovation, or creating alternatives to the rapacious 'platform capitalism' of Silicon Valley."²¹⁹

The lost revenue to government translates into the public's loss in investment in infrastructure, and services such as health care. These losses are further compounded by TNCs through their increased vehicle usage causing road damage and increasing the carbon footprint to the detriment of the public's health. Not only are these actions causing harm to the public, the TNCs may not be paying their fair share of the costs of the repairs. Furthermore, TNCs may argue that their tax practices are legal, but one has to question if these practices are ethically and socially responsible.

C. Conclusions

In sum, not only does Uber's tax structure deprive nations of their fair share of tax revenue, but it allows Uber to charge lower rates than the native private for-hire service providers that operate in and from their local jurisdictions. These local taxicab and for-hire vehicle companies pay taxes to local governments benefiting their local economies; however, with the introduction of TNCs to the market and their implementation of the above-described tax schemes, these local companies are rendered at a disadvantage because the cost of compliance with the taxes results in an increase in their fares and granting TNCs an unfair competitive advantage. Without the advantage of a tax structure such as one employed by Uber, local taxpaying competitors are forced out of business, further decreasing the tax revenue to the government and denying important and critical services to the populace that rely on them, resulting in the following:

- TNCs market themselves as socially responsible businesses when, in reality, they have built a highly sophisticated crafted web of tax avoidance depriving cities and nations out of hundreds of millions in tax revenue;
- Local taxicab and for-hire vehicle transportation providers are obliged to pay their local taxes, which increases their cost burden and forces them to charge higher fares than the TNCs are able to offer, putting the traditional industry at a competitive disadvantage for fulfilling its civic duty;²²⁰ and
- Without the advantage of a TNC's tax structure, local taxicab and for-hire vehicle providers are forced out of business, further decreasing the tax revenue to the government.

²¹⁹ <http://www.theguardian.com/commentisfree/2016/jan/31/cheap-cab-ride-uber-true-cost-google-wealth-taxation>

²²⁰ In some cases, TNCs pass along the tax burden to drivers while keeping the non-taxed portion of the bulk of the fare.

V. Not Sharing in the Sharing Economy –The TNC Gig Worker and Economic Disadvantage

A. Understanding the Sharing Economy - What is Being Shared?

The sharing economy has a voluminous definition that impinges upon supply and demand of an asset and its variable access by unlocking the value of unused or under-utilized assets benefiting both agents that are party of the transaction. For example, the sharing economy is defined as “*an economic model in which individuals are able to borrow or rent assets owned by someone else*” with the underlying assumption that the transaction is one that originates from underutilization of an asset.²²¹ Another definition highlights the sharing economy as “*an economic system in which assets or services are shared between private individuals, either for free or for a fee, typically by means of the Internet.*”²²² However, the genesis of the term can be traced back to the early days of the internet and the peer-to-peer data sharing community.

Peer-to-peer exchanges of goods and services have been represented as an essential part of the new economic growth model in most economies, allowing an excess surplus of goods and services to be exchanged in an income-generating technology platform that circumvents the traditional market and are fueled by innovation and novice technological startups. The value proposition of this peer-to-peer model consists of creating a match, at the right time and absorbing reasonable transaction costs, between a peer *owning* a particular resource and a peer *in need of* that resource.²²³

The internet-based peer-to-peer model of exchange rose to prominence in the late 1990s with the advent and expansion of the music sharing platform, Napster, which allowed audio files to be shared by autonomous users. Napster’s platform was designed in a way that would only serve as a conduit between two peer-to-peer file locations in order to avoid, at least for a short time, potential copyright infringements. The peer-to-peer model of audio file exchange came to an end following a United States District Court decision that found Napster liable for contributory and vicarious infringement of the plaintiffs’ copyrights (A&M Records, Inc. v. Napster, Inc.), laying the groundwork for more elusive peer-to-peer sharing models to proliferate online in a decentralized manner and resulting in both the continued evasion of accountability and anticipated demise of the traditional music recording industry.

The concept of the current sharing economy derived its roots from the Napster type of peer-to-peer model of economic exchange; however, it is practical to conclude that the coining of the phrase “the sharing economy” is now more of a linguistic parlance to attach a social aspect of the peer-to-peer practice with the aim of distancing itself from the Napster debacle. In the past few years, several economic elements have driven the growth of the global sharing economy on the back of the economic downturn that resulted from the global financial crisis. For example, high unemployment rates that reduced the purchasing power of consumers and forced people to find new ways to earn

²²¹ <http://www.investopedia.com/terms/s/sharing-economy.asp>

²²² <http://www.oxforddictionaries.com/us>

²²³ <http://ec.europa.eu/DocsRoom/documents/13413/attachments/2/translations/en/renditions/native>.

or save money led to an acceptance of peer-to-peer business models centered on consumer needs for suppliers and customers. Further, the necessary technology for hosting an online peer-to-peer market has, in recent years, become available at a more reasonable cost with a smartphone device that is capable of processing large amounts of date and location based goods and services offering.

The widely-utilized business model deployed by companies that identify themselves as part of the sharing economy features an online marketplace through which the demand for certain goods or services amongst customers is matched with those who own those goods and services. Differentiation strategies are based on the mechanism that drives matchmaking (matching supply and demand of these goods and services), which can be either demand-driven, supply-driven or a combination of both. However, the common characteristic of these companies is the actual *lack of sharing* and the presence of an exchange of goods and services. One factor for the non-existence of sharing of goods and services in this model is the customers' own disinterest in sharing goods or services they own in lieu of their preference to opt into purchasing rather than sharing. As such, companies that started out as part of a true sharing economy model requiring human interaction to share excess goods or services either depleted their seed funding or morphed into an odd menagerie of companies with little in common with how they initially promoted themselves and their initial focus on a sharing surplus.

In reality, a sharing economy model that is true to its essence successfully operates by enabling groups of individuals to co-own and share resources while enjoying their use based on pro-rated ownership stakes. The sharing dynamics also necessitate members of the group to share not only their resources, but their knowledge, decision-making responsibilities, and the abundance stemmed from the collective. For example, in agrarian societies, small farms may choose to purchase farming equipment by pooling their resources and sharing in both the equipment's maintenance costs and use throughout the year. The costs and benefits of the farming equipment are proportionally distributed among members, thus creating an equitable utilization. Similarly, a timeshare, whereby a group of individuals own shares in a piece of property, share the use and cost of the property under a timeshare agreement that will dictate the rights and responsibilities of the individuals. In these sharing models, the one absent component is the profit generated by the entities that facilitate either the sharing of the farm equipment or the ownership of the timeshare property. As such, real sharing models operate distinctly from profit-seeking entities that specialize in, for example, vacation rentals (i.e. Airbnb) or smartphone apps for widely unregulated for-hire vehicle services (i.e. Uber).

The sharing economy concept that resulted in the birth of entities such as Kickstarter (a platform that raises financing to fund various goals among many contributors), Airbnb (an advertisement website for homes that charges customers seeking lodging by the night, not unlike a hotel), and companies like Uber and Handy (that utilize the labor of "independent contractors" paid by the hour or mile to provide services), does not, in fact, emulate a true "sharing economy" like the models discussed above. These companies, while initially operating as platforms to encourage social interaction and create economic efficiency by reducing waste, have now morphed into businesses that profit from the facilitation of the exchange of goods and services, with less, or no, emphasis on sharing surplus. In short, there is nothing these companies share

in a “shared economy” model, and the transpiring of exchanges of goods and services are equivalent to the normal market economy setting where these goods and services are geared towards profit-generating customers that happen to be technology-savvy.

After an extensive review of the models of the current arrangements of what is referred to as the “sharing economy,” Bardhi and Eckhardt,²²⁴ in their analysis of the phenomenon, argue that:

*“Sharing is a form of social exchange that takes place among people known to each other, without any profit. Sharing is an established practice, and dominates particular aspects of our life, such as within the family...When “sharing” is market-mediated — when a company is an intermediary between consumers who don’t know each other — it is no longer sharing at all. Rather, consumers are paying to access someone else’s goods or services for a particular period of time. It is an economic exchange...”*²²⁵

The authors conclude that this economic exchange is one that should, in actuality, be termed the “access economy,” where consumers are more interested in lower costs and convenience than they are in fostering social relationships with the company or other consumers. In other words, customers are paying to access goods and services that, in no way, contemplate sharing as a form of social exchange, and, in fact, evidence a disinterest by customers in engaging in sharing.

Furthermore, there are no conceptually identifiable “sharing” characteristics in the traditional market exchange platforms exhibited by most companies that identify themselves as part of the “sharing economy.” For example, both a person paying for lodging at a hotel -- either by directly walking into the hotel or through a travel agent -- and an online platform that enables access to similar lodging (either at a hotel or a room that is made available by an individual) are facilitating the booking process of a room regardless of who owns the room. Essentially, a company that facilitates the booking process of the room in the realm of the so-called “sharing economy” (i.e. Airbnb) and a hotel in the traditional market setting provide a similar service utilizing different service-delivering mechanisms.

In the realm of transportation, TNCs claim they are a “ridesharing” platform and should not be regulated in the same way taxicabs and for-hire vehicles are licensed and inspected by government entities. However, an analysis of the so called “ridesharing” service provided by TNCs makes it clear that drivers are selling both their skills as drivers and a seat at the back of their vehicles, while passengers are simply paying to access the drivers’ skills and the empty seats. In other words, drivers are renting out both the back seat of their vehicles and their time to implement their driving skills without any “sharing.” Consequently, the above analysis of the current state of the sharing economy and its spurious supposition that companies that form the TNC model are facilitating “sharing” among people proves the supposition to be nothing less than a marketing ploy. For example, Lyft started out facilitating rides with a “suggested donation” economic platform while claiming a significant space in the “sharing economy” narrative, which

²²⁴ Fleura Bardhi and Giana M. Eckhardt. *Access-Based Consumption: The Case of Car Sharing*. Journal of Consumer Research, December 2012.

²²⁵ University of Chicago Press Journals. "Sharing isn't always caring: Why don't consumers take care of their Zipcars?." ScienceDaily. <www.sciencedaily.com/releases/2012/07/120716191449.htm> (accessed March 29, 2016)>.

lasted for only a few months; Lyft is now a typical for-hire vehicle company disguised as a smartphone app that competes with Uber and other TNCs on price, coverage area and driver participation. Similarly, Uber, which attempts to focus the conversation on how it is allegedly reducing the number of vehicles on the street while “providing transportation so inexpensive and reliable, people can actually sell their cars,”²²⁶ is a company focused on the short-term car-ride market (which is a broader definition of a service provided by taxicabs or any other for-hire vehicles), and is driven by pricing and technological convenience that attracts customers (and not any vehicle “sharing” model, as, other than its UberPool service, Uber does *not* otherwise provide vehicle sharing).

As discussed in previous sections, the UberPool Lyft Line (Uber and Lyft’s models, respectively) are the only two conceptually-accurate rideshare services that are currently provided by both companies. Both services were introduced in 2015, despite the companies calling themselves rideshare services 3 years prior to the launch of UberPool and Lyft Line. As such, it could be argued that the introduction of these new classes of services many years after the companies’ portrayal of their core business as a “rideshare” service is nothing more than a misleading marketing scheme to silence critics of the companies’ misuse of the term, rather than a holistic business strategy to create a for-hire vehicle sector that efficiently utilizes vehicles and ride requests by matching passengers with available vehicles to encourage “real-sharing.” In fact, when Uber launched its first service, it claimed its car service was “everyone’s private driver,” and a luxury private car company, rather than a company that attempts to bridge the inefficiencies in the for-hire sector. To its core, Uber’s utilization of ridesharing is a marketing convenience rather than a decision that was based on the reduction of disparities of service in the sector.

B. The Cost of the Sharing Economy

Unlike the free access the peer-to-peer model provides to customers, which managed to drive traffic to its web pages to generate revenue through advertisements, the current “sharing economy” has resulted in cheap pricing for access and the proliferation of ever-smaller jobs (“gigs” and “micro-gigs”) where worker income is declining, with no safety net, while companies profit. In the process, small companies that pay taxes, employ a local workforce, and follow rules and regulations set out by local regulatory bodies to operate, may be decimated as a result of the imbalance that is prompted by the app based companies partially unregulated business activity and a simple market take-over.

The companies that have taken advantage of the new “sharing economy” approach have managed to reduce operating costs by utilizing workers under a contractual relationship that classifies these individuals as independent contractors, and not employees. This relationship, which is exemplified by TNC drivers as well as, for example, cleaners and handymen of the smartphone app Handy, has reduced the cost of doing business significantly and allows the companies to extract all the benefits from the relationship while burdening the worker and society at large with the externalities that emanate from the independent contractor model.

²²⁶ <https://newsroom.uber.com/announcing-uberpool/>.

According to reports, the utilization of workers that are not employees lowers labor costs dramatically, often by 30 percent, as the company is not responsible for health benefits, social security, unemployment insurance benefits, workers' compensation, paid sick or vacation leave, and more.²²⁷ Some workers in the current "sharing economy" model, who are barred from forming unions and have no grievance procedure, can be dismissed without notice. As far as the company is concerned, this is the most ideal operating strategy to drive up net revenue while providing the service at a lower cost, enabling it to attract new customers enamored by the low price for the service while stealing the customers of their competitors who utilize an employee-employer model.

The worker classification model is so integral to the success or failure of the business of these companies that are in the realm of the current "sharing economy" that the threat of litigation usually generates a concern from their investors and, at times, results in a complete closure of a company. For example, Homejoy, a cleaning company smartphone app with over \$60 million in funding that relied on independent contractor workers, were forced to suspend its services after four employees filed a lawsuit claiming they were, in fact, wrongly classified as independent contractors. According to the CEO of the company, the "deciding factor" in the service suspension was the resulting litigation.²²⁸

The expansion of the current "sharing economy" model has also been cited as a significant factor in the decline of the quality of today's jobs as many employers are increasingly relying on a growing number of independent contractors, freelancers, temps and part-timers, collectively termed as "the disposable workforce."²²⁹ Companies that benefit from this worker relationship arrangement argue that the jobs are being performed by individuals in their off hours to supplement income from a more stable position of employment. However, many of these workers, in fact, depend on these jobs for all of their income, whether from a single company or by attempting to piece together a living wage from several such positions.

In the TNC model, most drivers utilize both Uber and Lyft to receive trips in addition to dispatched trips from traditional limousine and black car companies with corporate clients. Some question if companies that fail to provide adequate protections for their workers should even be permitted to conduct business, considering the social cost generated by these companies is not being priced into their cost model and their activities do not reflect the existence of a market failure. This is clearly evident in the price war between TNCs to a level where drivers are forced to accept work below their optimum marginal cost and benefits. In reality, the fare that has been quoted by TNCs in their marketing ploy to attract passengers does not reflect the cost associated with providing the transportation service, which again raises the question as to whether these companies should qualify to exist at all without accounting for the total cost they externalize to drivers and society at large. One explanation for this distorted cost model utilized by TNCs is their founders' potential exit strategy through an Initial Public Offering²³⁰ (IPO), which is misaligned from market realities and profitability. Essentially, current owners and investors of TNCs are more interested in increasing the

²²⁷ Steven Hill (2015). Raw Deal: How the "Uber Economy" and Runaway Capitalism Are Screwing American Workers.

²²⁸ <http://www.forbes.com/sites/ellenhuett/2015/07/23/what-really-killed-homejoy-it-couldnt-hold-onto-its-customers/#5c54c117114c>.

²²⁹ <http://www.zerohedge.com/news/2015-12-30/rise-temp-economy-more-us-employers-ever-want-disposable-workforce>.

²³⁰ An initial public offering (IPO) is the first sale of stock by a private company to the public.

number of their affiliated drivers and vehicles in order to push their company's valuation, which would strengthen their exit strategy through an IPO and drive their return on investment.

C. TNCs' Impact on the Environment and the Labor Market

The expansion of TNCs has come with a heavy cost affecting both the environment and the labor market, which both independently and holistically exacerbate the issues. For example, the reason TNC drivers arrive so rapidly in most cities - and passengers are exposed to multiple vehicles waiting to receive their call on TNC's smartphone app - is because these companies have literally flooded the streets with an excessive amount of vehicles resulting in severe traffic. According to a review of Uber data by a New York City-based transportation analyst, Uber-caused congestion has reduced traffic speeds in downtown Manhattan by around 8%.²³¹ This result is not surprising when one considers the rate at which TNCs are increasing the number of vehicles on New York City's streets. As such, there are now over 35,000²³² Uber cars operating in New York City than there are yellow taxis,²³³ in fact, Uber vehicles and those of Lyft also now vastly outnumber taxicabs in several American cities.²³⁴ For example, in San Francisco, Uber and Lyft have a combined estimated 15,000 vehicles on the streets, and according to San Francisco's Director of Transportation for the city's Municipal Transportation Agency, TNC vehicles are "contributing to the increased traffic" in the city.²³⁵ The TNC growth model that relies on an expedited arrival time has resulted in TNCs having to increase the number of their vehicles expeditiously, affecting traffic movement and the environment while increasing the number of workers with no protection and benefits otherwise available to their counterparts in traditional transportation businesses.

With regard to labor issues, in addition to the possible misclassification of TNC drivers as independent contractor, claims by TNCs that their drivers generate significantly more income than taxicab and for-hire vehicle drivers are contradicted by reports that have analyzed TNC driver income. Previously, Uber claimed that the median annual income of a driver in New York City was \$90,000 in "business income," without taking into account the real economic costs to drivers, such as vehicle loan payments, fuel, vehicle maintenance, car insurance and health insurance. Further, the Uber-reported "business income" earned by its drivers failed to include the number of hours drivers needed to work in order to generate this income. One report that reviewed Uber drivers' income and actual driving expenses postulates that Uber drivers do not, in fact, earn more than taxicab drivers.²³⁶ However, it should be noted that Uber's surge price model has proven to be a significant incentive to drivers to boost their income at the expense of the passenger who is forced to pay more than that of a taxicab trip.

Furthermore, many Uber drivers complain that in addition to their failure to earn minimum wage or receive any benefits, their situation is hampered by the fact that they

²³¹ <http://www.streetsblog.org/2015/07/22/ubers-own-data-reveals-it-slows-manhattan-traffic-9-percent/>.

²³² <http://www.theverge.com/2016/2/1/10888734/uber-driver-strike-nyc-fare-cut-february-2016>.

²³³ <http://nypost.com/2015/03/17/more-uber-cars-than-yellow-taxis-on-the-road-in-nyc/>.

²³⁴ <http://www.dailypress.com/business/dp-tidewaterbiz-ridesharing-20150724-story.html>.

²³⁵ <http://www.sfgate.com/bayarea/article/S-F-traffic-Numbers-don-t-show-why-it-really-6268436.php>.

²³⁶ http://www.huffingtonpost.com/steven-hill/sharing-economy-american-workers_b_9018724.html.

can be disconnected from the Uber app platform at any time without any recourse, thus leaving them with expensive car loan payments. This is evidenced by Uber's recent disconnection of hundreds of drivers in California and claiming that the disconnected drivers' "acceptance rate" was too low.²³⁷ It has also now dawned on many of Uber's drivers that began working for the company since its early days that, given the dramatic increase in congestion, they earn little to no income on short rides because they are stuck in traffic, and their subsequent refusal to accept short rides has resulted in Uber terminating many of these drivers without warning.

Driver turnover, according to Uber's self-reported numbers, reflects that about half voluntarily terminate their relationship with Uber within a year of registering as a driver with it, and new drivers, who initially were enamored with the promise of income-earning flexibility, burn out and walk away angered with frequent wage cuts and unfair treatment.²³⁸ In January 2016, Uber continued its trend of slashing fares, this time by 30% to about 50% per mile, which resulted in less than the \$0.54 reimbursement rate set by the government for wear and tear on a vehicle.²³⁹ In sum, many drivers are simply unable to earn enough to reimburse their vehicles' depreciation, let alone making a living out of driving for Uber. This incident, combined with other Uber practices, demonstrates that the company exerts a certain control over its drivers that seems to support the legal claim by thousands of drivers who are suing Uber insisting they are indeed employees and not contractors.²⁴⁰ This is evidenced by both Uber and Lyft's decisions to settle with drivers in California and Massachusetts who contended that they should be treated as employees and not independent contractors.²⁴¹

The utilization of the independent contractor model in the for-hire vehicle sector is something that precedes the new app based technology companies use of the model. In the taxi sector where drivers are able to lease medallions or licenses from owners of these permits or fleet operators, the independent contractor model has enabled a clear demarcation of rights and responsibilities of the owners of the taxi licenses and the drivers in a clear method, where the legal relationship between the two has been limited to the lease and utilization of the license. In the for-hire sector, despite the existence of an employee-employer model preferred by some companies, most for-hire vehicle companies conduct their business under "a true" independent contractor model. For example, a driver may own his vehicle but enter into a contractual relationship via a contract with an FHV company that provides the driver a radio dispatch and other communication equipment. The driver is engaged with the FHV company to provide a service that is generated by the FHV company where the driver enjoys full control of his/her working hours, types of work, and the length and extent of his engagement with the FHV company.

As discussed above, drivers in the for-hire sector in most U.S. jurisdictions are considered independent contractors not employees. This has been well settled in many courts around the country. For example, in *Saleem v. Corporate Transportation Group*,

²³⁷ <http://therideshareguy.com/uber-deactivated-a-bunch-of-drivers-as-an-intimidation-tactic/>.

²³⁸ <http://www.businessinsider.com/uber-drivers-say-theyre-making-less-than-minimum-wage-2014-10#ixzz3W1mRyYXC>.

²³⁹ <http://www.tampabay.com/news/transportation/ubers-low-fares-spark-backlash-drivers-protest-pay-cuts-customers-may-face/2261405>.

²⁴⁰ <http://www.reuters.com/article/us-uber-tech-drivers-lawsuit-idUSKCN0R14O920150901>.

²⁴¹ <http://www.reuters.com/article/us-lyft-lawsuit-drivers-idUSKCN0Y22PJ>.

Judge Jesse Furman of the Southern District of New York held that drivers for a group of “Black Car” companies were properly classified as independent contractors, not employees.²⁴² The Court applied the “economic reality” test for whether the drivers were employees or independent contractors under the Fair Labor Standards Act (FLSA). The factors were: (1) the degree of control exercise by the employer; (2) the workers’ opportunity for profit or loss; (3) the degree of skill and independent initiative required to perform the work; (4) the permanence or duration of the working relationship; and (5) the extent to which the work is an integral part of the employer’s business.²⁴³

Judge Furman held that the factors overall weighed in favor of independent contractor status. He noted that the drivers:

- Were completely free to set their own schedule of work and were under no obligation to accept a particular job;
- Were free to—and frequently did—work for other car services and provide transportation to private customers;
- Made numerous decisions that affected their overall profitability, such as whether to rent or buy a franchise, whether to hire other drivers, whether to work for other car service companies, and whether to solicit private clients;
- Made substantial investments in their businesses through purchasing franchises as well as on their own private vehicles;
- Exercised a significant degree of independent initiative in order to be a successful driver; and
- Could terminate the franchise agreements at will.²⁴⁴

Although the New York Labor Law (NYLL) test required Judge Furman to assess several additional factors, he reached the same conclusion, that the drivers were properly classified as “all five NYLL factors favor independent contractor status.”²⁴⁵

The issue, however, has not yet been resolved in the courts with respect to TNCs. Uber and the vast majority of TNCs are able to keep their costs low by classifying drivers as independent contractors and refusing to treat its drivers as employees. In addition to minimum wage, overtime pay and having expenses reimbursed, “employees” can also receive unemployment benefits if they are laid off, and have the right to unionize and collectively bargain for better contract terms.²⁴⁶ TNC drivers are not eligible for any of these benefits, and have brought claims across the country to challenge their status as independent contractors, most notably in two class action suits brought by 385,000 Uber drivers in California and Massachusetts.²⁴⁷ Plaintiffs argued that Uber drivers are required to follow a litany of detailed requirements imposed on them by Uber and therefore should be classified as employees rather than independent contractors.

²⁴² *Saleem v. Corporate Transp. Group, Ltd.*, 52 F. Supp. 3d 526 2014 (S.D.N.Y. 2014).

²⁴³ *Id.*

²⁴⁴ *Id.*

²⁴⁵ *Id.*

²⁴⁶ http://www.huffingtonpost.com/entry/legal-problem-could-crash-uber_us_5718d485e4b0479c59d714f6. (Accessed on July 18, 2016).

²⁴⁷ http://www.nytimes.com/2016/04/22/technology/uber-settles-cases-with-concessions-but-drivers-stay-freelancers.html?_r=2. (Accessed on July 18, 2016).

Uber recently agreed to settle the class action for a total of \$100 million, \$84 million now and \$16 million more if the company goes public.²⁴⁸ Lyft is also seeking approval of a settlement with 163,000 California drivers who sued to be treated as employees.²⁴⁹ The deal would pay driver \$27 million but, like in the Uber class action, drivers would remain classified as independent contractors.²⁵⁰ Similar lawsuits have also been filed in Florida and Illinois. If the lawsuits continue to pile on, it may cause TNCs to reconsider how they provide their services.

D. Conclusions

The current mainstream definition of the sharing economy has enabled TNCs to utilize the definitional gap to imprint the notion to the public at large that their service is reducing waste in the market place through allocative efficiency. There has been a widespread claim, under the banner of ridesharing, that TNCs are reducing vehicles on the street, creating new jobs, and servicing areas that suffered from the lack of taxicab service. Most of these claims emanate from self-fulfilling reports that are guided by the TNCs themselves,²⁵¹ or reports that misunderstood the nuances of the for-hire industry and, as a result, fail to record the market realities.²⁵²

As discussed in the preceding parts of this report, the service provided by TNCs is a transportation service where TNC vehicles transport a paying customer from point A to point B. This is exactly the same service that a taxi or an incumbent for-hire vehicle provides for a paying passenger. As such, TNCs are providing more access to the general for-hire market through a technologically-advanced platform than creating a market environment where vehicle owners and passengers are sharing a ride. The consequence of the definitional mismatch, therefore, has resulted in the public granting TNCs the proverbial commanding heights to misdirect the conversation and perception as to the true cost of the alleged sharing economy model. The consequence of the misdirected conversation has now resulted in a work environment in the for-hire vehicle industry sector where some TNC drivers are making less than \$0.55 cents per mile,²⁵³ which is less than the travel reimbursement the IRS determines to be the business travel deductible value for wear and tear of a vehicle, and a driver pool that is increasingly morphing into drivers that have a minimal training and past commercial driving experience. For example, in NYC, a survey conducted by the TLC has found that over 50% of new FHV drivers that are driving for Uber, Lyft, or similar apps, have no prior experience driving for-hire vehicles. This is compared to past driver pool composition where drivers were professionals who are not only licensed by the regulatory agency but also have amassed a lengthy experience.

The result of the decline in driver earning will have a long lasting impact on the industry by discouraging professional drivers from entering the marketplace, and attracting short-term and part-time drivers with very limited skills and experience transporting passengers. In the long run, this may create an environment where the

²⁴⁸ *Id.*

²⁴⁹ <http://www.insurancejournal.com/news/west/2016/06/03/410814.htm>. (Accessed on July 18, 2016).

²⁵⁰ *Id.*

²⁵¹ https://s3.amazonaws.com/uber-static/comms/PDF/Uber_Driver-Partners_Hall_Kreuger_2015.pdf.

²⁵² https://newsroom.uber.com/wp-content/uploads/2015/01/BSG_Uber_Report.pdf.

²⁵³ <http://www.businessinsider.com/uber-drivers-say-theyre-making-less-than-minimum-wage-2014-10>.

quality service provided by the industry could be undone to the detriment of the public at large and to the companies that operate their businesses through a legitimate business model.

In sum, the definitional challenge, exasperated by lack of well-formulated principles and policy from both the academic and regulatory side, has furnished TNCs and apps that rely on the sharing economy theoretical foundation to grow at a rate that outpace the regulatory agencies and the incumbent industry to understand and counter the false narratives propagated. Additionally, most of the success of these companies is enabled by the significant amount of capital they have managed to raise to defeat and counter any forms of discussion as to the merits and novelty of their services. Therefore, this report has attempted to disentangle the definitional gap and provided the correct representation of what is being provided by TNCs as the “access economy.” As such, defining their services appropriately from the outset will permit to tackle all the residual externalities of TNCs and gain the support of the public and help policymakers to legislate appropriate measures that will create an environment where the market is not diluted by inexperienced and dangerous drivers, but will enable existing participants to compete in a market setting where new entrants are restricted from extracting only the benefit of the sector without sharing the cost of doing business. This approach could create an opportunity for innovation and technological changes to take place without creating a barrier that is artificially set as a result of TNCs capital intensive market disruption. This report finds the following:

- The use of the term the “sharing economy” to define the services provided by TNCs has led to a policy divergence in how these services should be regulated;
- TNCs have utilized this definitional mismatch to proliferate their vehicles and drivers in many cities arguing that their service is different from the traditional for-hire services by augmenting the rideshare concept to meet their marketing strategy;
- The source of the definitional mismatch is a deliberate advocacy by TNCs and in part by the media which finds its genesis in the Napster peer-to-peer file sharing model;
- TNCs service is best described as an access economy, where these companies facilitate access to FHV service through their app based platform;
- The cost of the misconstrued sharing economy model is exhibited on the dwindling driver income, where TNCs are inappropriately using the independent contractor model to extract maximum value of relationship with driver leading to driver unrest and multiple litigations;
- TNCs unregulated expansion has also impacted the environment and the labor market with cities being engulfed with thousands of vehicles;
- The continued expansion strategy by TNCs and the reduction of minimum fares has meant that average driver income may be reduced significantly; and
- Driver turnaround and the majority of TNC drivers being part-time has created a driver pool that is overly represented by inexperience, with a direct negative consequence on safety and quality of service on the long run.