University of Brasilia – UnB

Faculty of Law

Priscilla Tardelli Tollini

UBER IN BRAZIL: COMPETITIVE (DIS)ADVANTAGES VIS-À-VIS TRADITIONAL TAXI SERVICES?

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Priscilla Tardelli Tollini

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Supervisor: Prof. Dr. Paulo Burnier da Silveira

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Examination Committee

_____

Prof. Dr. Paulo Burnier da Silveira

(Supervisor – Professor at the University of Brasilia)

_____

Prof. Dr. Ana Frazão

(Professor at the University of Brasilia)

_____

Gilvandro Vasconcelos Coelho de Araújo

(Commissioner at the Administrative Council for Economic Defense)

_____

Francisco Schertel Ferreira Mendes

(Substitute Examiner – Legislative Consultant at the Brazilian Federal Senate)

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ABSTRACT

The following dissertation aims to analyze Uber in Brazil and to establish the main competitive advantages and disadvantages the company has vis-à-vis long-standing and traditional taxi services. A retrospective of breakthrough technological innovations and their impacts on previous business models is necessary to understand the 21st century's innovational shift to sharing economy, where peer-to-peer services such as Uber represent a new social phenomenon. The widespread adoption of Uber and its multiple services led to several changes in the transportation sector, as it provided fierce competition to the taxi industry. Although popular with consumers, Uber faces legal problems with regulation authorities throughout the world, some of which have not yet developed a regulatory framework that allows this innovative – and, to some, "disruptive" – business model to operate legally. An analysis of the competitive advantages and disadvantages brought by Uber's business model is essential to consider a possible way out to the larger question of how regulation and competition should jointly respond to technological innovations such as Uber. The present paper discusses Uber's possible competitive advantages and disadvantages, such as efficiencies, barriers to entry, dynamic pricing, employment regulations, tax law obligations, and the lack of a uniform national regulation.

Key words: Uber; Regulation; Competition; Innovation; Competitive Advantages; Peer-to-Peer Networks; Sharing Economy; Disruptive Innovation Theory

RESUMO

O presente trabalho busca analisar o Uber no Brasil e estabelecer as principais vantagens e desvantagens competitivas que a empresa possui em relação aos tradicionais serviços de taxi. Uma retrospectiva de inovações tecnológicas e os seus respectivos impactos nos modelos de negócio precedentes é necessária para compreender a passagem revolucionária do século XXI para a economia compartilhada, em que serviços "*peer-to-peer*" como o Uber representam um novo fenômeno social. A ampla adoção do Uber e de seus múltiplos serviços acarretou em diversas mudanças no setor de transporte, tendo em vista que o aplicativo representa forte concorrência à indústria de taxis. Muito embora haja a popularização do aplicativo entre consumidores, o Uber enfrenta dificuldades jurídicas perante autoridades reguladoras de todo o mundo, que, em muitos casos, não desenvolveram até então um arcabouço regulatório que permita o funcionamento legal desse modelo de negócios inovador – e, para alguns, "disruptivo". Uma análise das vantagens e das desvantagens competitivas trazidas pelo modelo de negócios do Uber é essencial para uma solução à questão de como a regulação e a concorrência devem responder conjuntamente a inovações tecnológicas como o Uber. Este trabalho discute as possíveis vantagens e desvantagens competitivas do Uber, como eficiências, barreiras à entrada, preços dinâmicos, regulamentações trabalhistas, obrigações tributárias e a falta de uma legislação nacional uniforme.

Palavras-chave: Uber; Regulação; Concorrência; Inovação; Vantagens Competitivas; Redes "Peer-to-Peer"; Economia Compartilhada; Teoria da Inovação Disruptiva

SUMMARY

I. Introduction

The present dissertation aims to discuss the rise of Uber in Brazil and the competitive advantages and disadvantages transportation network companies[1] (TNCs) face vis-à-vis traditional taxi services. Uber's innovative business model, derived from the larger social phenomenon of the sharing economy, brings several challenges and impacts to the existing structures of regulation. The dissertation proceeds in four sections.

Section II starts with a brief historical retrospective of breakthrough innovations that took place in the last century and their respective impacts on previous existing market structures. This retrospective then reaches nowadays, where the prevailing innovations are peer-to-peer services with origin in the so-called sharing economy. The rise of Uber – a multinational company that has been shaking up the traditional taxi industry – will be brought to discussion, along with the challenges it faces regarding regulatory approval throughout different jurisdictions. Lastly, Section II addresses the question if Uber can be considered a "disruptive" innovation or just a "sustaining" innovation, with basis on Clayton Christensen's theory of disruptive innovations.

Based on this preliminary analysis of innovation, disruption, the rise of Uber, and the challenge to win regulatory approval, Section III focuses on Uber's competitive advantages in relation to the services offered by the traditional taxi industry in Brazil. Matters concerning efficiencies, low barriers to entry, dynamic pricing system, and few competition law concerns will be addressed in order to demonstrate how these issues can serve as possible competitive advantages to Uber.

Subsequently, Section IV is specifically devoted to Uber's competitive disadvantages in relation to the long-standing taxi industry, especially in regards to the atmosphere of legal uncertainty surrounding the company. The uncertainty arises from the challenging regulatory framework encountered in Brazil – given the absence of specific regulation at a national level and the extremely fragmented regulatory framework concentrated at the local level, responsible for a "gray zone" in many municipalities –, from the possibility of framing "partner drivers" as employees, and from potential complications as to underinsurance coverage and liability. Along with these uncertainties, the absence of tax exemptions also represents a competitive disadvantage to Uber.

[1] See CALIFORNIA PUBLIC UTILITIES COMMISSION (2016) for its definition of TNCs as companies that "provide prearranged transportation services for compensation using an online-enabled application or platform (such as smart phone apps) to connect drivers using their personal vehicles with passengers."

Finally, Section V proposes a possible way out to the larger question of how regulation and competition should respond to the rapid advances in technological innovations coming from Uber. The competitive advantages and disadvantages of Uber vis-à-vis taxi services explored throughout the paper can serve as basis to balance how regulators in Brazil can design a set of legal institutions that encourage innovation while also protecting consumers from several risks and uncertainty.

II. Technological and Disruptive Innovations: the Rise of Uber

II.1 Retrospective of Breakthrough Innovations and the Development of the Sharing Economy

In the past century, many longstanding industries were broken – or "disrupted"[2] – after developments in technological innovation, giving rise to new business models. In some cases, these new business models completely extinguished the previous ones; in other cases, both business models coexisted, although changes were necessary to preserve the previous business model.

Regardless of the failure or the success of previous business models, fact is that innovation is narrowly connected to competition, development, and economic growth. Competition is a key factor that contributes to major turning points in the evolution of markets and the creation of breakthrough innovations. A competitive marketplace tends to stimulate innovation, as the players compete vigorously for more customers and for a higher market share. The International Competition Network's paper on Advocacy and Competition Policy addresses the topic:

> The main objective of competition policy is to promote and protect free competition and open markets, generally accepted as the guiding principles of the modern market economy. In markets with a sufficient number of competitors (or potential competitors) and in a static setting, free competition is supposed to lead to low prices for the consumers, an efficient use of resources by the producers and maximization of social welfare. Apart from that, in **a dynamic setting the competitive process induces technological innovation, enhanced product quality, wider product differentiation and improvements in productive efficiency**. (INTERNATIONAL COMPETITION NETWORK, 2002, p. 26, emphasis added)

[2] See ISAAC (2014).

According to Ranchordás (2015), the innovational process can be interpreted by two different forms: (i) the Schumpeterian idea of "creative destruction", in which a revolutionary product changes paradigm and leads to the discontinuation of existing products, and (ii) the incremental innovation, in which an improvement of an existing product increases efficiency. In any case, "most innovations, even if they break with existing paradigms, are built on existing knowledge and derive from a "step-by-step co-evolutionary process of change"" (RANCHORDÁS, 2015, p. 20).

Likewise, Harvard Business School Professor Clayton Christensen developed the theory of disruptive innovations to differentiate "disruptive innovations" from "sustaining innovations". The theory outlines a process through which a disruptive product transforms a market: (i) incumbent companies aim at satisfying the high end of the market – the most profitable segment – by offering higher-quality products and services; (ii) by aiming at the high end of the market, these incumbent companies ignore the needs of low-end and mainstream customers, leaving space for entrants to target those overlooked and less-profitable segments; (iii) entrants target the overlooked segments; and (iv) entrants subsequently move upmarket and attract mainstream customers, challenging the dominance of the incumbents and thus causing disruption.

In the words of Christensen, Raynor and McDonald (2015),

> **"Disruption" describes a process whereby a smaller company with fewer resources is able to successfully challenge established incumbent businesses**. Specifically, as incumbents focus on improving their products and services for their most demanding (and usually most profitable) customers, they exceed the needs of some segments and ignore the needs of others. **Entrants that prove disruptive begin by successfully targeting those overlooked segments**, gaining a foothold by delivering more-suitable functionality—frequently at a lower price. Incumbents, chasing higher profitability in more-demanding segments, tend not to respond vigorously. Entrants then move upmarket, delivering the performance that incumbents' mainstream customers require, while preserving the advantages that drove their early success. **When mainstream customers start adopting the entrants' offerings in volume, disruption has occurred**. (CHRISTENSEN, RAYNOR & MCDONALD, 2015, p. 45, emphasis added)

From the internet to smartphones to peer-to-peer services, the shift from the 20th to the 21st century will be marked in history as a turning point to a new paradigm of technological revolution, represented by improvements in the previous state-of-the-art. There are several examples from the past decades that illustrate this period of flourishing technological innovations.

Take the example of the photocopying technology market[3]. In this market, Xerox came to prominence with the first plain paper photocopier, targeting large corporations and, thus, charging high prices for its products and services. Yet, with the introduction of personal copiers in the late 1970s, Xerox was challenged with a new and affordable solution to individuals and small companies. The personal copiers business led Xerox to readapt and reinvent its services in order to maintain its position in the given market.

During this period of time in the 1970s, VHS introduced the home use of videotape cassettes, giving place to the home video industry. Years later, in the late 1990s, DVDs tackled the structure of the VHS business, gaining mass acceptance within the home video industry and, thus, replacing the VHS business in the early 2000s[4]. Similarly, CDs took over the music cassette tape industry.

Then in the 1990s came the revolution of the internet, a system that interconnected computer networks at a global level. The internet's exponential growth was responsible for the general emergence of innumerous business models and internet-based companies, bringing people and consumers together in unprecedented ways. This technological innovation gave birth to new online services such as e-mail, blogging, social media, digital newspapers, e-books and video streaming websites, among many other services that changed drastically the forms of social interaction. Nowadays, with the eruption and widespread use of the internet, the then innovative DVD industry lost substantial space to a growing business of online video streaming, with companies such as Netflix and Amazon Instant Video. Likewise, the then innovative CD business has been replaced by the music streaming industry, with the adoption of applications such as Spotify, Apple Music and Deezer.

Moreover, in the mobile phone industry, ordinary portable telephones with reduced features were largely used in the late 1990s and early 2000s, with models mainly from Nokia and Motorola. At that time, these mobile phones were considered a breakthrough innovation in comparison to fixed and rotary-dial telephones. However, in the 2000s they were replaced by smartphones, which introduced advanced mobile operating systems and useful innovational features. Apple's iPhone, for example, debuted in 2007, created a new

[3] Example extracted from CHRISTENSEN, RAYNOR & MCDONALD (2015).
[4] See CHANEY (2005) in relation to the DVD business overtaking the VHS industry.

market for internet access and "disrupted"[5] from the laptop as the primary source to the internet.

One could also mention the innovational shift in the education industry, which is being confronted with a new way of teaching known as "online learning". An increasing number of schools and universities currently offer virtual learning through online educational platform systems. These platforms revolutionized and democratized global access to education, as students now only need a computer or a smartphone and decent internet connection to be able to learn and study. Take, for instance, Coursera – an online platform that provides free and paid options of online video courses for university students.

The internet also saw the end of most traditional travel agencies, where clients booked flights, hotels, cars, and cruises directly with travel agents specialized in selling tourism packages. Online travel agencies such as Booking, TripAdvisor and Expedia captured an increasing share of the mainstream market of travel agencies. As observed by Guttentag (2015), there was a significant decline in the number of traditional travel agencies after security concerns related to booking a travel reservation online were mitigated. The rise of the internet affected not only traditional travel agencies. The hotel industry is also facing many challenges after the debut of Airbnb, an online platform founded in 2008 where people can rent their spaces – shared rooms, private rooms or entire apartments or houses – as accommodation for tourists, one ordinary person to another. This method of accommodation, referred by Guttentag (2015) as "peer-to-peer accommodation", although dates back to decades, was transformed after the introduction of technologies that mitigated difficulties[6] faced by hosts and guests, allowing hosts and potential guests to build trust, crucial for the wide acceptance of this accommodation service.

Many of these innovative industries mentioned earlier – Netflix, Spotify and Airbnb – originate from technological companies and startups that have developed a way to offer simpler products and services by use of internet technology (ISAAC, 2014). Such companies are part of a bigger innovational shift to the so-called "sharing economy", a 21st century trend that underlies the success of all of these peer-to-peer services, connecting individuals to other individuals' underused assets, which can range from living spaces to vehicles to music (GUTTENTAG, 2015). Geradin (2015a, p. 5) considers these peer-to-peer

[5] See CHRISTENSEN, RAYNOR & MCDONALD (2015) for the relation between the theory of disruptive innovation and Apple's iPhone.

[6] According to GUTTENTAG (2015), Airbnb provides the technological infrastructure through which hosts can promote their spaces to potential guests by use of photographs and post descriptions, also allowing for communication between host-guest, reservation, payments and reviews.

platforms "true game changers" as they brought more dynamism to many businesses that were for a long time considered static by effectively matching demand and supply "without the need for costly intermediaries".

Although sharing practices have historical roots, it was only after the development of the internet that sharing became a widespread phenomenon, where access became "the new form of ownership" (RANCHORDÁS, 2015, p. 4). Bond (2015) defines the sharing economy and explains how the internet was a key factor for its expansion:

> The sharing economy is a microeconomic system built around the **utilization of unused human and physical resources**. This collaborative economic model **attempts to make full utilization of available resources**, as opposed to the traditional singular focus on the initial buying and selling of goods and human resources. For example, an off-duty sales associate at Walmart may utilize the same car that she drives to and from work as an "Uber" vehicle, taking passengers to and from destinations in her hometown. Alternatively, a large family with a vacant bedroom for the weekend may rent out that room to a visiting couple that cannot afford a local hotel of comparable quality. **The sharing economy connects unused resources with consumers via technology. Although the sharing economy certainly predates the Internet, the Internet is responsible for substantially reducing information costs, resulting in the sharing economy's transformation and dramatic expansion.** (BOND, 2015, p. 78, emphasis added)

Besides propelling sharing practices, the 21st century's technological revolution is also marching towards driverless vehicles, with a crowded field of competitors such as Google, Tesla, General Motors, Volvo, and Uber[7] investing on research to pursue autonomous driving technologies[8]. In the longer term, innovations developed in this area can reinvent transport and reshape cities, while also reducing pollution and deaths from car accidents[9].

Hence, from all the above examples, it can be said that innovation is an on-going process. Most industries and business models tend to face further changes in the future, which will subsequently require unavoidable updates in the traditional regulatory schemes. The world is walking towards a new paradigm led by the technological revolution and, during this process, regulatory and competition frameworks should not hinder the development of breakthrough innovations. Rather, consumers should be able to enjoy all the efficiencies

[7] In September of 2016, Uber publicly tested its self-driving pilot program in the United States. See SOMMERVILLE (2016) about the launch of Uber's self-driving pilot program and investments in autonomous vehicles technologies. See also THE ECONOMIST (2016b): "But Uber's ambitions, and the expectations underpinning its valuation, extend much further: using self-driving vehicles, it wants to make ride-hailing so cheap and convenient that people forgo car ownership altogether. Not satisfied with shaking up the $100-billion-a-year taxi business, it has its eye on the far bigger market for personal transport, worth as much as $10 trillion a year globally."

[8] See SOMMERVILLE (2016) about the launch of Uber's self-driving pilot program and investments in autonomous vehicles technologies. See GOOGLE (2016) about Google's Self-Driving Car Project. See BUSINESS INSIDER (2016) for Tesla's pursuit of autonomous driving technologies.

[9] See THE ECONOMIST (2016b) about the impacts driverless vehicles can bring to cities.

brought by them, while also being protected from potential harms.

II.2 The Rise of Uber and its Global Expansion

Uber Technologies Inc. is an American multinational TNC founded in San Francisco in 2009 by technology entrepreneurs Garrett Camp and Travis Kalanick. The entrepreneurs, natives of San Francisco, were frustrated with the taxi industry in the city. According to Kalanick (2010), the unavailability and unreliability of the taxis led them to the big idea of 'cracking the horrible taxi problem in San Francisco' with a new startup.

Initially, the startup provided only the Uber Black service, which offered premium sedan rides in black cars driven by professional drivers, aimed to reach customers going to business meetings or formal places. After competing transportation platform Lyft started allowing drivers to provide transportation through their personal vehicles, Uber launched uberX in 2012 (EDELMAN, 2015). UberX, differently from UberBlack, is a peer-to-peer low-cost service, by which any qualified driver can offer rides to up to four persons with a safety-approved vehicle by Uber, aimed to reach customers going to casual places. Uber then also expanded to also provide uberXL[10], UberSELECT[11], UberSUV[12], and UberLUX[13] (UBER, 2016). Uber also offers ride options accessible for wheelchairs. Recently, the company started offering the option for the UberPool service, which allows two or more passengers headed in the same direction to share a ride and split the costs, thereby being the cheapest option of all.

In order to face its local rivals and compete more fiercely in emerging markets, Uber broadened its strategy to offer more diverse services, rather than concentrating its activities solely on ride-sharing services, which have faced many obstacles with local authorities and regulators. Due to this business strategy, Uber expanded its investments to encompass its own mapping capabilities[14], the takeaway meal delivery market with the launch of UberEats[15], and the long distance freight business with the acquisition of self-driving truck

[10] UBER (2016) defines UberXL as an affordable transportation option for a large group of up to six riders.
[11] UBER (2016) defines UberSELECT as a luxury ride option with highly rated drivers with high-end sedans.
[12] UBER (2016) defines UberSUV as a premium ride option driven by a professional driver in a SUV, with room for up to seven passengers.
[13] UBER (2016) defines UberLUX as an experienced and professional chauffeur driving a luxury sedan.
[14] The development of its own mapping capabilities is responsible for substantial improvements in time estimates for pickups and drop-offs, serving as an advantage in relation to its small local rivals. See THE ECONOMIST (2016a).
[15] See AUCHARD (2016) about UberEats.

startup Otto[16].

UberX, however, was the service responsible for Uber's rapid growth and high valuation. To put it into numbers, Uber was valued at USD 40 billion in December 2014, exactly the double compared to its valuation six months before[17]. As of September 2016, Uber's valuation is around USD 70 billion[18]. Furthermore, the company has expanded to more than 520 cities worldwide, throughout 72 countries, with around 30 million monthly users[19]. If Uber had rapidly gained regulatory approval, these numbers could possibly be even more expressive.

The widespread adoption of Uber and its services is due to the simpler process of getting a ride. The application takes advantage of smartphone technologies to link drivers to passengers. After the passenger's request for a ride, the application sends the passenger's location to the driver through GPS technology. Meanwhile, the passenger also receives the driver's real-time location on a map and the average time for pick-up. To facilitate the pick-up, the passenger receives a picture of the driver and its car. After the passenger enters the car, Uber starts charging for its service, with payment made directly to the customer's registered credit card, making no need for payment in cash. During the ride, the passenger can share its location with family or friends. In return for providing the platform that connects drivers to passengers, Uber takes a slice of the fare for providing the service, ranging between 20-25%[20] depending on the city. Uber's pricing structure is generally composed of a base rate, a charge per mile and a charge per minute.

The advent of Uber provided a fierce competition to the taxi industry, enraging taxi drivers and taxi associations. In some cities, it can be said that Uber and other TNCs dismantled taxi monopolies. In New York, for example, Uber changed dramatically the paradigm of taxi medallions, leading to a 17% decrease of the average taxi medallion price from 2013 to 2014[21]. A study[22] that analyzed and compared UberX and taxi rates concluded that the price for uberX beats taxi fares in more than twenty different cities in the United States. In San Francisco, the birthplace of the company, uberX rates are 45% cheaper than taxi rates[23]. Similarly, a comparison of Uber and taxi fares in five different Brazilian cities –

[16] See LOVE AND SOMMERVILLE (2016).
[17] See ISAAC (2014) for Uber's valuation in December 2014.
[18] See THE ECONOMIST (2016a).
[19] See THE ECONOMIST (2016a). See also UBER (2016) for an accurate number of cities and countries.
[20] See THE ECONOMIST (2016a).
[21] See BOND (2015).
[22] See SILVERSTEIN (2014).
[23] See ISAAC (2014).

São Paulo, Rio de Janeiro, Brasilia, Belo Horizonte and Porto Alegre – indicated that uberX fares are always cheaper than taxis, and in some scenarios so are UberBlack fares[24].

Despite Uber's international expansion and its well-known success with its customers, the company needs to compete with rival TNCs. In the Americas, Uber has been massively accepted by customers. Although in the United States Uber maintains the leading position with around 80% of the ride-sharing transportation market, local rival Lyft also has a considerable market share of 20%[25]. In Mexico and in Brazil, Uber has the dominant position in the business[26]. In the Asian market, Uber faces competition of regional rivals, such as Singapore-based Grab and Indonesia-based Go-Jek[27]. In China, Uber merged with Chinese local rival Didi Chuxing on August 2016[28]. In India, Uber still faces fierce competition from the local rival Ola, which claims to have 75% of the ride-hailing market[29]. In the European market, Uber competes with other ride-hailing apps such as UK-based Hailo, German-based MyTaxi, Spain-based Cabify, Israel-based Gett, France-based LeCab, and Russia-based Yandex.Taxi. In Australia, Uber's main competitors are goCatch and Ingogo.

The Economist (2016a) links Uber's emergence with three disruptive trends: (i) the rise of asset-light business models; (ii) the shift to the sharing economy; and (iii) consumer preference to access, not ownership. Isaac (2014) explains the reasons for Uber's unprecedented success and the possible consequences for all actors involved by this technological innovation:

> Uber Technologies Inc., an **on-demand ridesharing service** that connects passengers to local drivers in real time using smartphone technology, is one of the most **disruptive**, successful tech start-ups yet. Uber's success, which can be attributed to a **low fixed-cost model** that provides ride-seekers a faster and more reliable alternative to the traditional taxi and promises drivers a higher hourly earning through the **avoidance of costly regulations**, has severely **disrupted** the taxi service industry. In cities around the world, taxi companies are losing their customers and their drivers to Uber and similar "transportation network companies" (TNCs), such as **Lyft, Sidecar, and Hailo**. […]
>
> A simple review of Uber's business model reveals that much of the success Uber has generated so quickly relies on three key conditions: 1) its ability to **classify itself as a "technology company" instead of a transportation company**, exempting Uber from expensive taxi laws and regulations, 2) the **ability to classify their drivers as independent contractors instead of employees**, which allows Uber to evade the costly protections and benefits guaranteed to workers in a standard employer-employee relationship, and 3) a **depressed labor market in which**

[24] See HIGA (2015).
[25] See THE ECONOMIST (2016a).
[26] See THE ECONOMIST (2016a).
[27] See TAJITSU (2016) on Uber's rivals in Asia.
[28] See THE ECONOMIST (2016b).
[29] See BERSHIDSKY (2016).

> **workers are willing to assume the burden of risks and costs associated with driving for the company**. (ISAAC, 2014, p. 2, emphasis added)

Therefore, Uber's business model presents unique characteristics, as the company classifies itself as a technology platform company rather than a transportation company and its drivers as independent contractors rather than employees, shifting the costs and risks to them. Nevertheless, this classification has not been widely accepted by policymakers and regulators, giving rise to several legal issues that stem from the difficulty in defining Uber's services and its relationships with its drivers and its passengers.

II.3 The Challenges of Winning Regulatory Approval

Around the globe, Uber has been facing resistance from several regulators, policymakers and competition authorities, some of which have interpreted Uber's service as an illegal and unfair taxi service. It is common for innovative business models based on technology to outpace legislation and subsequently face problems with regulators, which have not yet developed sensible regulation that allows these business models to operate legally and to provide their several efficiencies (GUTTENTAG, 2015). Edelman and Geradin (2015) defend that the key challenge nowadays is to facilitate the market entry of these innovative business models and to obtain the efficiencies brought by them while also ensuring fair competition between entrants and existing providers and implementing protections to prevent market failures.

Ranchordás (2015) analyzes that, in addition to the economic and social challenges of innovation, the regulatory facet has to be taken into consideration as, in most cases, innovation poses challenges to regulators, which have little information about the effects and side effects of such novelties:

> Sharing economy practices challenge regulations on a daily basis, evidencing **the tension between the need to encourage innovation and the need to protect customers from fraud, liability, and practices that might endanger public health or safety**. In the world of the sharing economy, traditional legal boundaries are easily blurred, resulting in **legal gray areas and regulatory uncertainty**. […]
>
> The regulation of innovation in the sharing economy is particularly complex because **it is unclear whether these practices fit within existing legal frameworks that apply to equivalent commercial practices and should play by the same rules, whether these practices should remain to a great extent unregulated, or whether these practices should benefit from less demanding regulations**. This hesitation has opened the door to uncertainty and lack of transparency. […]

> The spotlight here is on the challenges that characterize innovation and **the balance between the need to encourage innovation on the one hand and, on the other, limit the uncertainty and risks attached to the sharing economy**. (RANCHORDÁS, 2015, p. 8, 10 and 11, emphasis added)

Uber's entry into the transportation market enraged taxi drivers, triggering massive demonstrations in major cities. The taxi industry's main complaint is regarding unfair competition and the lack of analogous regulation, given that commercial drivers usually face various legal requirements, as exposed by Edelman (2015): (i) commercial driver's license; (ii) vehicle with commercial plates; (iii) background or criminal records check; (iv) frequent vehicle inspections; (v) commercial insurance; and (vi) compliance with legal prohibitions on discrimination on the basis of race, gender and disabilities. Due to these requirements, some regulators have concluded Uber cannot operate within their jurisdictions.

The massive demonstrations called for regulatory intervention and alarmed regulatory authorities, which banned or restricted Uber's services from the individual passenger transportation market in Germany[30], Spain, Italy, Belgium, Philippines, Thailand and Japan[31] (ISAAC, 2014; GERADIN, 2016a; TAJITSU, 2016). In total, Edelman and Geradin (2015, p. 12) verified "Uber has been banned in in at least ten countries, has suspended operations in three others (including six US cities), and in at least one country, has faced criminal prosecution of its senior managers". Most of the authorities reason the smartphone app created unfair competition with licensed taxi drivers. Nonetheless, Uber has been responsive and, as an example, filed complaints to the European Commission against the German and the Spanish bans to its services[32].

In its defenses, Uber puts forward the view that the role of TNCs differ from taxicabs – the latter offers a public individual transportation service, while the former offers intermediation between drivers and passengers through a technology platform. Also, Uber usually arguments that taxi services are open to the public, as "passengers can hire taxis by

[30] See AUCHARD AND STEITZ (2015). "The latest case, brought in the Frankfurt regional court by German taxi operator group Taxi Deutschland against UberPOP, is one of more than a dozen lawsuits filed in countries across Europe in recent months against the San Francisco-based company. Dieter Schlenker, chairman of the Taxi Deutschland cooperative, said the ruling would protect taxi drivers from competition from unlicensed part-time drivers used by Uber. His taxi group is part of an association dating back to 1919." See also GESLEY (2016): "As a reaction to several law suits in Germany, the only services Uber B.V. (Uber's European subsidiary, headquartered in the Netherlands) currently offers are transport services provided by licensed independent professional drivers through its services uberX and UberBLACK, the luxury hire-car service, as well as standard taxi services through UberTaxi. The only German cities in which Uber operates are Berlin and Munich. The service UberPOP, which used private non-licensed drivers with their own vehicles, was discontinued in all of Germany."

[31] However, as Japan is a key battleground for Uber's expansion in the Asian market, the company announced on September 2016 the launch of UberEats in some parts of Tokyo. See TAJITSU (2016) on Uber's expansion in Japan.

[32] See FIORETTI (2015) on Uber's response to German and Spanish bans.

queuing at a cab stand, by hailing them in the street or by making a telephone reservation" (GERADIN, 2016a, p.1), while Uber's services are restricted to users of its application, not being possible for passengers to hire Uber rides by hailing them in the street.

Indeed, unlike taxicabs, Uber and other TNCs: (i) must operate in a prearranged basis and drivers may not have a cabstand or pick up passengers via street hails; (ii) can accept someone as a driver according to its own company requirements, not having to fulfill all standards set by regulation to be a taxi driver; (iii) can establish the final price of the ride and the percentage it keeps for providing the platform; (iv) give their drivers the freedom of choice to accept or deny the ride; and (v) have a supply-side flexibility, as drivers can easily alter their availability by adding or removing themselves from the platforms.

There has been an inconclusive debate about whether Uber can be considered a perfect substitute to taxis or if it constitutes a significantly distinct product. Although there are enough similarities and sufficient levels of substitutability between Uber and taxis to support the claim that the regulation of the latter should be applied also to Uber, there are also enough particularities to justify a differentiated treatment. In this sense, Frazão (2016b) supports that "there is not always a total detachment in relation to traditional services. On the contrary, many times these "new services" are direct substitutes – or at least present a high level of substitutability – with the already existing services, competing directly with them"[33]. In the view of Esteves (2015a, p. 8), applications like Uber care for "a market not yet covered (or covered in an unsatisfactory way) by taxis and also provide additional competition in the individual passenger transportation market".

According to Bond (2015), the sharing economy puts "new pressures on local governments in choosing how to respond to this evolution" (p. 77) and threatens "to upset the status quo of local regulatory frameworks" (p. 93). The answer to how regulation should respond to Uber is not so clear-cut as popular views might suggest. Frazão (2016b) explains that usually Uber's regulation is put between two extreme alternatives – if Uber's services are understood as similar in essence to existing taxi services, the alternative is to apply the current taxi regulations to Uber; however, if Uber's services are understood to be singular and unique in comparison to taxi services, the alternative is then to provide Uber immunity to the existing regulatory framework.

Nonetheless, the answer to how regulation should approach innovation in the

[33] Free translation of FRAZÃO (2016c): "nem sempre há um descolamento total em relação aos serviços tradicionais. Pelo contrário, muitas vezes os "novos serviços" são substitutos diretos – ou pelo menos apresentam alto grau de substituibilidade – dos serviços já existentes, concorrendo diretamente com estes."

sharing economy is complex as several regulatory concerns have been raised as to the effects and side effects of Uber's innovative business model – public safety, insurance and liability, and tax obligations. For Ranchordás (2015), regulators face a dilemma: on one hand, regulation should not stifle innovation; on the other hand, regulation needs to protect customers from fraud, liability, unskilled service providers, and other practices that may impose risks and uncertainty on safety and health.

Confronted with new sharing economy companies, Bond (2015) defends local governments have two options: either embrace the new economic model brought by these companies or attempt to regulate them. Bond (2015) concludes the best approach would be for regulators to embrace innovation:

> Given the pervasive power of the Internet and the inability of municipalities currently to control sharing companies, **the best approach for municipalities is to embrace innovation**. Local governments should work to achieve **collaborative agreements with sharing economy companies** while also making locally regulated industries more competitive through deregulation. […] **Rather than attempting to impose prior regulatory structures, municipalities should embrace shifts in consumer preferences** […]. It is through collaboration, rather than regulation, that municipalities can best achieve benefits for both enterprising individuals and communities as a whole. (BOND, 2015, p. 96, emphasis added)

Ranchordás (2015) suggests that policymakers should act as "adaptive agents" and adjust regulations according to the development of markets and technology in order to find an optimal policy solution. During this process of regulating a novel practice, Ranchordás (2015) sustains that regulators can allow for an experimental "incubating period" with temporary rules, being able to gather more information as to the innovation itself and to the effects of the temporary regulation.

Edelman and Geradin (2015) prefer the approach of directly eliminating regulation with no valid purpose of protecting market failures or achieving genuine policy objectives and, subsequently, implementing regulatory interventions that may be necessary to correct market failures. By following this approach, traditional regulations that only protect incumbent companies come to an end, giving space to wise policies that ensure the adequate use of software platforms.

Irrespective of the approach chosen, in some cases regulatory intervention can be useful and needed in order to address possible market failures, such as: (i) externalities – for instance, unsafe drivers, unsafe vehicles, and underinsured or uninsured drivers; (ii) information asymmetries between platforms, consumers and service providers; (iii) cognitive biases – for example, ignoring relevant information or relying on irrelevant information,

which can lead users to make irrational decisions; and (iv) assurance of full service even to disfavored groups, such as racial minorities, users with disabilities[34], low-income users and low-income regions. (EDELMAN & GERADIN, 2015)

Professor Miller (2016) acknowledged the existence of different approaches to regulating the sharing economy and theorized ten principles on which regulatory interventions to the sharing economy must rest: (i) the sharing economy is differentiated and requires a differentiated regulatory response; (ii) the sharing economy must be daylighted; (iii) regulating the sharing economy requires (the right kind of information); (iv) the sharing economy is here to stay (and that is a good thing); (v) the sharing economy disrupts and reimagines established markets; (vi) the sharing economy establishes new markets (that established markets want to take over); (vii) the sharing economy disrupts and reimagines established regulatory structures; (viii) the sharing economy requires a response beyond traditional regulation; (ix) the harm and the remedy are uniquely challenging to determine in the sharing economy; and (x) the sharing economy implicates diverse parties, each of whom should be considered in establishing a regulatory response. While analyzing possible approaches to the Uber phenomenon, lawmakers and regulators should consider and apply these ten principles in order to present an adequate and responsive approach to TNCs.

In an international scope, cities have had different approaches to the rise of Uber. As an example, Bond (2015, p. 88) brings the city of San Francisco, which "has not altered its regulatory scheme of the taxi industry or imposed any new regulations on Uber", differently from Washington DC's regulatory response, which resulted in the Vehicle-For-Hire Innovation Act of 2014, which was heavily opposed by taxi unions but widely praised by Uber as a model legislation for the rest of the United States. According to Lazo (2015), Washington DC's new regulatory framework allows Uber to operate legally as long as it complies with the minimum levels of insurance coverage and background checks for drivers. On the opposite approach, the French Parliament passed on October 2014 a law – the so-called *Loi Thévenoud*[35] – that imposed a series of regulations in order to protect incumbents. This law implemented many regulatory requirements that, in the view of Edelman and Geradin (2015), do not protect users from market failures nor allow fruition of the key efficiencies provided by TNCs.

[34] See, for instance, the Brazilian House of Representatives Draft Bill nº 5.576/2016, which aims to establish individual private transportation of taxis and Uber for users with physical disabilities.

[35] See Law nº 2014-1104, of October 1st, 2014. Available at: https://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000029527162&categorieLien=id.

In Brazil, as will be explored in more details in Section IV, while cities such as São Paulo, Brasilia and Victoria already approved "innovation-friendly" legislation regarding Uber, others such as Rio de Janeiro, Salvador, Belo Horizonte, Recife, Maceió, João Pessoa and Santos prohibited Uber's activities, creating an atmosphere of uncertainty.

Overall, at this stage, it is worth noticing that introducing a new business model that conflicts and tends to take over preexisting, long-lasting and traditional business models can be a difficult journey, as regulatory frameworks are usually decades old and built at a time where the internet and the sharing economy did not exist. Nonetheless, from a legal point of view, regulators should not use the same lens to analyze the companies from the era of the sharing economy and the companies from traditional and outdated paradigms. Rather, it is necessary to present a new regulatory framework that is tailored for sharing economy companies and that allows users to enjoy the efficiencies brought by innovation while also being protected from potential harms regarding safety, hygiene, comfort, and quality. To reach this new framework, regulators have to keep in mind Miller's (2016) basic principles of the sharing economy.

II.4 Uber: Disruptive Innovation?

Before moving on to Sections III and IV, where Uber's competitive advantages and disadvantages in regards to taxi services will be explored, it is worth remarking beforehand that there has also been an inconclusive debate on whether or not Uber can be considered a disruptive innovation. In several publications and news articles, such as Isaac (2014)[36], Geradin (2016a)[37], OECD (2015)[38], and Cannon & Summers (2014)[39], the label "disruptive" is used to refer to Uber's services. The term "disrupt" was even used by Mr. Kalanick, Uber's co-founder and CEO, when affirming to The Economist (2016a) that the company's goal was to disrupt the taxi market. However, should the innovative approach to

[36] See ISAAC (2014, p. 2): "Uber's success, which can be attributed to a low fixed-cost model that provides ride-seekers a faster and more reliable alternative to the traditional taxi and promises drivers a higher hourly earning through the avoidance of costly regulations, has severely disrupted the taxi service industry."
[37] See GERADIN (2016a, p. 5): "III. Uber's disruptive business model".
[38] See OECD (2015, p. 3): "Disruptors in the sharing economy like Airbnb and Uber, for example, are not new technologies so much as they are new business models that leverage the Internet and smartphones to match excess capacity in private durable goods with demand."
[39] See CANNON & SUMMERS (2014): "Sharing economy firms are disrupting traditional industries across the globe. For proof, look no further than Airbnb which, at $10 billion, can boast a higher valuation than the Hyatt hotel chain. Uber is currently valued at $18.2 billion relative to Hertz at $12.5 billion and Avis at $5.2 billion."

transportation services embraced by Uber and by other TNCs be viewed through the lens of the disruptive theory?

Clayton Christensen, the world's foremost authority on disruptive innovation, defends otherwise. Mr. Christensen developed the disruptive innovation theory in several papers[40] and recently stated in Christensen, Raynor and McDonald (2015) that the original disruption theory is in danger of becoming a victim of its own success, as the core concepts of the theory have been misunderstood and misapplied by many researchers, which are supposedly applying the label "disruptive innovation" to describe any breakthrough innovation that shakes up the industry. The problem of this misapplication is that there are different strategic approaches managers can use to safeguard their businesses depending on whether the entrant player provides a disruptive innovation or just a sustaining innovation.

Christensen, Raynor and McDonald (2015) support that, even though Uber is transforming the taxi business, it is not genuinely disruptive. This is due to the fact that Uber only represents an incremental improvement to the traditional taxi industry, and thus the label "disruption innovation" should not be applicable to the company, but rather "sustaining innovation". The authors' perception regarding the rise of Uber is that the company is not genuinely disruptive, based on two main arguments: (i) "*disruptive innovations originate in low-end or new-market footholds*" and (ii) "*disruptive innovations don't catch on with mainstream customers until quality catches up to their standards*" (CHRISTENSEN, RAYNOR & MCDONALD, 2015, p. 45-48)

The first argument assumes that a disrupter focuses on markets incumbents generally overlook. As the authors explain, low-end and less-demanding customers are overlooked because incumbents aim primarily at the most profitable and demanding customers – the customers from the high end of the market. Disrupters then take advantage of this lack of attention and focus on providing this overlooked segment. Another possibility is for disruptive innovations to originate in new-market footholds, where a new market is

[40] For a full picture of Clayton Christensen's theory of disruptive innovation, see the following papers: 1) BOWER, Joseph L.; CHRISTENSEN, Clayton M. **Disruptive Technologies: Catching the Wave**. Harvard Business Review 73, nº 1. Pages 43-53. January-February 1995; 2) CHRISTENSEN, Clayton M. **The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail**. Boston, United States: Harvard Business School Press. 1997; 3) CHRISTENSEN, Clayton M.; RAYNOR, Michael E. **The Innovator's Solution: Creating and Sustaining Successful Growth**. Boston, United States: Harvard Business School Press. 2003; 4) CHRISTENSEN, Clayton M. **The Ongoing Process of Building a Theory of Disruption**. Journal of Product Innovation Management, 23(1), Pages 39-55. 2006; and 5) CHRISTENSEN, Clayton M.; RAYNOR, Michael E.; McDONALD, Rory. **What is Disruptive Innovation?** Harvard Business Review 93, no. 12. Pages 44-53. December 2015.

created and non-consumers become consumers. Based on these two possibilities of where a disrupter can act, the authors defend Uber did not originate in either one.

The second argument used to explain why the label "disruption innovation" should not be applied to Uber has to do with the standard quality expected by incumbent's existing customers. The authors explain that, generally, incumbent's customers only switch to a disruptor company after the quality rises to their expected standards. After this occurs, these customers adopt the new disruptive product. In the case at hand, however, Christensen, Raynor and McDonald (2015) argue that Uber's service has rarely been described as inferior to taxi services; instead, it is even seen as a better service.

Even though Mr. Christensen defends that Uber should not be treated as a disruptive innovation, critics such as Moazed and Johnson (2016) consider the company a disruptor, arguing that Uber's original service – UberBlack – was just a sustaining innovation in the high-end black taxi market, while uberX represents a classic low-end market disruption. Moazed and Johnson (2016) explain that in the beginning uberX offered a lower quality service and was not as competitive as taxis for most passengers, given that its fares were higher, the waiting time was longer, the drivers were not qualified, and it lacked many safety precautions taxis had. Nonetheless, as uberX's network grew, the fares became cheaper, the waiting time for a vehicle declined, and its rating system improved service quality. With these changes, Uber moved upstream, caught on with the mainstream customers and subsequently disrupted the traditional taxi industry, having started from a low-end market foothold.

Additionally, Moazed and Johnson (2016) argue uberX also qualifies as a new market foothold, as it created a new market in which any person with a car and a license can be a driver. Besides having a completely new source of supply, this new market also turned several non-customers into customers. This argument corroborates with Isaac's (2014) understanding that, by making a historically expensive service more accessible, not only has Uber made consumers consume more but also turned some non-consumers into consumers.

Thus, with this explanation, Moazed and Johnson (2016) support that Mr. Christensen's disruptive innovation theory should be revised in order to account for the differences between linear businesses and platform businesses. Platform businesses, differently from linear business, build a network of consumers and producers, both seen as customers groups. For instance, just as Uber has as its customers both passengers and drivers, Apple has as its customers both users and app developers. Therefore, although Mr. Christensen claims Uber is just a sustaining innovation, Moazed and Johnson (2016)

presented robust arguments in favor of Uber's analysis through the lens of the disruptive theory.

An OECD (2015) study also considered Uber a disruptive innovation in the sharing economy and addressed how competition advocacy changes whether it is the case of an ordinary entrant or a disruptive entrant being blocked:

> But is anything different about advocacy in cases where a disruptive entrant is being thwarted, as opposed to advocacy in cases where an ordinary entrant is being blocked? One major difference is that **the stakes for consumers tend to be bigger**. If we return to our definition of disruption and consider again the characteristics that disruptive firms and disruptible markets tend to have, we can infer a greater sense of urgency in making sure that disruptors have the full opportunity to reconfigure or create markets that they are entitled to have from a competition law perspective. **When an entrant can offer consumers something that is so much better than what they are currently getting that the entrant can grow rapidly and displace the top firms in the market, that is a clear signal that it is offering consumers a substantial amount of value**. The message that can be delivered to policymakers then becomes that much more compelling. (OECD, 2015, p. 11, emphasis added)

Regardless of the labels applied to Uber – "disruptive innovation", "sustaining innovation", "creative destruction" or "incremental innovation" –, it is common ground that Uber's business model represents an innovation in the individual transportation market. What are the competitive advantages and disadvantages of this innovative business model? These are the topics to be addressed under Sections III and IV.

III. Competitive Advantages Vis-À-Vis Traditional Taxi Services

As seen in Section II, Uber's rise is of great significance for the traditional transportation sector. With an efficient and innovative use of technology, Uber has appealed to technology-confortable customers. Taking into consideration the innovative aspects of Uber's service, in the present Section the discussion points to Uber's competitive advantages in relation to the services offered by the traditional taxi industry, with emphasis in the Brazilian scenario. An overview of the current state of legislative and competition regulations will be made in order to address the issues of (i) efficiencies, (ii) barriers to entry, (iii) dynamic pricing system, and (iv) few competition concerns.

III.1 Efficiencies

Although Uber faces many problems with complying with the law, it is unquestionable the innumerous efficiencies the application brings to the markets it serves, especially when traditional taxi services are considered deeply unsatisfactory by passengers, like in many Brazilian cities. The range of efficiencies that can be delivered by technology platform companies like Uber were explored by Edelman and Geradin (2015) and by Edelman (2015), which listed at least three different sets of efficiencies: (i) reduction of transaction costs; (ii) improved allocation of resources; and (iii) information efficiencies, increased accountability for users, and the introduction of reputation mechanisms.

Edelman and Geradin (2015) put forward the view that amongst the variety of potential efficiencies brought by TNCs is the reduction of transaction costs, made possible by eliminating dispatchers and specialized equipment and by implementing a service provided by mass-produced smartphones.

Take for instance the task of assigning drivers to passengers. In the traditional telephone-based taxi industry, a dispatcher – who has limited information about driver availability and locations – usually gets a call from a potential customer and then alerts the taxi drivers by radio that a customer wants to be picked-up. During this process, Edelman (2015) propounds the view that communication errors are likely and inevitable to occur, producing more costs and delays for both parties. By replacing telephone calls with an internet-based mobile phone application directly connected to a GPS, Uber efficiently managed to eliminate dispatcher costs, errors and delays.

Likewise, Edelman (2015) claims that Uber also reduced the transaction costs by removing costly taximeters, purpose-built radios and credit card processors and replacing them with mass-produced smartphones with multiple purposes. The reduction of these costs allowed for an increase in the distribution of information. While taxi passengers only exchanged information with the dispatcher by phone, which led to inevitable communication errors, passengers of TNCs receive the information of the driver's face, vehicle, and license plate at the same time the driver receives the passenger's photo. Edelman and Geradin (2015) explain that helps both parties to recognize each other, reducing uncertainties associated with waiting for a taxi.

On these grounds, Edelman and Geradin (2015) illustrate how the success of this efficiency – reduction of transaction costs – led to the creation of platforms offering various types of services:

> These efficiencies apply to myriad other software platforms. Uber's success

> spawned interest in an "Uber for X" in other sectors, such as Handy for home cleaning, Instacart for grocery shopping and delivery, Medicast for in-home doctor visits, Shyp for packing and shipping services, and YourMechanic for car repair. Each of these services places the entire transaction (including search, pricing, payment, and evaluation) onto the platform, reducing transaction costs in both finding a service provider and in completing a purchase. (EDELMAN AND GERADIN, 2015, p. 4)

In addition, Edelman and Geradin's (2015) findings lend to support the claim that another efficiency arising from technology platform companies like Uber is the improved allocation of resources. Uber assures the active use of resources and assets – personal vehicles – that would otherwise remain underused and inactive.

Moreover, by allowing the same vehicle to have multiple purposes – personal use and ride sharing business –, Uber facilitates other allocative efficiencies. In first place, Edelman (2015) points to the fact that the driver avoids a commute to pick up a taxi car from a depot, optimizing time and reducing congestion, pollution and costs of maintenance. Also, Edelman (2015) defends that making use of a single vehicle for different purposes increases service availability to potential passengers since the driver can begin providing the service from home. Furthermore, Edelman and Geradin (2015) suggest that the driver would not have to fear any embarrassment of conducting personal activities in a taxi vehicle.

Resources are also better allocated with the replacement of prescheduled bookings with real-time, on-demand continuous adjustments. Edelman and Geradin (2015) support that this dynamic mechanism saves time and fuel and permits a greater utilization of vehicles, reducing prices to customers. Last but not least, Edelman and Geradin's (2015) views on improved allocation of resources are grounded on the assumption that Uber may help increase investment by motivating the purchase of cars or upgrades.

The third set of efficiencies evidenced by Edelman and Geradin (2015) are information efficiencies, increased accountability for users, and the introduction of reputation mechanisms. In relation to information efficiencies, the authors explain that TNCs like Uber have enough technology to collect accurate information instantaneously, selecting the most optimal driver in terms of distance and availability. By contrast, radio dispatchers could not nearly provide a similar service, given the complexity of information about customer requirements and vehicle locations.

Also, Edelman (2015) defends that Uber added more accountability for both drivers and passengers by introducing real-time tracking of vehicle location and reputation mechanisms. Uber allows that after each ride passengers leave a feedback about the driver and vice-versa. This bidirectional rating system, according to Isaac (2014), ensures quality

control by eliminating drivers whose average rating is below 4.7 stars out of five, increasing transparency and accountability. Along similar lines, Edelman and Geradin (2015) lend support to the claim that the possibility of evaluating driver courtesy and vehicle condition serves to deter low-quality service providers. Likewise, passengers who receive a low evaluation due to violent behavior or unclean manners, for instance, can be banned[41] from the platform.

Lauterbach *et al.* (2009, p. 346) propounds the view that "reputation mechanisms are essential for online transactions, where the parties have little prior experience with one another. This is especially true when transactions result in offline interactions". Guttentag (2015, p. 1195) also mentions that these reputation mechanisms "serve the dual purpose of allowing the two parties to learn more about one another before agreeing to a transaction, and creating an incentive for both parties to conduct themselves in an acceptable manner." Regarding this reputational mechanism, Edelman and Geradin (2015) put forward the claim that:

> By all indications, reputation systems are serving the intended purpose. **Passengers widely report a higher level of courtesy from Uber drivers than from taxicabs**, an outcome which is probably not surprising in light of available incentives and remedies. A passenger dissatisfied with a taxi driver could attempt to note the medallion number or license plate number, then try to lodge a complaint with a fleet owner or local regulator—but most passengers anticipate (we sense correctly) that such complaints usually have limited effect. **Submitting a negative assessment to Uber is both easier and, it seems, significantly more likely to yield a response**. (EDELMAN AND GERADIN, 2015, p. 7, emphasis added)

In Brazil, where criminality rates tend to be higher than in developed countries, this third set of efficiencies brings along another one that is considered a substantial factor for determining consumer preferences: safety. Uber's entry into the Brazilian market represented a safer transportation option for passengers in comparison to the outdated and – many times – unsatisfactory taxi service. Uber's potential increase in safety comes from three main factors: (i) cashless payment made directly to the customer's registered credit card, excluding any concerns of having to carry considerable amounts of cash; (ii) location tracking and sharing, as passengers can share their journey in real time with family and friends; and (iii) peer

[41] See EDELMAN AND GERADIN (2015) for passenger banishment: "A banished customer might start over with a new profile, but platforms are well-positioned to recognize duplicate accounts based on similarity in name, linked social network accounts, payment cards, phone serial number or computer characteristics, and other factors. Whatever the limits of these efforts, they are surely better than any taxi driver effort to ban passengers by sight, an approach bound to make both false-positive and false-negative errors." (p. 6-7)

review mechanism, allowing both passengers and drivers to leave instant feedbacks about each other.

Overall, Edelman and Geradin (2015) presented compelling arguments to expose different sets of efficiencies brought by Uber, not to mention other consumer-friendly efficiencies not explored by the authors, such as the possibility of passengers splitting the fare with other passengers in the same car. Therefore, there is ample support for the claim that efficiencies are a competitive advantage of Uber vis-à-vis traditional taxi services.

III.2 Low Barriers to Entry

Coupled with the various efficiencies, Uber presents yet another competitive advantage in comparison to traditional taxi services, resulting from the low barriers to entry, inherent of its innovative business model.

By classifying itself as a technology company rather than a transportation company, Uber circumvents costly regulations. This distinction, as presented by Isaac (2014), allows the company to operate in a "legal void", providing all the services of a taxi but exempting itself from costly – and, sometimes, irrational – taxi regulations. The data gathered in a study of the United States Federal Trade Commission (1984) identifies at least five areas of taxicab regulations: (i) entry restrictions, (ii) fare controls, (iii) restrictions of types of services offered, such as ride-sharing, (iv) requirements to provide certain amounts of service, (v) quality regulations (vehicle safety, driver qualifications, liability insurance coverage).

In Brazil, entry restrictions are regulated with medallion systems that provide limited amounts of taxi licenses, which, in practice, can only be obtained if an existing license holder transfers it, usually for a considerable amount of money. The reason behind such regulation was to avoid predatory or unfair competition that could lead to a "race to the bottom" with an overly saturated taxi offer.

Edelman and Geradin (2015) support that the medallion systems enriched medallion owners and created taxi monopolies completely sheltered from competition for the last decades. Likewise, Isaac (2014) argues that this lack of competition in the taxi industry has led to a low level of innovation, outdated business models, archaic regulatory structures, and innumerous other inefficiencies. Along similar lines, Geradin's (2016a) argument as to how high barriers to entry act as a disadvantage to traditional taxi services runs as follows:

> Historically, technology played little role in the industry, which is not surprising

> since **taxi services are subject to barriers to entry created by regulatory intervention**. Taxi regulations, for instance, **limit the number of vehicles authorized to provide taxi services in a given locality**. This would not matter so much if the industry was characterized by high levels of performance. However, taxi fares remain often expensive while the quality of the service can be mixed. At certain periods of the day, taxis tend to be scarce. Users may thus experience long waiting times and, in some cases, taxis do not show up at all. This led some countries to engage deregulatory initiatives to improve the performance of the taxi sector, but the often reverted to regulation given the mixed results of these initiatives. Until recently, it seemed that this sector was not called to evolve and that users would have to put up with the service as it is. […]
>
> Although taxi services are fairly basic in nature (transporting passengers from point A to point B) and do not require much capital or skill (a car and a driver), they have been for a long time subject to fairly intrusive regulation with variations across countries and localities. **Among the reasons evoked for regulating taxi services figure, for instance, the fact that in the absence of control on entry there would be too many taxis in the streets and this would create congestion. There has also been a fear, particularly during the great depression, that if taxis were in excessive numbers, they would engage in ruinous competition, which would in turn lead to low quality of service**. (GERADIN, 2016a, p. 1-4, emphasis added)

However, the intent of avoiding unfair competition by creating high barriers to entry leads to limited availability of medallions, which generates an imbalance between supply and demand and results in abusive commercialization of medallions in secondary markets (RIBEIRO, 2016). As mentioned by Leal (2016), in most Brazilian cities the taxi service is marked by a strong distortion resulting from a secondary market of medallions, as the owner of a medallion is usually not the taxi driver that actually provides the transportation service. In these secondary markets, medallions can be sold for almost half a million Brazilian reals, an arrangement that does not benefit the society, workers, or the public power, as the surcharge in price is passed on to passengers (LEAL, 2016).

Hence, the excessive regulation of entry restrictions is burdensome for the taxi industry and serves as a competitive advantage to Uber and other TNCs, whose business models do not present a maximum number of drivers nor a medallion system. Quite the reverse, partner drivers have a free membership with Uber. Taking this difference as a basis, Leal (2016) affirms that it is possible to predict that the future value of taxi medallions tends to zero.

With lower barriers to entry Uber can provide a cheaper service to its customers in comparison to taxis. This competitive imbalance generated by regulatory deficiencies will remain until the Brazilian public authorities revise the outdated taxi regulations. On this point, Frazão (2016c) remarks that the regulation of Uber needs to be attentive to its competitive repercussions, given that regulatory deficiencies are enhanced when they are applied only to taxi services:

> For this reason, the argument of inadequacy of the regulation of traditional services [taxi services] as a justification to maintain the new services [Uber] immune from the regulatory point of view can generate a series of competitive distortions in light that **only the previously established agents are subject to the costs and burdens of the already existing regulation while the entrants of new services are in the ideal situation of total liberty and absence of regulation**.[42] (FRAZÃO, 2016c, emphasis added)

Thus, while the peculiarity of low barriers to entry represents a competitive advantage to Uber, regulators should keep in mind the need to revise taxi regulations in order to avoid competitive distortions generated by deficiencies in the regulatory framework applied to taxis.

III.3 Dynamic Pricing System: the Practice of "Surge Pricing"

In addition to the various efficiencies and low barriers to entry, Uber's business model presents other unique characteristics; amongst them is the dynamic pricing system, also known in the literature as "surge pricing". Uber defines "surge pricing" as follows:

> **Surge pricing is when fares temporarily increase to encourage more drivers to get on the road and head to areas of the city where demand for rides is high.** Fares may surge when many riders are requesting pickup in an area of the city. Surge is designed to ensure you can request and receive a quick pickup anytime. **Surging fares may also encourage nearby riders to wait a few minutes or use another form of transportation instead of requesting an Uber**. Once demand for rides returns to normal levels, surge ends. In some cities, before you request a ride, your app will display any current surge multiplier as a whole number and decimal. **Surge multiplies the base, time, and distance of your trip fare**. Cancellation fees, tolls, and per-trip surcharges are not subject to surge pricing. For example, a surge multiplier of 1.2x applied to a trip fare that would normally cost $5 would result in a trip fare of $6 ($5 x 1.2x).[43] (emphasis added)
>
> When many riders in an area of the city are requesting rides at the same time, surge pricing automatically helps ensure you can receive the quick and convenient pickup you rely on. **When you use your app to first select a pickup location and destination and then request pickup, your app screen will let you know if surge pricing is in effect**. Surge pricing is displayed as a whole number and decimal (for example, 1.3x). **In some cities, you may be asked to type the surge**

[42] Free translation of: "Por essa razão, o argumento da inadequação da regulação dos serviços tradicionais, como justificativa para manter os novos serviços imunes do ponto de vista regulatório, pode gerar uma série de distorções concorrenciais, fazendo com que apenas os agentes anteriormente estabelecidos estejam sujeitos aos custos e aos ônus da regulação já existente, enquanto que os entrantes dos novos serviços estejam na situação ideal de total liberdade e ausência de regulação."

[43] See UBER (2016). Available at: <https://help.uber.com/h/34212e8b-d69a-4d8a-a923-095d3075b487>, Last visited: October 15th, 2016.

> **multiplier to confirm that you understand and accept that it will increase the trip fare**.[44] (emphasis added)
>
> Before you request a trip, your app's fare estimate will include surge pricing when applicable. **You must agree to current surge pricing before you can request a ride**.[45] (emphasis added)

Differently from the regulated tariffs of the taxi business in Brazil, Uber adopts a dynamic pricing model that adjusts its fares in real-time during peak times. With a pricing system that adjusts according to supply and demand, at peak times more drivers are inspired to provide the service given the additional increase in price. From a practical point of view, this means that during periods when vehicles are scarce, such as Saturday nights, New Year's Eve, or when there are special events in the city, Uber stimulates more drivers to provide the service by increasing their fees, while also discouraging price-sensitive users to request a ride. Thus, the goal of the practice of "surge pricing" is to ensure supply even during busy days. (EDELMAN, 2015; ISAAC, 2014; GERADIN, 2016a)

The dynamic pricing system used by Uber and by other TNCs has the following characteristics: (i) it adjusts fare surge multiplier in real-time; (ii) it encourages more drivers to provide their services during peak times of demand; (iii) it encourages riders to postpone their ride requests or to use different means of transportation during peak times of demand; (iv) it multiplies the base, time, and distance of the fare; and (v) it requires the users to agree to the surge pricing before making a request.

Hall, Kendrick and Nosko (2015) realized a case study in real-world scenarios to understand how the surge mechanism works in action. The first scenario analyzed was at the end of a sold out concert in New York City, where a large number of users were attempting to go home and the number of riders opening the Uber app was 4 times higher than usual. The surge mechanism kicked in (between 1 and 1.8x) and the supply of drivers doubled in comparison to the period before the activation of dynamic pricing. With more suppliers, more riders in the area were able to enjoy Uber's services. Also, the data gathered in the study suggest that while there was a peak of riders opening the app, the number of requests at the end did not alter much. This indicates that many riders, after seeing that the surge price was on, preferred to take alternate means of transportation, while riders that were willing to pay surge price were able to get a ride in a timely manner of around 2.6 minutes.

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[44] See UBER (2016). Available at: <https://help.uber.com/h/707e5567-a8ea-47c0-9e2b-bd2fbc2aa763>, Last visited: October 15th, 2016.
[45] See UBER (2016). Available at: <https://help.uber.com/h/d2d43bbc-f4bb-4882-b8bb-4bd8acf03a9d>, Last visited: October 15th, 2016.

The second scenario analyzed by Hall, Kendrick and Nosko (2015) also took place in New York City, only this time during New Year's Eve and without surge pricing for 26 minutes after 01:00am. A closer look at the data indicates that, during the surge outage, which made prices go from 2.7x the standard fare to the standard fare, the rates of fulfilled ride requests fell, expected waiting times increased, and many riders ended up without a ride at all. Hence, the data yielded by this study provides convincing evidence that the surge mechanism is responsible to maintain the health and balance of the marketplace, while also encouraging a time-efficient supply.

As stated by Edelman (2015), the Uber approach to pricing seems to reflect a step forward, as there appears to be no logical reason why transportation prices must maintain unchanged throughout the day. Nonetheless, the practice of "surge pricing" has also raised controversies concerning consumer rights, as some argue that users may accidently accept the screen notice about the dynamic fare without proper attention and subsequently have disappointments with the final price of the ride[46].

It is worth mentioning that in São Paulo, one of the three Brazilian cities that has approved a pro-Uber legislation (see Annex 1), the dynamic pricing mechanism is subject to a cap price established by the government[47]. Despite this provision, the practice of "surge pricing" represents a competitive advantage to Uber's business model.

III.4 Few Competition Concerns

Last but not least, contrary to what it may seem, the widespread use of Uber brings, *a priori*, few competition law concerns in Brazil. There are four main arguments that can be advanced to support this claim.

Firstly, Brazilian taxi companies can also make use of comparable software platforms and, thus, enjoy the efficiencies brought by them. In the current transportation market scenario in Brazil, there is nothing that prevents traditional taxi companies from embracing the technologies used by Uber. For instance, Edelman and Geradin (2015) uphold that taxi fleet owners can develop or buy software platforms that tracks vehicle location,

[46] See EDELMAN AND GERADIN (2015) for controversies regarding surge pricing: "In principle, a user interface might allow a customer to "accept" a surge price by accident, e.g., by tapping quickly, without noticing an on-screen mention of higher prices, but the efficiencies of adjustable prices appear to vastly outweigh the harms from accidents when some users accept a price unknowingly. In any event, consumers should become more familiar with price adjustments as they gain experience with transportation platforms. (…) On the whole we credit price adjustments as increasing efficiency despite some surprises or disappointments along the way." (p. 8)

[47] In this sense, see article 6, item IV, and article 13 of Decree nº 56.981 of May 10th, 2016.

identifies vehicle availability, improves dispatch of drivers, introduces an electronic rating system and allows electronic messaging between dispatchers and drivers for a more quick and accurate service. As a matter of fact, many Brazilian taxi fleet owners have already implemented the use of software platforms[48], such as 99Taxis, SaferTaxi, and Easy Taxi.

Secondly, Uber faces competition from other TNCs rivals in Brazil – WillGo and Cabify. WillGo, an Indian company, launched its services in five Brazilian cities[49] in 2016 and plans to soon expand its services to other major cities. Like Uber, WillGo offers different types of services[50] – (i) Moto, for the delivery of objects and documents, (ii) Smart, for simple vehicles, (iii) Black, for more sophisticated vehicles, (iv) Armor, for armored vehicles, and (v) SUV – and charges its fares according to time and distance, with a minimum fare also previously established. Contrary to Uber, WillGo charges its service providers monthly, not per ride. WillGo's entry into the Brazilian market brings competition to Uber by making possible the use of new features: (i) riding with an armored vehicle, (ii) option of delivery of objects and documents, (iii) schedule rides with up to 48 hours in advance[51], (iv) selection of favorite drivers for future rides, and (v) no dynamic – or "surge" – pricing.

Another newcomer is the Spain-based application Cabify[52], which also started offering its services in 2016. Cabify currently offers only one type of service in São Paulo – Cabify Light, comparable to uberX – and plans to expand to five other cities in Brazil until the end of 2016. Like Uber, Cabify in Brazil charges its service providers a percentage per ride. Unlike Uber, Cabify innovates by charging its prices according to the distance traveled, regardless of the time. In this way, the customer knows the exact price that will be charged before the ride, bringing more competition to Uber and benefits to customers.

Thirdly, coupled with the fact that taxi companies are free to embrace the benefits coming from technological platforms and that Uber faces competition from rival platforms, Edelman and Geradin (2015) analyze that there are usually no restrictions from Uber that prevents service providers and consumers from 'multi-homing' to use different platforms. Evans and Schmalensee (2013, p. 15) clarify the difference between single and multi-homing:

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[48] See CHRISTENSEN, RAYNOR AND McDONALD (2015, p. 47) for the taxi industry's response to Uber: "And as is typical when incumbents face threats from sustaining innovations, many of the taxi companies are motivated to respond. They are deploying competitive technologies, such as hailing apps, and contesting the legality of some of Uber's services".

[49] WillGo already operates in São Paulo, Rio de Janeiro, Belo Horizonte, Porto Alegre and Brasília, and plants to soon expand its services to other eleven major cities, such as Salvador, Florianópolis, Curitiba and Goiânia.

[50] See ROCHA (2016) about WillGo's different types of services.

[51] Note that Uber already reacted to such feature, also allowing passengers to schedule rides with up to 30 days in advance. See CAPELAS (2016).

[52] See BERGAMIN JR. (2016b) for Cabify's entry into the Brazilian market.

"an economic agent single-homes if she uses only one platform in a particular industry and multi-homes if she uses several. In the cases of payments, consumers and merchants both generally use several payment platforms and therefore multi-home in this sense."

Therefore, Uber's service providers – the drivers – can accept ride requests from either software platforms or other mechanisms, such as traditional telephone dispatchers, and Uber's consumers – the passengers – can request rides from multiple platforms. This process of 'multi-homing' has already been observed with service providers in Brazil[53] that use Uber's and Cabify's platforms at the same day but during different time periods.

Last but not least, Esteves (2015b) presented an empirical research to assess the immediate economic impacts of Uber's entry in the Brazilian cities of São Paulo, Rio de Janeiro, Belo Horizonte and Brasilia during the first half of 2015, specifically in regards to the substitutability effects it brought to the number of taxi rides contracted through mobile apps "99taxis" and "Easy Taxi". The data gathered does not provide evidence to support the claim that the number of taxi rides after Uber's entry were inferior than the ones before Uber's entry; rather, it provides evidence that Uber actually generated a new demand in these cities, possibility contributing to the argument that Uber is a disruptive innovation in Brazil according to Christensen's theory.

Esteves (2015b) remarks the substitutability and competition relationships between Uber and both taxi applications:

> In terms of empirical exercises applied to antitrust policy, it means that we can not even assume (at least in the periods analyzed here) the hypothesis that the services provided by Uber were (until May 2015) in the same relevant market of the services provided by taxi applications 99taxis and Easy Taxi. Additionally, it is not possible to rule out the possibility that Uber's entry in the individual passenger transportation market has been sponsored, almost exclusively, by the **expansion and diversification of this market, that is, by meeting a repressed demand, until then unexploited by taxi services**. In other words, the analysis of the period under examination, which constitutes Uber's entry stage in some capital cities, demonstrated that **the application, contrary to absorbing a significant portion of the races made by taxis, actually conquered new customers that did not use taxi services before**. It means, in short, that **until now Uber has not "usurped" a considerable part of taxi customers or compromised the business of taxi drivers, but actually generated a new demand**.[54] (ESTEVES, 2015b, p. 7-8, emphasis added)

[53] See BERGAMIN JR. (2016b) for drivers in Brazil that are already 'multi-homing' between Uber and Cabify.

[54] Free translation of: "Em termos de exercícios empíricos aplicados à politica antitruste, isso significa que não podemos sequer assumir (ao menos nos períodos aqui analisados) a hipótese de que os serviços prestados pelo aplicativo Uber estivessem (até maio de 2015) no mesmo mercado relevante dos serviços prestados pelos aplicativos de corridas de táxis 99taxis e Easy Taxi. Adicionalmente, não é possível descartar a possibilidade de que o ingresso do aplicativo Uber no mercado brasileiro de transporte individual de passageiros tenha sido patrocinado, quase que exclusivamente, pela expansão e diversificação deste mercado, ou seja, por meio do atendimento de uma demanda reprimida, até então não atendida pelos serviços prestados pelos táxis. Em outras

Analyzing the relationship between the rise of TNCs and possible competition law concerns, Edelman and Geradin (2015) hold the opinion that:

> To date**, the growth of software platforms seems to trigger few competition law concerns**, and even where certain software platforms have come to dominate their respective sectors, we see **little sign of market structure that would prevent entry or prevent incumbents from providing similar services** in the ways they see fit. In many high-tech markets, a single firm enjoys a temporary or enduring monopoly, often grounded in technical compatibility, switching costs, or contractual restrictions. Such barriers are not apparent in the markets discussed in this paper. Indeed, **there are dozens of "Uber clones" competing vigorously in many markets**, particularly in Asia. One might also imagine barriers resulting from scale—that a new transportation platform would struggle to match Uber's number of vehicles (hence reducing dispatch efficiency and increasing customer wait times), or a new short-term booking platform would struggle to match Airbnb's breadth of choices. **In principle this could impede entry, though we doubt that this alone would support a competition case**. (EDELMAN AND GERADIN, 2015, p. 10-11, emphasis added)

Brazil's competition watchdog, the Administrative Council for Economic Defense (hereinafter "CADE", for its acronym in Portuguese), already analyzed a few administrative cases involving Uber[55] and participates as *amicus curiae* in cases that challenge Uber's legality in the Brazilian Judiciary.

CADE's General Superintendence[56] received in May of 2015 a complaint made by a taxi association against Uber. The association argued that Uber was practicing unfair competition by offering illegal taxi services. However, on November 20th 2015 the General Superintendence filed the case[57] due to the fact that it does not refer to any anticompetitive conduct set out in the Federal Law nº 12.529/2011 – the Brazilian Competition Law. In the General Superintendence's understanding, it is up to the Legislative Power and to the regulatory agencies to establish the regulatory framework of legality or illegality within the paid individual transportation market. Therefore, the matter in question was considered out of CADE's scope of competence.

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palavras, a análise do período examinado, que constitui a fase de entrada e sedimentação do Uber em algumas capitais, demonstrou que o aplicativo, ao contrário de absorver uma parcela relevante das corridas feitas por taxis, na verdade conquistou majoritariamente novos clientes, que não utilizavam serviços de taxi. Significa, em suma, que até o momento o Uber não "usurpou" parte considerável dos clientes dos taxis nem comprometeu significativamente o negócio dos taxistas, mas sim gerou uma nova demanda."

[55] See ADMINISTRATIVE COUNCIL FOR ECONOMIC DEFENSE (2015b).

[56] CADE is composed by three bodies: the Administrative Tribunal, the General Superintendence and the Department of Economic Studies. The General Superintendence is the body responsible for investigating and instructing cases. At the end of the investigation of an anticompetitive conduct proceeding, the General Superintendence issues an opinion on whether the investigated parties should be condemned or if the case should be filed. Subsequently, the Administrative Tribunal judges the case.

[57] Preparatory Proceeding nº 08700.004530/2015-36.

On the same date it filed the previous case, CADE's General Superintendence opened another case[58] involving Uber, which originated from a complaint made by the Consumer Protection Committee of the Brazilian House of Representatives. The Committee accused Uber of trying to illegally dominate the market of paid individual transportation. In order to address the arguments, the General Superintendence opened the Administrative Inquiry and currently proceeds in the evidentiary stage.

CADE has also received a complaint presented jointly by the Students' Union of the University of Brasilia, the Student's Union of the University Center of Brasilia, and Uber do Brasil Tecnologia Ltda in order to investigate alleged anticompetitive conducts of taxi unions, taxi associations, and taxi drivers against Uber. CADE analyzed the complaint with regards to three anticompetitive conducts: (i) the use of violence and serious threats in order to limit or exclude competitors, with potential diffuse and deleterious effects over consumers; (ii) abusive pressure over public authorities to pass laws that would block Uber's entry into the paid individual transportation market; and (iii) sham litigation. On November 20th 2015, CADE's General Superintendence opened the case[59] to investigate conducts (i) and (iii) with basis on articles 13, V, and 66 and following of the Federal Law nº 12.529/2011 and articles 135 and following of CADE's internal regulations. However, in relation to conduct (ii), the General Superintendence recommended the case to be filed, given that the parties' conduct of promoting their interests with public authorities were considered legitimate in regards to competition. The case is currently still under investigation and, up to the closing date of this dissertation, the General Superintendence has not yet issued an opinion.

In Latin America, besides CADE, the Mexican Competition Authority has also expressed its views[60] in regards to Uber, and considered that the development of TNCs solves information asymmetry problems, contributes to urban mobility, encourages innovation and provides effective consumer choices that generate social welfare, reason why it recommended legislative authorities to allow these ride-sharing services. Other competition authorities from Canada, France, Germany, Italy, Spain and the US have also recommended easing regulatory restrictions on Uber (OECD, 2015).

Nonetheless, Frazão (2016c) points out the need for caution with the possibility of TNC entrants conquering the mainstream market and eliminating the competition. In this scenario, the companies could abuse the market power gained and increase its prices. Leal

[58] Administrative Inquiry nº 08700.010960/2015-97.
[59] Administrative Proceeding nº 08700.006964/2015-71.
[60] See PLENO DE LA COMISIÓN FEDERAL DE COMPETENCIA ECONÓMICA (2015).

(2016) indicates the necessity to establish clear rules that stimulate the entry of TNC competitors in the same conditions as Uber in order to avoid an eventual abuse of market power in the future.

However, the most relevant concern with Uber at the moment should be towards possible anticompetitive practices in relation to its competitors. For instance, in the future Uber could start requiring exclusivity of partner drivers by inserting a non-compete clause into its drivers contracts and, thus, prohibiting drivers from multi-homing and reducing the ability of TNC competitors to offer a wider service network (LEAL, 2016; ROGERS, 2015).

Despite the possible competition concerns mentioned, Esteves (2015a, p. 48) thoroughly analyzed the individual private transportation market in Brazil and concluded that "there are no economic elements that justify the prohibition to new service providers of individual transportation" and that "economic elements suggest that, under a perspective of competition and consumer rights, the entry of new agents tend to be positive"[61].

IV. Competitive Disadvantages Vis-À-Vis Traditional Taxi Services

Having made a thorough analysis of Uber's competitive advantages vis-à-vis taxi services, Section IV focuses on its competitive disadvantages. Initially, the present section acknowledges the atmosphere of legal uncertainty surrounding the company, caused mainly by (i) the challenging regulatory framework in Brazil, given the absence of specific regulation at a national level and the lack of uniform legislation at a local level, (ii) the lack of legal definition for its relationship with its "partner drivers", either as independent contractors or employees, and (iii) insurance matters. Lastly, the competitive disadvantage of tax incentives in favor of the taxi industry will be explored.

IV.1 Atmosphere of Legal Uncertainty: External and Inherent Uncertainties

It is uncontroversial that Uber's innovative process culminated in many questions that led to an atmosphere of legal uncertainty. Should the company's activity be regulated in Brazil? If so, how and by whom – national regulators or local regulators? What is the legal

[61] Free translation of: "Finalmente, é necessário discutir a regulação do mercado de transporte individual de passageiros, visto que não há elementos econômicos que justifiquem a proibição de novos prestadores de serviços de transporte individual. Além disso, elementos econômicos sugerem que, sob uma ótica concorrencial e do consumidor, a atuação de novos agentes tende a ser positiva."

nature of Uber's relationship with its "partner drivers" – independent contractors or employees? Are Uber's services always covered by insurance?

According to Ranchordás (2015), questions like these arise because innovation comes along with both inherent and external uncertainties:

> The **inherent uncertainties are connected with the process of innovation and the unpredictability of its outcomes**; whereas **external uncertainties refer to the regulatory framework** or the necessary conditions to enable the introduction of innovative products or services in the market.
>
> Uncertainty impacts the regulation of innovation and the innovation process in multiple ways. **External regulatory uncertainty can have a strong impact on the incentives to innovate**, particularly when the time span to develop profitable technology or, in the case of the sharing economy, valuable social practices, is more significant. This happens in the case of **uncertainty regarding the regulatory delay**: if firms do not know when and if their products or services will be authorized and how they will be regulated, the incentives to invest may decrease. **Regulatory delays are costly** and, whenever the product introduction benefits decrease progressively, such delay can be extremely costly. **Excessive regulatory uncertainty is detrimental to innovation, since it can result in industry inaction**.
>
> In sum, uncertainty is an inherent and accepted part of the innovation process. However, **innovators do not welcome excessive regulatory uncertainty, regulatory delays, or constant and incoherent legislative reviews as the response to the uncertainties of the innovation process**. Consumers and users of sharing economy practices might also be reluctant to participate in these activities if they are not provided with a minimum of guarantees—for example, that they will arrive safe and sound at their destination, in the case of Uber, or that the risk of food poisoning is limited, in the case of the meal sharing apps. (RANCHORDÁS, 2015, p. 34-35, emphasis added)

Taking into account that the concept of innovation is often associated with uncertainties, we now pass on to assess these uncertainties in the Brazilian perspective.

IV.1.1. Challenging Regulatory Framework

A major competitive disadvantage Uber encounters in Brazil vis-à-vis the taxi business is in regards to the challenging regulatory framework. On one side, there is an absence of specific regulation tailored for the innovative services provided by TNCs at a national level; on the other, there is an extremely fragmented and heterogeneous regulatory framework concentrated at the local level, creating an atmosphere of legal uncertainty for Uber's expansion.

(1) The Absence of Specific Regulation at a National Level

The Federal Law nº 12.587 of January 3rd, 2012, established the guidelines of the National Urban Mobility Policy in Brazil. The referred law classifies urban transportation services into three categories[62]: (i) in relation to its object, it can be of passengers or of goods; (ii) in relation to the characteristics of the service, it can be collective or individual; and (iii) in relation to its nature, it can be public or private. It also provides the definition of different means of transportation, including: (i) individual public transportation, defined as the paid transportation service of passengers opened to the public for individualized trips through rented vehicles; and (ii) private motorized transportation, defined as motorized mean of passenger transportation used for individualized trips through private vehicles[63]. (BRAZIL, 2012)

Although the recent national legislation allows for urban transportation services to be classified as "private", "individual" and "of passengers", and also provides distinct definitions for "individual public transportation" and "private motorized transportation", it does not stipulate a specific definition for TNCs nor outlines possible regulations for them. Thus, at a national level, the Brazilian law has not yet provided an answer as to how regulation perceives the changes brought by TNCs.

Nonetheless, the discussion about the matter gained force in the Brazilian Congress after Uber launched its operations in Brazil in June of 2014 in the cities of Rio de Janeiro and São Paulo (see Annex 1), amidst the Soccer World Cup event. Since then, the Congress has received many legislative proposals in favor of[64] and against[65] the services provided by TNCs.

The pro-Uber opinion advocates the legality of the services provided by TNCs with basis on the distinction between individual *public* transportation and individual *private* transportation made by the Federal Law nº 12.587/2012. Leal (2016) defends that the economic activity of TNCs cannot be classified as a public service due to its characteristics of being optional, non-essential, and subject to free enterprise. Thus, activities of TNCs should be framed under the regime of economic activity rather than the regime of public services, respectively under articles 170 and 175 of the 1988 Constitution of the Federal Republic of Brazil.

[62] See BRAZIL (2012). Article 3, §2º, items I, II and III.
[63] See BRAZIL (2012). Article 4, items VIII and X.
[64] See the Brazilian House of Representatives Bills nº 1584/2015, nº 2569/2015, nº 2532/2015, nº 2749/2015, nº 3384/2015, nº 4312/2016, nº 5794/2016 and nº 5587/2016. See also the Brazilian Federal Senate Bills nº 530/2015 and nº 726/2015.
[65] See the Brazilian House of Representatives Bills nº 1667/2015 and nº 2316/2015.

On the contrary, the supporters of an anti-Uber current of thought allege that the services provided by TNCs are against the Federal Law nº 12.468 of August 26th, 2011, which regulated the taxi profession and stipulated that "the use of personal or third party automotive vehicle for the paid individual public transportation of passengers of up to the maximum of 7 (seven) passengers is an exclusive activity of professional taxis"[66] (BRAZIL, 2011).

Mendes and Ceroy (2015), while analyzing possible legislative responses to Uber, supported that the absence of specific legislation at a national level cannot be interpreted to classify Uber's services as illegal, given that these services are protected by several principles of the Brazilian Constitution, including the general principles of the economic activity provided by article 170:

> Article 170. The economic order, founded on the appreciation of the value of human work and on free enterprise, is intended to ensure everyone a life with dignity, in accordance with the dictates of social justice, with due regard for the following principles:
>
> I – national sovereignty;
> II – private property;
> III – the social function of property;
> IV – **free competition**;
> V – **consumer protection**;
> VI – **environment protection**, which may include differentiated treatment in accordance with the environmental impact of goods and services and of their respective production and delivery processes;
> VII – reduction of regional and social differences;
> VIII – **pursuit of full employment**;
> IX – preferential treatment for small enterprises organized under Brazilian laws and having their head-office and management in Brazil.
>
> Sole paragraph. **Free exercise of any economic activity is ensured to everyone, regardless of authorization from government agencies, except in the cases set forth by law**. (BRAZIL, 1988, emphasis added)

Taking into account these principles, along with others also encompassed by the Brazilian Constitution – such as free enterprise and freedom of profession –, Mendes and Ceroy (2015) argue that the regulation of TNCs should be flexible and open enough to welcome new innovations and technological changes while also assuring minimum levels of safety and consumer welfare, in order to counterbalance the tension between free enterprise and state intervention. In this sense, the authors propose two modifications in the current national regulatory framework to embrace the sharing economy and apply it to urban transportation services. The proposal is to alter both (i) the National Urban Mobility Policy

[66] See BRAZIL (2011). Article 2. Free translation of: "É atividade privativa dos profissionais taxistas a utilização de veículo automotor, próprio ou de terceiros, para o transporte público individual remunerado de passageiros, cuja capacidade será de, no máximo, 7 (sete) passageiros."

(Federal Law nº 12.578 of 2012) – which, although provides for private individual transportation services, does not expressly define or regulate[67] them – and (ii) the Brazilian Traffic Code (Federal Law nº 9.503 of 1997) – to establish that the vehicles used by TNCs must be properly registered with the competent local authorities.

One could also consider two other federal laws that encompass the services provided by TNCs. The first is the Civil Code[68], which provides rules for passenger transportation contracts in its articles 730 to 742. The second is the Civil Rights Framework for the Internet[69], which guarantees in its article 3, item VIII, the freedom of business models developed on the internet, provided they do not conflict with other principles set forth by such law. Notwithstanding the various studies (MENDES AND CEROY, 2015; ANDRIGHI, 2016; LEAL, 2016) and Bills at the Brazilian Congress that discuss how the legislation at a national level can improve to regulate the innovations brought by TNCs, up to the conclusion of this paper there has been no change concerning TNCs in the federal laws.

(2) The Lack of Uniform Legislation at a Local Level

The second challenge concerning the regulatory framework for Uber and other TNCs in Brazil is that, summed with the lack of regulation for private individual transportation of passengers, the Federal Law nº 12.578/2012 attributes the competence of regulating urban transportation services to each municipality: "Article 18. Municipalities have the following duties: I – plan, execute, and evaluate urban mobility policy, and promote the regulation of urban transportation services"[70] (BRAZIL, 2012). Consequently, the regulatory framework applying to TNCs is extremely fragmented and decentralized within the scope of each municipality[71].

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[67] The definition proposed by MENDES AND CEROY (2015, p. 20) for individual private transportation is: "a paid transportation service of passengers not opened to the public to fulfill individualized travels through private vehicles registered with the competent authorities, whose hiring occurs previously by internet applications or not". Free translation of: "serviço remunerado de transporte de passageiros não aberto ao público para a realização de viagens individualizadas, por intermédio de veículos particulares cadastrados junto às autoridades competentes, cuja contratação se dá de maneira prévia, mediante aplicações de internet ou não."

[68] Brazilian Federal Law nº 10.406 of January 10th, 2002.

[69] Brazilian Federal Law nº 12.965 of April 23rd, 2014.

[70] Free translation of: "Art. 18. São atribuições dos Municípios: I - planejar, executar e avaliar a política de mobilidade urbana, bem como promover a regulamentação dos serviços de transporte urbano."

[71] On the contrary, Justice Andrighi from the Brazilian Superior Court of Justice supports that the harmonic combination of the Federal Constitution (articles 1, item IV, 22, items I and XI, and 170), the Civil Code (articles 730 and 731), and the Civil Rights Framework for the Internet (articles 1, item V, and 3, item VIII) leads to the understanding that the competence of regulating about TNCs is of the national legislators, not of states of municipalities. To Justice Andrighi's view, all municipal laws that prohibit TNCs can be declared formally unconstitutional by the Supreme Federal Court of Brazil (ANDRIGHI, 2016).

This provision obliges Uber to obtain regulatory approval from several different regulators at the local level. Besides being an exceedingly burdensome process in terms of costs and energy, this fragmentation can lead to conflicting regulations, resulting in legal uncertainty as to Uber's future expansion in Brazil. Due to the absence of a more tailor-made regulation at a national level, ample debates about the path to Uber's regulation arose within the Municipal Councils of many Brazilian cities.

In São Paulo, Brazil's most populous city and Latin America's greatest financial center, the Municipal Council approved the Bill nº 349 of 2014, which was subsequently sanctioned by the city's mayor. The anti-Uber legislation – Municipal Law nº 16.279 of October 8th 2015 – prohibits paid transportation service of passengers in private vehicles registered through applications. However, article 4 of such law provides that "the Executive Branch shall promote studies for the improvement of the legislation of individual transportation of passengers and the compatibility of new services and technologies with the model established by Law nº 7.329 of July 11th 1969"[72].

The Municipal Government of São Paulo, aiming to improve the existing legislation of individual transportation of passengers, opened to public consultation a draft decree in order to ensure greater legitimacy, transparency and accountability during the selection of a new regulatory framework. The effort was recognized by Darido, Alves and Targa (2016):

> **One recent development from Sao Paulo stands out as a worthwhile effort to balance the objectives of promoting innovation** by Transportation Network Companies (TNCs, such as Uber, Lyft, EasyTaxi, 99Taxi, and others) and ridesharing services (such as BlablaCar, Caronetas, *Tripda* and others) **with the interests of the city and its residents**.
>
> The Municipal Government of Sao Paulo has published for public comments until January 27, 2016 a draft decree to **charge TNCs an upfront fee based on an estimate of vehicle-kilometers, also referred to as "credits"**, to be used by its fleet of passenger cars in a two month period, plus a surcharge if credits are exceeded. The idea is that any registered TNC could bid in an online public auction to purchase credits periodically and with certain limitations to ensure competition. This approach would create a market for these credits and be aligned with the principle commonly known in the vehicle insurance industry as "pay-as-you-drive", and would allow the city to receive a fee from TNCs for the commercial use of its public road infrastructure, which can then be used to better manage and maintain it. The decree would exempt free ridesharing services which the city believes would help reduce the total number of vehicle-kilometers on its congested road network. (DARIDO, ALVES, TARGA, 2016, emphasis added)

[72] Free translation of: "Art. 4º O Poder Executivo deverá promover estudos para o aprimoramento da legislação de transporte individual de passageiros e a compatibilização de novos serviços e tecnologias com o modelo previsto na Lei nº 7.329, de 11 de julho de 1969."

In May 10th, 2016, the City Hall of São Paulo approved the Decree nº 56.981 that regulated the services of (i) individual paid transportation of passengers, (ii) ride sharing, (iii) carpooling, and (iv) vehicle sharing (without a driver). The companies interested in being "Accredited Transportation Technology Companies" (in other terms, TNCs) are required to register with the municipality in order to receive the authorization to provide the service of intermediation between drivers and passengers. In case of non-compliance to this requirement, a fine is applied. Cabify was the first company to receive authorization in São Paulo, followed by Easy Go (former Easy Taxi) and afterwards by Uber.

The Decree nº 56.981/2016 is based on the following guidelines[73]: (i) avoid idleness or overload of available infrastructure; (ii) rationalize the occupation and use of installed infrastructure; (iii) provide improvements in accessibility and mobility conditions; (iv) promote the sustainable development of the city of São Paulo in the socio-economical and environmental dimensions; (v) ensure the safety in the displacement of people; (vi) encourage the development of new technologies that improve the use of system resources; and (vii) harmonize with the encouragement of the use of public transportation and alternative means of individual transport.

The decree established that TNCs can only accept requests from technological platforms managed by them and must ensure the non-discrimination of users and the promotion of the broad access to its service, without prejudice to the possibility of exclusion due to a fair reason foreseen in its regulation[74]. Also, TNCs are required to[75]: (i) organize the service provided by registered drivers; (ii) intermediate the connection between drivers and passengers through a technological platform; (iii) register the vehicles and the drivers that will provide services, ensuring minimum levels safety, comfort, hygiene and quality[76]; (iv) fix a tariff to be charged from the passengers with observance to a maximum value, established by a Municipal Committee; (v) intermediate the payment between drivers and passengers by providing electronic means of payment; (vi) use digital maps to track route and real-time traffic; (vii) provide means for reputational and quality mechanisms by the users; (viii) make the driver's identification (with photo, vehicle model and license plate) available for the passengers; (ix) issue an electronic receipt for the passengers containing origin and destination of journey, total time and distance, map of the route, specification of the total

[73] See Article 2 of the Decree nº 56.981/2016.
[74] See Article 3, §2º, of the Decree nº 56.981/2016.
[75] See Article 6 of the Decree nº 56.981/2016.
[76] The legislator left open the concepts of minimum levels of safety, comfort, hygiene and quality. On this point, TNCs have to find the most adequate interpretation to satisfy these requirements, which can lead to more innovation and competition.

price paid and identification of the driver; and (x) pay an upfront fee referred to as "credits", based on an estimate of traveled kilometers.

TNCs shall also provide the ride sharing option for up to four passengers headed in the same direction. These passengers can choose to share the ride and split the costs. In any case, before the ride TNCs have to make available to passengers information regarding the price to be charged and an estimate calculation of the final value. The decree also established minimum requirements for the drivers, such as the need to have a professional drivers license for paid activities, to be registered with the City Hall, to have approved a specific training course, to contract insurance to cover for accidents, to provide services exclusively through TNCs and to operate in a vehicle up to five years old.

Overall, the legislation decreed by São Paulo's mayor represents a step forward to how regulatory frameworks can embrace innovative technological changes, ensuring at the same time public interest matters. The most pioneering change brought by the decree was the establishment of a credit mechanism by which TNCs have to purchase "credits" in order to operate in the city. The legislation was appraised by Ribeiro (2016), which understood it to be a flexible, dynamic and creative regulatory solution that reflects the fundamental principles of responsive regulation. Also, it is worth mentioning that a recent decision[77] from the Court of Justice of São Paulo declared the unconstitutionality of the anti-Uber Municipal Law nº 16.279/2015.

It is worth mentioning, however, that on October 10th, 2016, the City Hall of São Paulo announced a change in the regulation. The measure establishes that the prices of "credits" will be gradually increased according to the amount used by each TNC, aiming to stimulate competition and dissuade TNCs from increasing its fleet[78]. To the limit of 7.500 kilometers used per hour, TNCs will continue acquiring credits for R$0,10 per kilometer. If this limit is exceeded, the price of the surpassed kilometers is increased by 10%. The progressive system continues with proportional increases until the maximum of increase of 300%, which represents R$0,40 more per kilometer. In practice, given that other TNCs represent only 10%[79] of the market, the measure only affected Uber, which challenged this in court and received a favorable decision on October 19th, 2016[80].

[77] The Court of Justice of São Paulo decided on October 5th, 2016, the unconstitutionality of the São Paulo's Municipal Law nº 16.279/2015 (Direct Unconstitutionality Action nº 2216901-06.2015.8.26.0000).
[78] See PREFEITURA DE SÃO PAULO (2016) about the change in legislation.
[79] See BERGAMIN JR. (2016a).
[80] Judge Antonio Augusto Galvão da França from the 4th Public Treasury Court of São Paulo granted on October 19th, 2016, a preliminary injunction to suspend the progressive system of increases implemented by the City Hall of São Paulo. Ordinary Proceeding nº 1047591-20.2016.8.26.0053.

On the opposite hand of São Paulo, the Municipal Council of Rio de Janeiro approved the Bill nº 122-A/2015, subsequently sanctioned by the city's mayor. The anti-Uber legislation – Complementary Municipal Law nº 159 of September 29th, 2015 – prohibits the services provided by TNCs by declaring that: "it is forbidden to exercise of any kind of paid individual transportation of passengers, with or without driver, within the Municipality of Rio de Janeiro, with elements or characteristics particular of taxi services […]"[81] (RIO DE JANEIRO, 2015).

Nonetheless, on April 5th, 2016, the 6th Public Treasury Court of Rio de Janeiro granted a pro-Uber preliminary injunction[82] and guaranteed the right of Uber's drivers to provide services of until public authorities regulate the activity[83]. The decision reasoned on the understanding that the services provided by Uber and by taxi drivers are essentially different. The City Hall of Rio de Janeiro appealed to the Court of Justice of Rio de Janeiro against this decision, but the request was denied and Uber's operations in Rio continue until the present date, albeit bound by legal uncertainty.

In Brasilia, the capital, the legislative authorities have also been discussing the legality of Uber's operations. The Federal District's Legislative Chamber firstly approved the Bill nº 282 of 2015, which intended to prohibit Uber's operations. However, the Governor of the Federal District vetoed the bill and proposed an open debate about Uber's regulation. Subsequently, Bill nº 777 of 2015 was approved by the Legislative Chamber and sanctioned by the Governor, which culminated in the pro-Uber District Law nº 5.691 of August 2nd, 2016. The District Law's legal strategy in approaching the new business model introduced by Uber is much alike the legislation decreed in São Paulo.

The recent regulation in the Federal District foresees that: (i) interested companies shall seek prior permission before starting its operations; (ii) the service shall be adapted in order to enable its full use by people with disabilities; (ii) the vehicle must be up to 5 years old, or 8 years old if the vehicles possesses renewable non-fossil fuel technologies; (iii) the vehicle must have insurance for personal accidents per each passenger, according to vehicle capacity; (iv) each company has the autonomy to price its services; (v) prices shall be disclosed in a clear and accessible way to all passengers; (vi) drivers must not accept ride

[81] See article 20, §1º, of Rio de Janeiro's Complementary Municipal Law nº 159/2015. Free translation of: "Art. 20. § 1º É vedado o exercício de qualquer espécie de transporte individual remunerado de passageiros, com ou sem motorista, no âmbito do Município do Rio de Janeiro com elementos ou características próprias dos serviços de táxi, em especial a cobrança taximétrica, oferta a público indistinto, a oferta pública e contratação instantânea."

[82] Preliminary injunction granted by Judge Ana Cecilia Almeida of the 6th Public Treasury Court of Rio de Janeiro (Writ of Mandamus nº 040658573.2015.819.0001).

[83] See SELMI (2016).

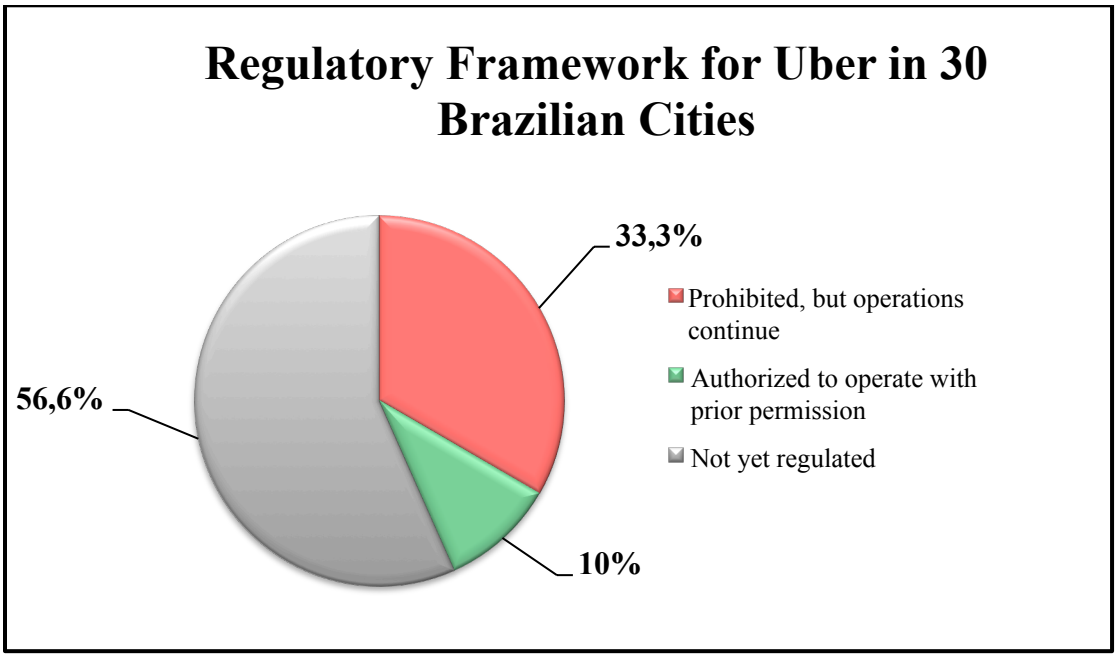
requests on the streets; (vii) drivers must aim passenger safety and comfort during the ride; (viii) the company must issue and send an invoice to the passengers at the end of the ride; (ix) it is prohibited for the companies to disclose personal information of passengers, which are bound to confidentiality; and (x) it is possible to charge the companies an upfront fee referred to as "credits", based on an estimate of traveled kilometers.

Unlike the decree in São Paulo, the legislation approved in the Federal District does not mention ride sharing, carpooling or vehicle sharing. Furthermore, it does not refer to obligations regarding electronic means of payment, use of digital maps, reputational mechanisms, driver's identification or a cap for the tariff value. However, on the same line as São Paulo, it also implemented the innovative credit mechanism to charge TNCs an upfront public price.

Thus, a closer look at the regulation process occurred in São Paulo, Rio de Janeiro, and Brasilia can demonstrate how the fragmentation at a local level can lead to conflicting regulations. Currently, Uber is active in 30 cities in Brazil[84], which means 30 different municipalities to win regulatory approval. Annex 1 provides a table with the current regulatory framework for Uber in each one of these cities. The data gathered in this study suggests that, as of November 2016, Uber is still in a "gray zone" in 56,6% of the Brazilian cities. Out of the 17 cities in which Uber was not yet regulated, 10 already have draft legislations being analyzed, 6 have not started discussing the matter, and 1 archived an anti-Uber bill. Also, notwithstanding prohibitive regulations in 33,3% of the cities, Uber keeps providing its services with basis on favorable judicial decisions or on the argument of Uber's legality under the Federal Law nº 12.587/2012. The data also indicates that only 10% of the cities – namely Brasilia, São Paulo and Vitoria – have approved a pro-Uber regulatory framework.

The following chart illustrates how the regulatory framework is currently divided in the 30 Brazilian cities that have received Uber's services:

[84] See UBER (2016).



Source: Priscilla Tardelli Tollini. Updated until November 14th, 2016.

Hence, penetrating the paid individual transportation market can be a struggle in each new city. According to Geradin (2016b), this represents a competitive disadvantage to Uber's business model, which demands a quick gain of scale in order to be sustainable:

> Second, if one assumes for the time being that Uber is a transportation service, this means Uber needs to obtain the go ahead from many regulators since, as we have seen above, **the regulatory framework is extremely fragmented**. Unlike most regulated firms (telecommunications service providers, pharmaceutical companies, etc.), which are generally controlled by one regulatory authority per country, **Uber needs to obtain regulatory approval from dozens of regulators located at the regional or even city level. This renders the regulatory approval process hopelessly complex and time-consuming, hence creating incentives for launching the service in as many cities as possible even if this means facing some prohibitions**.
> […]
> Moreover, **to be sustainable, the platform needs to gain scale as quickly as possible**. There is thus some urgency in launching an online platform and growing it rapidly. With this aim in mind, it is unsurprising that **Uber is willing to launch its services in some cities without regulatory approval (or with approval pending) even if this creates a risk of having to discontinue the services following a court order**. (GERADIN, 2016b, p. 6, emphasis added)

Therefore, the absence of a specific regulation at a national level and the occurrence of diverging regulations at a local level, summed with the often application of regulations pertaining to the traditional taxi business to TNCs, can lead to situations of patent legal uncertainty that are harmful not only to TNCs but also to consumers and to the market as whole. Yet, there is no definite solution to the matter. Even in cities such as São Paulo and

Brasilia, where the local regulators already established a legislative solution to TNCs, Uber will continue to face legal uncertainty as new anti-Uber cases keep popping in the Judiciary[85]. Moreover, according to the data gathered in Annex 1, in 5 Brazilian cities Uber is only allowed to operate due to favorable preliminary injunction decisions rendered by a court of first instance, which demonstrates the precarious situation of the legal certainty.

The plurality of opinions in the Legislative, Executive and Judiciary Branches reflects the widespread uncertainty about how – and if – Uber's services should be submitted to regulation. Until there is no definite answer from local regulators or the Judiciary, it is important to treat Uber as a legitimate competitor in the paid individual transportation market, as the Brazilian Constitution guarantees the principles of free enterprise (article 1º, IV), free practice of any work or profession (article 5º, XIII), free competition[86] (article 170, IV), and free exercise of any economic activity (article 170, sole paragraph).

IV.1.2. Employment Relationships: "Partner Drivers" as Independent Contractors or Employees?

Besides the atmosphere of legal uncertainty caused by the challenging regulatory framework in Brazil that places Uber in a "gray zone" in 56,6% of the cities and prohibits its operations in 33,3% of them, another controversial theme surrounding Uber's business model is whether its drivers are classified as independent contractors or as employees. The discussion about the legal nature of the contractual relationship between Uber and its service providers is still a very much open question, not only in Brazil but also throughout innumerous jurisdictions.

On one side, Uber classifies its drivers as independent and autonomous contractors rather than employees and emphasizes its role as a mere intermediate technology company that links drivers to passengers. On the other, it can be argued that Uber shifts the risks to workers and bypasses standard employment legislation. Regardless the different views, it is undisputed that by avoiding extensive and costly employment protections Uber's

[85] Judge Valentino Aparecido de Andrade from the 10th Public Treasury Court of São Paulo rendered a decision on September 27th, 2016, in which it obliged the City Hall of São Paulo to limit the number of Uber vehicles in a maximum deadline of 30 days. Available at: <http://g1.globo.com/sao-paulo/noticia/2016/09/justica-obriga-prefeitura-de-sp-limitar-carros-do-uber-nas-ruas.html>, Last visited: October 18th, 2016.

[86] In the words of FORGIONI (2012, p. 167), the principle of free competition guarantees the dispute in the economic field. Also, according to SARMENTO (2015, p. 11), the principle of free competition has double sides – on one hand, it limits excessive state interventions that prevent economic agents' entry and competition in the market; on the other hand, it requires state intervention in order to protect the "well-being" of the market and to prevent abuse of economic power and anticompetitive practices, such as monopolies, oligopolies, and cartels.

business model is characterized by low labor costs, considered one of the most substantial contributions for the company's gains in profit and overall growth.

In Brazil, the labor law is set out mainly by the Federal Constitution and by the Consolidated Labor Laws – Law-Decree nº 5.452 of May 1st, 1943, known as the "CLT". The CLT stipulates that a labor relationship is configured if the following attributes are verified: (i) personal nature of the employee; (ii) non-eventuality of the service; (iii) onerous relation; and (iv) subordination between employer and employee. The latter is, in many court cases, the tiebreaker.

Uber's Terms of Service in Brazil explicitly establishes its role as a mere technology platform that does not provide transportation or logistics services:

> 2. THE SERVICES.
>
> The Services constitute a technology platform that enables users of Uber's mobile applications or websites […] to arrange and schedule transportation and/or logistics services with third party providers of such services […]. **YOU ACKNOWLEDGE THAT UBER DOES NOT PROVIDE TRANSPORTATION OR LOGISTICS SERVICES OR FUNCION AS A TRANSPORTATION CARRIER, AND THAT ALL THESE TRANSPORATION OR LOGISTIC SERVICES ARE PROVIDED BY INDEPENDENT THIRD PARTY TRANSPORTATION PROVIDERS THAT ARE NEITHER EMPLOYEES OR REPRESENTATIVES OF UBER NOR OF ITS AFFILIATED COMPANIES**.[87] (UBER DO BRASIL TECNOLOGIA LTDA., 2016, emphasis added)

In addition to the distinction between technology platforms and transportation providers, one could remark that Uber drivers use their own cars, are not required to wear uniforms, and are not bound to fulfill a minimum number of work hours (ROGERS, 2015). On the contrary, Uber drivers have the complete freedom to choose not only if they will work, but also when, where and for how long. This clearly demonstrates the drivers' interest and availability, as they can provide services every single day or remain inactive for months. Moreover, Uber drivers have to bear the costs related to car operation and maintenance, taxes, licenses, fines, and the risks associated with the activity. This set of arguments can be

[87] See UBER DO BRASIL TECNOLOGIA LTDA. Free translation of: "Os Serviços integram uma plataforma de tecnologia que permite aos (às) Usuários(as) de aplicativos móveis ou sítios de Internet da Uber [...] providenciar e programar Serviços de transporte e/ou logística com terceiros provedores independentes desses Serviços [...]. VOCÊ RECONHECE QUE A UBER NÃO PRESTA SERVIÇOS DE TRANSPORTE OU LOGÍSTICA, NEM FUNCIONA COMO TRANSPORTADORA, E QUE TODOS ESSES SERVIÇOS DE TRANSPORTE OU LOGÍSTICA SÃO PRESTADOS POR PRESTADORES TERCEIROS INDEPENDENTES QUE NÃO SÃO EMPREGADOS(AS) E NEM REPRESENTANTES DA UBER, NEM DE QUALQUER DE SUAS AFILIADAS."

presented to exclude the key attribute of subordination between Uber and its drivers and, consequently, to decharacterize the employment relationship.

Yet, for the defenders of the existence of an employment relationship, the attribute of subordination is characterized by Uber's responsibility for pricing the fares, receiving the payment, paying the drivers, setting the service standard, and even deactivating Uber drivers with low rating levels, a typical demonstration of the employer's management powers (AMORIM, 2016).

A few labor cases have already sprung up in São Paulo and Belo Horizonte[88], calling attention to long hours of work and low income. Uber drivers claim the existence of an employment relationship and require labor rights guaranteed in Brazil, such as minimum wage, established working hours of 8 hours a day and 44 hours a week, annual paid vacations, 13th month salary, lay-off guarantee fund ("FGTS")[89], 30 days pay in lieu of notice on dismissal[90], paid weekly rest-period, maternity or paternity leave, and transportation and meal vouchers. While the Brazilian courts have not yet analyzed the matter, in similar circumstances regarding the taxi industry they set the understanding[91] that there is no employment relationship between taxi drivers and radio taxi companies, but rather the provision of autonomous services due to the lack of subordination.

The Labor Prosecution Offices of Rio de Janeiro, São Paulo and Brasilia, through the promotion of an inter-institutional task force, are together investigating complaints from Uber drivers in relation to labor rights. The task force scheduled a public hearing on the subject for November 2016 (GOMES, 2016).

In the United States, the Labor Commissioner of the State of California decided[92] on June 3rd, 2015, that Uber is involved in every aspect of the operation, in light of the

[88] For instance, see the following proceedings: RT nº 1001323-08.2016.5.02.0058 of the 58th Labor Court of São Paulo (*Elvis Cardoso Gomes v. Uber*), RT nº 1001402-26.2016.5.02.0045 of the 45th Labor Court of São Paulo (*Adelmo da Silva Bezerra v. Uber*), RT nº 1001574-25.2016.5.02.0026 of the 26th Labor Court of São Paulo (*Rodrigo Tadeu de Souza da Silva v. Uber*), RT nº 1001492-33.2016.5.02.0013 of the 13th Labor Court of São Paulo (*Fernando dos Santos Teodoro v. Uber*) and RT nº 0011354-30.2015.5.3.0182 of the 44th Labor Court of Belo Horizonte (*Wagner Martins de Oliveira v. Uber*).

[89] The FGTS system enables each worker to open a savings fund attached to the labor contract. In case of exposure to specific circumstances, such as loss of employment, retirement, and serious illness, the employee is allowed to withdraw the savings fund. Monthly deposits by the employer equivalent to 8% of the employee's income compose the account balance.

[90] Brazilian labor law guarantees 30 days pay in lieu of notice on dismissal, summed with 3 more days for each whole year worked, up to a maximum of 90 days.

[91] In this sense, see the following cases: 1) 3rd Regional Labor Court of Brazil. Ordinary Appeal nº 814107 00096-2007-053-03-00-0. Justice Cleube de Freitas Pereira. Eighth Group. June 23rd, 2007. 2) 3rd Regional Labor Court of Brazil. Ordinary Appeal nº 44004 00911-2003-036-03-00-1. Justice Maria Cristina Diniz Caixeta. Third Group. March 27th, 2004. 3) 2nd Regional Labor Court of Brazil. Ordinary Appeal nº 01330-2008-019-02-00-1. Justice Marta Casadei Momezzo. Tenth Group. May 07th, 2010.

[92] See LABOR COMMISSIONER OF THE STATE OF CALIFORNIA (2015).

following reasons: (i) they can vet prospective drivers who do not pass their background checks; (ii) they control the tools the drivers use; (iii) they monitor driver's approval ratings and terminate their access to the application if the rating falls below 4.6 stars; (iv) they pay their drivers a non-negotiable service fee; (v) they set the price for the trip; (vi) they discourage drivers from accepting tips as it would be counterproductive to their marketing strategy; (vii) they provide the mobile phone application essential to the work; and (viii) their intellectual property is what enables the drivers to perform the work.

Likewise, a recent ruling by a London Employment Tribunal dated October 28th, 2016, classified Uber drivers as employees rather than independent contractors, entitling them to basic employment rights such as minimum wage and holiday pay. According to the ruling, "Uber is in business as a supplier of transportation services" and its drivers cannot negotiate with passengers, as "they are offered and accept trips strictly on Uber's terms" [93]. In sum, the London Employment Tribunal reasoned that Uber: (i) interviews and recruits drivers; (ii) controls the key information and excludes the driver from it; (iii) requires drivers to accept trips and/or not to cancel trips and logs off drivers who breach these requirements; (iv) sets the default route; (v) imposes numerous conditions on drivers and instructs drivers as to how to perform their work; (vi) subjects drivers to a rating system; (vii) handles complaints by passengers; and (viii) reserves the power to amend the drivers' terms unilaterally.

Isaac (2014) highlights the impacts and vulnerabilities Uber's business model presents for its drivers, which besides having to bear responsibility for the costs of gas and vehicle conservation, face an unstable income without the labor protections associated with employment. In the same line of thought, Frazão (2016b) expresses concerns with such contractual arrangements, which can present countless efficiencies but at the same time may serve as an instrument to avoid protective legislations and hide real employment relationships. Hence, Frazão (2016c) defends that, although regulation should stimulate innovation and new contractual arrangements that serve as efficient alternatives to the new demands of the society, the reduction of transaction costs should not be obtained from a deliberate avoidance of rules of public interest, such as labor standards:

> Indeed, **the reduction of transaction costs cannot be obtained exclusively from a deliberate avoidance from some points of regulation**, especially in areas such as **Labor Law**, Consumer Law, Competition Law, Environmental Law and Tax law, that deal with obligatory norms that ensure unavailable public interest rights of major relevance or that protect vulnerable individuals. In this sense, the

[93] See LONDON CENTRAL EMPLOYMENT TRIBUNAL (2016, p. 27-28).

> **entrepreneurial creativity cannot avoid compliance to mandatory rules**.[94] (FRAZÃO, 2016c, emphasis added)

The central point of distinction between independent contractors and employees lies within the contrasting concepts of autonomy and subordination. Regarding the provision of services by autonomous service providers, what matters to the service hirer is only the final result of the work. Quite the reverse, when there is an employment relationship with the existence of subordination the employee must comply with the *modus faciendi* standards set out by the employer. Thus, the nub of the question is to discover to what extent Uber drivers are subordinated and to what extent the company can interfere and control in the provision of services.

One of the crucial cornerstones of labor law in Brazil is the principle of the primacy of reality (FRAZÃO, 2016a), by which courts can carry out a case-by-case assessment and decide for the existence or not of an employment relationship. Thus, if Brazilian courts find Uber drivers to be real employees rather than independent contractors, employment regulations will be a major competitive disadvantage to Uber, possibly impairing the company's operations in Brazil. Likewise, if lawmakers decide to frame Uber's operations as employment relationships, a key feature of its business model – low labor costs – is compromised and Uber's survival in Brazil will be challenged.

In sum, "Uber's ultimate effect on labor standards is therefore unclear. […] As with most labor questions, which scenario unfolds will be determined as much by politics as by economics" (ROGERS, 2015, p. 101). Until then, the legal uncertainty regarding the nature of the contractual relationship with its "partner drivers" in Brazil will haunt the company.

IV.1.3. Liability Matters: Uber Drivers' Limited Insurance Coverage

Uncertainty also arises from insurance and liability matters. Uber's insurance policy in Brazil demonstrates the company's concern with the safety of passengers and drivers. As of July 2016, Uber in Brazil contracted with the ACE Group an insurance coverage for its ridesharing services that includes: (i) R$100,000 liability coverage per person

[94] Free translation of: "De fato, a redução de custos de transação não pode ser obtida exclusivamente a partir da fuga deliberada de alguns focos de regulação, especialmente em áreas que, como são os casos do Direito do Trabalho, Direito do Consumidor, Direito da Concorrência, Direito Ambiental e Direito Tributário, lidam com normas cogentes que asseguram interesses públicos indisponíveis da maior relevância ou tutelam vulneráveis. Nesse sentido, a criatividade empresarial não pode se furtar à observância de normas imperativas."

for accidental death; (ii) R$100,000 liability coverage per person for total or partial permanent invalidity; and (iii) R$5,000 liability coverage per person for medical expenses. The driver is covered from the moment it accepts a trip in the application until its conclusion, while the passenger is covered from the moment it enters until the moment it leaves the vehicle. (UBER NEWSROOM, 2016b)

Nonetheless, Uber in Brazil provides for insurance coverage only when a customer is physically in the car. In practice, this means that Uber drivers take in the burden of accident risks while en-route to a passenger, covered only by their personal insurance. Even so, in case the insurance company finds out that the driver was acting as an Uber driver at the time of the accident, it can deny coverage and cancel the insurance policy, taking into account that the vehicle was being used for commercial purposes without the payment of an additional premium. Thus, for Uber drivers this means assuming personal liability for costs associated with insurance fraud and accidents, or paying 50% more for the additional commercial premium. (ISAAC, 2014; MAIA, 2016)

According to Magro and Agudo (2015), the use of Uber results in an authentic consumer relationship, given that all the elements foreseen by the Brazilian Consumers Defense Code (Federal Law nº 8.078 of September 11th, 1990) are achieved. In this case, both Uber and Uber drivers may be held responsible for any defect in the delivery of the service – Uber in regards to the platform and the driver in relation to the passenger transportation itself. Moreover, Magro and Agudo (2015) advocate for the joint liability of Uber and Uber drivers in relation to any damages caused to the passengers, arguing that any clause of limitation of liability under Uber's Terms of Service is null due to express provision under article 51 of the CDC. Whether or not the Brazilian Consumers Defense Code is applicable to Uber's operations, matter which is not covered in this paper, the question about Uber drivers' limited insurance coverage remains.

In the United States and in Puerto Rico, for instance, Uber's insurance policy provides: (i) $1 million of liability coverage per incident (coverage for drivers' liability to third parties from the moment of acceptance of the trip to its conclusion); (ii) $1 million of uninsured or underinsured motorist bodily injury coverage per incident (to ensure protection on a 'hit-and-run' if a third driver causes an accident with an Uber vehicle and does not provide insurance); (iii) contingent comprehensive and collision insurance (covers physical damage to the vehicle during a trip up to the actual cash value of the vehicle); (iv) no fault coverage; and (v) coverage between trips if the driver does not have applicable coverage (bodily injury up to $50,000 per individual per accident, with a total $100,000 per accident,

and $25,000 for property damage). (UBER NEWSROOM, 2016a)

As Uber in Brazil provides liability coverage only for accidental death, total or partial permanent invalidity, and medical expenses, there is an atmosphere of uncertainty as to who would be liable for other types of damages. Uber drivers can either pay an extra premium to receive commercial coverage or assume personal liability for costs connected with accidents and insurance fraud. In any case, what happens if there is an accident during the period of time between trips? Regulators in Brazil should reconsider this matter. Until then, the limited insurance coverage represents another competitive disadvantage in comparison to taxi services, which are generally fully insured.

IV.2 Absence of Tax Exemptions

Last but not least, contrary to taxicabs, Uber drivers are not granted any tax exemptions from the Brazilian government. In Brazil, at the moment of vehicle purchase, taxi drivers receive tax exemption from a federal financial operations tax ("IOF") and from a federal excise tax on the manufacturing of goods ("IPI"). Moreover, in some Brazilian states, such as São Paulo and Rio de Janeiro, taxi drivers are also exempted from paying a state value-added tax on services and circulation of goods ("ICMS") and an annual state motor vehicle property tax ("IPVA"). In the case of São Paulo, taxi drivers even receive a 30% discount from car dealers. Also, taxi associations and cooperatives from the city of São Paulo and autonomous taxi drivers from the city of Rio de Janeiro are exempted from a municipal service tax ("ISS"). (MELLO & DANTAS, 2015)

On the contrary, Uber drivers bear the full cost of vehicle acquisition – which can be expensive luxury sedan vehicles in the case of UberBlack – without tax exemptions or discounts from car dealers. Uber drivers pay IOF, IPI, ICMS and ISS taxes. In addition, Uber drivers pay annual IPVA tax to the state.

One could argue, however, that taxi drivers are required to pay annual taxes, which in São Paulo summed up to around R$255[95] in 2015. Nonetheless, while Uber drivers do not pay annual taxes to the government, in São Paulo, Brasilia and Vitória – the three cities which have already enacted pro-Uber legislation (see Annex 1) – Uber drivers are required to pay an upfront fee based on an estimate of traveled kilometers in order to operate, referred to as "credits". Therefore, the absence of tax exemptions for Uber drivers represents a competitive disadvantage in relation to taxi drivers.

[95] See MELLO & DANTAS (2015).

V. Conclusion:

Given the fluidity and decentralization of legislation surrounding Uber, it is challenging to predict the company's future in Brazil, as regulation poses a threat to its future expansion. However, at the present moment Uber continues to prominently establish itself within the worldwide transportation sector. The rapid popularization of Uber's app-based ride-sharing service gave rise to several concerns regarding regulation, competition, employment, tax, insurance, liability, and consumer rights. Thus, achieving a greater understanding of Uber's innovative trajectory and the impacts it has in various sectors undoubtedly offers tremendous practical value.

The regulatory framework applicable to the individual transportation sector at a national level in Brazil should be revisited in order to establish modern and uniform regulations tailored specifically for ride-sharing services. Regulators need to find the balance between the interest to promote innovation in the sharing economy and the interest to safeguard customers in regards to safety, insurance, hygiene, comfort, and quality. To find such balance, regulators should rethink the role of law during the process of innovation and apply principle-based regulation specific for the sharing economy practices. Once reasonable innovation-friendly regulations have been enacted for Uber and other TNCs, it will be possible for consumers to fully enjoy the efficiencies brought by these technological companies.

Bearing in mind the issues addressed in Sections II, III, and IV of this paper, the purpose of a new regulatory framework should not be to stifle innovation and new services that bring several efficiencies and benefits to customers, but rather to assess risks concerning consumer protection, public safety, insurance, labor regulations, and fair competition. If incorrectly targeted, regulation can place many costs and burdens on Uber, causing the adverse effect of stifling innovation instead of promoting it. Hence, it is necessary to remove arbitrary regulatory intervention and set a pro-competition regulatory framework that is flexible and open enough for future innovations, such as autonomous vehicles. As the current legal framework at a national level in Brazil does not suffice, regulators should alter the laws in order to foster innovation while also safeguarding consumers.

The regulatory issues involving Uber are intrinsically linked to competitive issues, reason why both matters should be treated accordingly. The regulation of Uber and other TNCs needs to be harmonic, consistent and articulated with the regulation of traditional taxi

services, which certainly also needs to be revised by public authorities in order to avoid competitive distortions, as "there seems to be no valid reason to shelter the taxi industry from competition and to prevent users from enjoying new, innovative services" (GERADIN, 2016b, p. 10).

In any case, Uber's impact in the traditional taxi industry is irreversible, as passengers will no longer make telephone calls to request a driver, just as individuals no longer buy videotape cassettes to watch movies or CDs to listen to music. The regulatory environment will remain punctuated by question marks for many years to come, but it is important to establish a combined, cooperative and complementary line of action between regulation and competition authorities.

VI. References:

ADMINISTRATIVE COUNCIL FOR ECONOMIC DEFENSE. **Preparatory Proceeding nº 08700.006964/2015-71**. General Superintendence's Technical Note nº 51/2015. Brasilia, November 19th, 2015.

ADMINISTRATIVE COUNCIL FOR ECONOMIC DEFENSE. **Superintendência-Geral do Cade Instaura Processo Contra Taxistas No Caso Uber**. Notícias. November 20th, 2015. Available at: <http://www.cade.gov.br/noticias/superintendencia-geral-do-cade-instaura-processo-contra-taxistas-no-caso-uber>, Last visited: October 12th, 2016.

AMORIM, Carlos Vinicius Duarte. **Empregados ou Motoristas Autônomos – Mais Uma Polêmica Envolvendo o Uber**. Jota. May 4th, 2016. Available at: <http://jota.info/empregados-ou-motoristas-autonomos-mais-uma-polemica-envolvendo-o-uber>, Last visited: October 22nd, 2016.

ANDRIGHI, Fátima Nancy. **Uber: a Regulação de Aplicativos de Intermediação de Contrato de Transporte**. Revista de Direito Administrativo, Rio de Janeiro, v. 271, pages 409-416. January – April 2016.

AUCHARD, Eric. **Uber Launches Global Assault on Takeaway Meals Market**. Reuters. September 28th, 2016. Available at: <http://www.reuters.com/article/us-food-delivery-idUSKCN11W2LX>, Last visited: October 3rd, 2016.

AUCHARD, Eric; STEITZ, Christoph. **German Court Bans Uber's Unlicensed Taxi Services**. Reuters. March 18th, 2015. Available at: <http://www.reuters.com/article/us-uber-germany-ban-idUSKBN0ME1L820150318>, Last visited: October 3rd, 2016.

BERGAMIN JR., Giba. **Contra Monopólio, Haddad Aumenta Taxa Para Aplicativos Como Uber**. Folha de São Paulo. October 10th, 2016. Available at: <http://www1.folha.uol.com.br/cotidiano/2016/10/1821589-contra-monopolio-haddad-aumenta-taxa-para-aplicativos-como-uber.shtml>, Last visited: October 20th, 2016.

BERGAMIN JR., Giba. **Rivais do Uber, Empresas da Índia e Espanha Estreiam Com Tropeços**. Folha de São Paulo. June 26th, 2016. Available at: <http://www1.folha.uol.com.br/cotidiano/2016/06/1785741-rivais-do-uber-empresas-da-india-e-da-espanha-estreiam-com-tropecos.shtml>, Last visited: October 9th, 2016.

BERSHIDSKY, Leonid. **Backing Uber's Competitors Makes Economic Sense**. Bloomberg. August 2nd, 2016. Available at: <https://www.bloomberg.com/view/articles/2016-

08-02/giving-uber-money-to-burn-is-economically-inefficient>, Last visited: October 26th, 2016.
BOND, Andrew T. **An App for That: Local Governments and the Rise of the Sharing Economy**. Notre Dame Law Review Online, vol. 90:2. Pages 77-96. 2015.
BRAZIL. **Constitution of the Federal Republic of Brazil of 1988**. Available at: <http://www.planalto.gov.br/ccivil_03/Constituicao/Constituicao.htm>, Last visited: October 3rd, 2016.
BRAZIL. **Federal Law nº 12.468 of August 26th, 2011**. Available at: <http://www.planalto.gov.br/ccivil_03/_Ato2011-2014/2011/Lei/L12468.htm>, Last visited: October 3rd, 2016.
BRAZIL. **Federal Law nº 12.587 of January 3rd, 2012.** Available at: <http://www.planalto.gov.br/ccivil_03/_ato2011-2014/2012/lei/l12587.htm>, Last visited: October 3rd, 2016.
BUSINESS INSIDER. **Tesla is Building Self-Driving Cars for Autopilot 2.0**. August 15th, 2016. Available at: <http://www.businessinsider.com/tesla-is-building-self-driving-cars-for-autopilot-20-2016-8>, Last visited: October 3rd, 2016.
CALIFORNIA PUBLIC UTILITIES COMMISSION. **Transportation Network Companies**. 2016. Available at: <http://www.cpuc.ca.gov/General.aspx?id=787>, Last visited: September 26th, 2016.
CANNON, Sarah; SUMMERS, Lawrence H. **How Uber and the Sharing Economy Can Win Over Regulators**. Harvard Business Review. October 13th, 2014. Available at: < https://hbr.org/2014/10/how-uber-and-the-sharing-economy-can-win-over-regulators>, Last visited: September 20th, 2016.
CAPELAS, Bruno. **Uber Libera Opção de Agendar Corridas no Brasil**. September 30th, 2016. Available at: <http://link.estadao.com.br/noticias/empresas,uber-libera-opcao-de-agendar-corridas-no-brasil,10000079186>, Last visited: October 27th, 2016.
CHANEY, Jen. **Parting Words for VHS Tapes, Soon to Be Gone with the Wind**. The Washington Post. August 28th, 2005. Available at: <http://www.washingtonpost.com/wp-dyn/content/article/2005/08/26/AR2005082600332.html>, Last visited: September 20th, 2016.
CHRISTENSEN, Clayton M.; RAYNOR, Michael E.; McDONALD, Rory. **What is Disruptive Innovation?** Harvard Business Review 93, no. 12. Pages 44-53. December 2015.
DARIDO, Georges; ALVES, Bianca Bianchi; TARGA, Felipe. **Sao Paulo's Innovative Proposal to Regulate Shared Mobility by Pricing Vehicle Use**. World Bank Group. Transport for Development Blog. January 26th, 2016.
EDELMAN, Benjamin. **Whither Uber? Competitive Dynamics in Transportation Networks**. Competition Policy International, Forthcoming. November 24th, 2015. Available at: <http://ssrn.com/abstract=2695097>, Last visited: September 21st, 2016.
EDELMAN, Benjamin G.; GERADIN, Damien. **Efficiencies and Regulatory Shortcuts: How Should We Regulate Companies Like Airbnb and Uber?** Forthcoming, Stanford Technology Law Review. November 24th, 2015. Available at: <http://srrn.com/abstract=2658603>, Last visited: September 30th, 2016.
ESTEVES, Luiz. **O Mercado de Transporte Individual de Passageiros: Regulação, Externalidades e Equilíbrio Urbano**. Department of Economic Studies of the Administrative Council for Economic Defense. Paper 001/2015. Brasilia, September 2015.
ESTEVES, Luiz. **Rivalidade Após Entrada: O Impacto Imediato do Aplicativo Uber Sobre as Corridas de Taxi Porta-à-Porta**. Department of Economic Studies of the Administrative Council for Economic Defense. Paper 003/2015. Brasilia, December 2015.
EVANS, David S.; SCHMALENSEE, Richard. **The Antitrust Analysis of Multi-Sided Platform Businesses**. Cambridge (MA): National Bureau of Economic Research. Working

Paper nº 18783. February 2013. Available at: <http://www.nber.org/papers/w18783.pdf>, Last visited: October 7th, 2016.
FEDERAL TRADE COMMISSION. **An Economic Analysis of Taxicab Regulation**. Bureau of Economics Staff Report. Frankena, Mark W. & Pautler, Paul A. May 1984.
FIORETTI, Julia. **Uber Files Complaints Against German and Spanish Bans**. Reuters. April 1st, 2015. Available at: <http://www.reuters.com/article/uber-eu-complaint-idUSL6N0WY2TP20150401>, Last visited: October 3rd, 2016.
FORGIONI, Paula. **Princípios Constitucionais Econômicos e Princípios Constitucionais Sociais – A Formatação Jurídica do Mercado Brasileiro**. Revista do Advogado, n. 117. 2012.
FRAZÃO, Ana. **A Decisão do Reino Unido Sobre os Motoristas da Uber: O Que Ela Nos Ensina?** Jota. November 1st, 2016. Available at: < http://jota.info/decisao-reino-unido-sobre-os-motoristas-da-uber-o-que-temos-aprender-com-ela>, Last visited: November 10th, 2016.
FRAZÃO, Ana. **PL Que Regula Serviços Como o Uber Traz Riscos Trabalhistas e Consumeristas**. Consultor Jurídico. February 13th, 2016. Available at: <http://www.conjur.com.br/2016-fev-13/ana-frazao-projeto-lei-regula-uber-traz-riscos-trabalhistas>, Last visited: October 3rd, 2016.
FRAZÃO, Ana. **Tecnologia e Regulação dos "Novos Serviços"**. Jota. October 6th, 2016. Available at: <http://jota.uol.com.br/tecnologia-e-regulacao-dos-novos-servicos>, Last visited: October 8th, 2016.
GESLEY, Jenny. **Legal Changes for Uber in the European Union and in Germany.** Library of Congress. March 14th, 2016. Available at: <https://blogs.loc.gov/law/2016/03/legal-challenges-for-uber-in-the-european-union-and-in-germany/>, Last visited: October 26th, 2016.
GERADIN, Damien. **Should Uber Be Allowed to Compete in Europe? And If So How?** Competition Policy International, Forthcoming, 2015. George Mason University Law and Economics Research Paper Series 15-11. Available at: <http://ssrn.com/abstract=2615530>, Last visited: October 2nd, 2016.
GERADIN, Damien. **Uber and the Rule of Law: Should Spontaneous Liberalization Be Applauded or Criticized?** Competition Policy International, Forthcoming, 2015. George Mason University Law and Economics Research Paper Series 15-53. Available at: <http://ssrn.com/abstract=2693683>, Last visited: October 2nd, 2016.
GOMES, Helton Simões. **Uber Enfrenta Ações Trabalhistas de Motoristas e Entra na Mira do MPT**. G1. October 13th, 2016. Available at: <http://g1.globo.com/tecnologia/noticia/2016/10/uber-enfrenta-acoes-trabalhistas-de-motoristas-e-entra-na-mira-do-mpt.html>, Last visited: October 23rd, 2016.
GOOGLE. **Google Self-Driving Car Project**. 2016. Available at: <https://www.google.com/selfdrivingcar/>, Last visited: October 3rd, 2016.
GUTTENTAG, Daniel. **Airbnb: disruptive innovation and the rise of an informal tourism accommodation sector**. Current Issues in Tourism, vol. 18, no. 12, pages 1192-1217, 2015. Available at: <http://dx.doi.org/10.1080/13683500.2013.827159>, Last visited: August 23rd, 2016.
HALL, Jonathan; KENDRICK, Cory; NOSKO, Chris. **The Effects of Uber's Surge Pricing: A Case Study**. The University of Chicago Booth School of Business. 2015. Available at: <http://andrewchen.co/wp-content/uploads/2016/01/effects_of_ubers_surge_pricing.pdf>, Last visited: October 17th, 2016.
HIGA, Paulo. **Táxi ou Uber? Um Comparativo dos Preços das Corridas em Cinco Cidades**. Tecnoblog. Available at: <https://tecnoblog.net/188610/taxi-ou-uber-preco-qual-mais-barato/>, Last visited: October 27th, 2016.
INTERNATIONAL COMPETITION NETWORK. **Advocacy and Competition Policy**.

Advocacy Working Group. Naples, Italy, 2002.
ISAAC, Emily. **Disruptive Innovation: Risk-Shifting and Precarity in the Age of Uber**. Berkeley Roundtable on the International Economy. BRIE Working Paper 2014-7. December 7th, 2014.
KALANICK, Travis. **Uber's Founding**. December 2010. Available at: <https://newsroom.uber.com/ubers-founding/>, Last visited: September 19th, 2016.
LABOR COMMISSIONER OF THE STATE OF CALIFORNIA. **Case nº 11-46739 EK**. *Barbara Ann Berwick vs. Uber Technologies Inc and Rasier – CA LLC*. June 3rd, 2015. Available at: <http://digitalcommons.law.scu.edu/cgi/viewcontent.cgi?article=1988&context=historical>, Last visited: October 29th, 2016.
LAUTERBACH, Debra; TRUONG, Hung; SHAH, Tanuj; ADAMIC, Lada. **Surfing a web of trust: Reputation and reciprocity on CouchSurfing.com.** IEEE SocialCom, 4, Pages 346–353. 2009.
LAZO, Luz. **New Regulations for Uber and Lyft Open the Door for Expansion**. The Washington Post. February 2015. Available at: <https://www.washingtonpost.com/local/trafficandcommuting/new-regulations-for-uber-and-lyft-open-the-door-for-expansion/2015/02/21/8445149a-b83e-11e4-a200-c008a01a6692_story.html>, Last visited: September 19th 2016.
LONDON CENTRAL EMPLOYMENT TRIBUNAL. **Case nº 2202551/2015**. *Aslam & Farrar vs. Uber*. Employment Judge A M Snelson. October 28th, 2016. Available at: <https://www.judiciary.gov.uk/wp-content/uploads/2016/10/aslam-and-farrar-v-uber-reasons-20161028.pdf>, Last visited: October 29th, 2016.
LOVE, Julia; SOMMERVILLE, Heather. **Exclusive: Uber To Move Freight, Target Trucking For the Long Haul**. Reuters. September 28th, 2016. Available at: <http://www.reuters.com/article/us-uber-trucking-idUSKCN11Y0DI>, Last visited: October 3rd, 2016.
MAGRO, Américo Ribeiro; AGUDO, Hugo Crivilim. **O Aplicativo "Uber" e a Defesa do Consumidor**. Encontro Toledo de Iniciação Científica, v. 11, n. 11. 2015. Available at: <http://intertemas.unitoledo.br/revista/index.php/ETIC/article/view/4931/4748>, Last visited: October 25th, 2016.
MAIA, Laura. **'Risco Uber' Encarece Seguro de Veículos**. O Estado de São Paulo. July 25th, 2016. Available at: <http://economia.estadao.com.br/noticias/suas-contas,risco-uber-encarece-seguro-de-veiculos,10000064782>, Last visited: October 30th, 2016.
MELLO, KATHIA; DANTAS, CAROLINA. **Uber x Taxi: Entenda as Diferenças de Custos e Serviços Entre o Taxi e o Aplicativo**. G1. July 13th, 2015. Available at: <http://especiais.g1.globo.com/sao-paulo/2015/uber-x-taxi/>, Last visited: October 30th, 2016.
MENDES, Francisco Schertel; CEROY, Frederico Meinberg. **Economia Compartilhada e a Política Nacional de Mobilidade Urbana: Uma Proposta de Marco Legal**. Brasília: Núcleo de Estudos e Pesquisas. Consultoria Legislativa do Senado Federal. Texto Para Discussão nº 185. November 2015.
MILLER, Stephen R. **First Principles For Regulating the Sharing Economy**. 53 Harvard Journal on Legislation 147 (2016). February 2016. Available at: <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2568016>, Last visited: October 31st, 2016.
MOAZED, Alex; JOHNSON, Nicholas L. **Why Clayton Christensen Is Wrong About Uber And Disruptive Innovation**. TechCrunch. February 27th, 2016. Available at: <https://techcrunch.com/2016/02/27/why-clayton-christensen-is-wrong-about-uber-and-disruptive-innovation/>, Last visited: October 4th, 2016.
OECD. **Hearing on Disruptive Innovation**. Issues Paper by the Secretariat. Directorate for

Financial and Enterprise Affairs – Competition Committee. May 28th, 2015.
PLENO DE LA COMISIÓN FEDERAL DE COMPETENCIA ECONÓMICA. **Opinión nº 008/2015**. México, DF, June 4th, 2015. Available at: <http://www.cofece.mx:8080/cfcresoluciones/docs/Mercados%20Regulados/V6/16/2042252.pdf>, Last visited: September 19th, 2016.
PREFEITURA DE SÃO PAULO. **Prefeitura Estabelece Regulação de Preços de Créditos Para Operadoras de Transporte Individual**. Secretaria Executiva de Comunicação. October 10th, 2016. Available at: <http://www.capital.sp.gov.br/portal/noticia/16222#ad-image-0>, Last visited: October 20th, 2016.
RANCHORDÁS, Sofia. **Does Sharing Mean Caring? Regulating Innovation in the Sharing Economy**. Tilburg Law School Legal Studies Research Paper Series nº 06/2015.
RIBEIRO, Bruno Santos. **Princípios e Desafios Para Regulação da Economia do Compartilhamento, com Substrato da Teoria Responsiva e Enfoque na Atuação do Aplicativo Uber**. Brasilia: Faculty of Law of the University of Brasilia. 2016.
RIO DE JANEIRO. **Complementary Municipal Law nº 159 of September 29th, 2015**. Available at: <http://mail.camara.rj.gov.br/APL/Legislativos/contlei.nsf/1dd40aed4fced2c5032564ff0062e425/65e58cb3ec93794483257ecf00600d50?OpenDocument>, Last visited: October 19th, 2016.
ROCHA, Leonardo. **WillGo: Rival do Uber e dos Taxis Já Está Funcionando no Brasil**. TecMundo. May 2nd, 2016. Available at: <http://www.tecmundo.com.br/uber/104326-willgo-rival-uber-taxis-funcionando-brasil.htm>, Last visited: October 9th, 2016.
ROGERS, Brishen. **The Social Costs of Uber**. University of Chicago Law Review Dialogue, Forthcoming. Temple University Legal Studies Research Paper nº 2015-28. January 31st, 2015. Available at: <http://ssrn.com/abstract=2608017>, Last visited: September 30th, 2016.
SACKS, Danielle. **The sharing economy**. Fast Company. April 18th, 2011. Available at: <http://www.fastcompany.com/magazine/155/the-sharing-economy.html>, Last visited: September 20th, 2016.
SARMENTO, Daniel. **Ordem Constitucional Econômica, Liberdade e Transporte Individual de Passageiros: O "caso Uber"**. Rio de Janeiro. July 10th, 2015. Available at: <http://s.conjur.com.br/dl/paracer-legalidade-uber.pdf>, Last visited: October 25th, 2016.
SELMI, Paula. **Justiça do RJ Libera Atividade do Uber no Estado**. Valor Econômico. April 5th, 2016. Available at: <http://www.valor.com.br/empresas/4512200/justica-do-rj-libera-atividade-do-uber-no-estado>, Last visited: October 15th, 2016.
SILVERSTEIN, Sara. **These Animated Charts Tell You Everything About Uber Prices in 21 Cities**. Business Insider. October 16th, 2014. Available at: < http://www.businessinsider.com/uber-vs-taxi-pricing-by-city-2014-10?IR=T>, Last visited: October 3rd, 2016.
SOMMERVILLE, Heather. **Uber Debuts Self-Driving Vehicles in Landmark Pittsburgh Trial**. Reuters. September 14th, 2016. Available at: <http://www.reuters.com/article/us-uber-autonomous-idUSKCN11K12Y>, Last visited: October 3rd, 2016.
TAJITSU, Naomi. **Uber Aims to Win Japan's Heart Through Its Stomach**. Reuters. September 27th, 2016. Available at: <http://www.reuters.com/article/us-uber-japan-idUSKCN11Y06R>, Last visited: October 3rd, 2016.
THE ECONOMIST. **All eyes on the sharing economy**. The Economist. March 9th, 2013. Available at: <http://www.economist.com/news/technology-quarterly/21572914-collaborative-consumption-technology-makes-it-easier-people-rent-items>, Last visited: September 20th, 2016.
THE ECONOMIST. **Uber – From Zero to Seventy (Billion): The Accelerated Life and Times of the World's Most Valuable Startup**. The Economist. September 3rd, 2016.

Available at: <http://www.economist.com/news/briefing/21706249-accelerated-life-and-times-worlds-most-valuable-startup-zero-seventy>, Last visited: September 23rd, 2016.
THE ECONOMIST. **Uberworld: the World's Most Valuable Startup is Leading the Race to Transform the Future of Transport**. The Economist. September 3rd, 2016. Available at: <http://www.economist.com/news/leaders/21706258-worlds-most-valuable-startup-leading-race-transform-future>, Last visited: September 23rd, 2016.
UBER. 2016. Available at: <https://www.uber.com/pt-BR/?exp=hp-c>, Last visited: October 26th, 2016.
UBER DO BRASIL TECNOLOGIA LTDA. **Termos e Condições.** Available at: <https://www.uber.com/pt/legal/terms/br/>, Last visited: October 7th, 2016.
UBER NEWSROOM. **Insurance for Ridesharing with Uber**. February 10th, 2014. Available at: <https://newsroom.uber.com/insurance-for-uberx-with-ridesharing/>, Last visited: October 30th, 2016.
UBER NEWSROOM. **Seguro Para Passageiros e Motoristas Parceiros na Plataforma da Uber no Brasil.** July 11th, 2016. Available at: <https://newsroom.uber.com/brazil/seguro-para-passageiros-e-motoristas-parceiros-na-plataforma-da-uber-no-brasil/>, Last visited: October 30th, 2016.

ANNEX 1 – Table of Legal Framework for Uber in 30 Brazilian Cities[96]

#	Cities	Operations Started	Regulation	Regulation Content	Judicial Decisions	Current Condition
1	**Belo Horizonte**	September 2014	Municipal Law nº 10.900 of January 8th, 2016 and Ordinance BHTRANS DPR nº 054 of March 31st, 2016[97]	Only authorizes TNCs with accredited drivers and vehicles (in practice, only taxi drivers)	Decision of 1st Public Treasury Court of Belo Horizonte[98] and Decision of 6th Public Treasury Court of Belo Horizonte[99]	Prohibited, but operations continue with basis on judicial decisions
2	**Blumenau**	— [100]	None[101]	—	None	Not yet regulated
3	**Brasília**	November 2014	District Law nº 5.691 of August 2nd, 2016	Authorizes TNCs with prior permission	None	Authorized to operate with prior permission
4	**Campinas**	January 2016	Bill nº 180 of June 27th, 2016, is under discussion[102]	If approved, the legislation will authorize TNCs with prior permission	None	Not yet regulated
5	**Campo Grande**	September 2016	Bill nº 8.099 of July 9th, 2015, is under discussion	If approved, the legislation will prohibit TNCs	None	Not yet regulated

[96] Information updated until November 14th, 2016. The 30 cities are currently listed as active on Uber's website. See UBER (2016).

[97] Full content of Belo Horizonte's regulations are available at: <http://portal6.pbh.gov.br/dom/iniciaEdicao.do?method=DetalheArtigo&pk=1156232> and <http://portal6.pbh.gov.br/dom/iniciaEdicao.do?method=DetalheArtigo&pk=1160490>, Last visited: October 17th, 2016.

[98] Judge Michel Curi e Silva from the 1st Public Treasury Court of Belo Horizonte granted on March 10th, 2016, a preliminary injunction in favor of Uber's operations (Collective Writ of Mandamus nº 5014923-75.2016.8.13.0024). Full content available at: <http://2q72xc49mze8bkcog2f01nlh-wpengine.netdna-ssl.com/brazil/wp-content/uploads/sites/340/2016/03/Decisa%CC%83o-concessa%CC%83o-liminar-bh.pdf>, Last visited: October 17th, 2016.

[99] Judge Paulo de Tarso Tamburini Souza from the 6th Public Treasury Court of Belo Horizonte granted a preliminary injunction in favor of Uber's operations on September 9th, 2016 (Writ of Mandamus nº 5117005-87.2016.8.13.0024). The decision is valid within the State of Minas Gerais as a whole, not just in Belo Horizonte. Available at: <http://www.migalhas.com.br/arquivos/2016/9/art20160915-04.pdf>, Last visited: October 17th, 2016.

[100] Although listed on Uber's website as one of the active cities in Brazil, no information was found regarding the start of Uber's operations in Blumenau.

[101] Currently there is no Bill under discussion. However, Bill nº 1.492 of 2015 that aimed to prohibit TNCs was archived.

[102] The Municipal Council of Campinas initially discussed the Bill nº 238 of August 3rd, 2015, which aimed to prohibit Uber. However, after the first round of debates and votes, the Bill nº 238/2015 was filed and months later Bill nº 180 of June 27th, 2016, started being discussed. Full content of Bill nº 180/2016 is available at: <http://sapl.campinas.sp.leg.br/sapl_documentos/materia/316928_texto_integral.pdf>, Last visited: October 17th, 2016.

6	**Caxias do Sul**	— [103]	None	—	None	Not yet regulated
7	**Curitiba**	March 2016	Bill nº 005.00063 of May 11th, 2016, is under discussion	If approved, the legislation will authorize TNCs with prior permission	None	Not yet regulated
8	**Florianópolis**	September 2016	Bill nº 1538 of April 11th, 2016, is under discussion	If approved, the legislation will authorize TNCs with prior permission	None	Not yet regulated
9	**Fortaleza**	April 2016	Bill nº 112 of April 26th, 2016, is under discussion	If approved, the legislation will prohibit TNCs	None[104]	Not yet regulated
10	**Goiânia**	January 2016	Bills nº 167 of June 21st, 2016, and 297 of August 18th, 2016, are under discussion	If approved, Bill nº 167 will authorize TNCs with prior permission and Bill nº 297 will prohibit TNCs	None	Not yet regulated
11	**João Pessoa**	September 2016	Municipal Law nº 13.105 of November 30th, 2015 Bill nº 1.563 of 2016 is under discussion[105]	Prohibits TNCs operations If approved, the legislation will authorize TNCs with prior permission	Decision of the 8th Civil Court of João Pessoa[106]	Prohibited, but operations continue with basis on judicial decision
12	**Joinville**	— [107]	None	—	None	Not yet regulated
13	**Juiz de Fora**	— [108]	Municipal Law	Prohibits TNCs	None	Prohibited,

[103] Although listed on Uber's website as one of the active cities in Brazil, no information was found regarding the start of Uber's operations in Caxias do Sul.

[104] The Court of Fortaleza has not yet rendered a decision about Uber's legality. However, Judge Roberto Ferreira Facundo from the 29th Civil Court of Fortaleza denied on June 3rd, 2016, a preliminary injunction requested by a Taxi Union against Uber (Proceeding nº 0140601-55.2016.8.06.0001). Also, Judge Nádia Maria Frota Pereira from the 12th Public Treasury Court of Fortaleza granted on September 12th, 2016, a preliminary injunction to authorize an Uber driver – the claimant – to operate legally in Fortaleza (Proceeding nº 0156952-06.2016.8.06.0001).

[105] Bill nº 1.562/2016 of the Municipal Council of João Pessoa aims to revoke the Municipal Law nº 13.105/2015 and to authorize Uber's operations with prior permission.

[106] Judge Renata da Câmara Pires Belmont from the 8th Civil Court of João Pessoa denied on October 6th 2016 a preliminary injunction that requested to suspend Uber's operations in João Pessoa (Public Civil Action – number not identified). Available at: <http://oconciergeonline.com.br/justica-autoriza-uber-operar-em-joao-pessoa/>, Last visited: October 18th, 2016.

[107] Although listed on Uber's website as one of the active cities in Brazil, no information was found regarding the start of Uber's operations in Joinville.

			nº 13.271 of December 18th, 2015	operations		but operations continue
14	**Londrina**	August 2016	Bill nº 64 of July 13th, 2016, is under discussion	If approved, the legislation will prohibit TNCs	None	Not yet regulated
15	**Maceió**	October 2016	Municipal Law nº 6.552 of May 19th, 2016	Prohibits TNCs operations	None	Prohibited, but operations continue
16	**Montes Claros**	—[109]	None	—	Decision of 6th Public Treasury Court of Belo Horizonte[110]	Not yet regulated
17	**Natal**	August 2016	Three Bills are under discussion[111]	—	None	Not yet regulated
18	**Porto Alegre**	November 2015	Bill nº 14 of May 16th, 2016, is under discussion[112]	If approved, the legislation will authorize TNCs with prior permission	Decision from the 10th Civil Chamber of the Court of Justice of the State of Rio Grande do Sul[113]	Not yet regulated
19	**Recife**	March 2016	Municipal Law nº 18.176 of October 28th, 2015 and Decree nº 29.558 of	Prohibits TNCs operations	Decision from the 7th Public Treasury Court of Recife[114]	Prohibited, but operations continue with basis on

[108] Although listed on Uber's website as one of the active cities in Brazil, no information was found regarding the start of Uber's operations in Juiz de Fora.

[109] Although listed on Uber's website as one of the active cities in Brazil, no information was found regarding the start of Uber's operations in Montes Claros.

[110] Judge Paulo de Tarso Tamburini Souza from the 6th Public Treasury Court of Belo Horizonte granted a preliminary injunction in favor of Uber's operations on September 9th, 2016. The decision is valid within the State of Minas Gerais, not just in Belo Horizonte. Writ of Mandamus nº 5117005-87.2016.8.13.0024. Available at: <http://www.migalhas.com.br/arquivos/2016/9/art20160915-04.pdf>, Last visited: October 17th, 2016.

[111] There are currently three bills under discussion at the Municipal Council of Natal to regulate Uber. However, it was not possible to find information regarding the legislative proceeding of such Bills. Available at: <http://g1.globo.com/rn/rio-grande-do-norte/noticia/2016/08/uber-anuncia-inicio-das-operacoes-do-aplicativo-em-natal.html>, Last visited: October 17th, 2016.

[112] Bill nº 14/2016 was already approved by the Municipal Council of Porto Alegre and currently awaits sanction by the city's mayor.

[113] On September 29th, 2016, the 10th Civil Chamber of the Court of Justice of the State of Rio Grande do Sul judged the merits of an appeal made by the Taxi Union of Porto Alegre, which tried to revert the pro-Uber decision rendered by the Judge of first instance. The Court of Justice unanimously decided to maintain Uber's operations in Porto Alegre (Proceeding nº 70069913168 or 0201510-98.2016.8.21.7000).

[114] Judge Haroldo Carneiro Leão from the 7th Public Treasury Court of Recife granted a preliminary injunction in favor of Uber's operations on October 7th, 2016 (Writ of Mandamus nº 0042606-50.2016.8.17.2001).

			April 4th, 2016			judicial decision
20	**Ribeirão Preto**	September 2016	None	—	None	Not yet regulated
21	**Rio de Janeiro**	June 2014	Complementary Municipal Law nº 159 of September 29th, 2015	Prohibits TNCs operations	Decision of 6th Public Treasury Court of Rio de Janeiro[115]	Prohibited, but operations continue with basis on judicial decision
22	**Salvador**	April 2016	Municipal Law nº 9.066 of June 1st, 2016	Prohibits TNCs operations	None[116]	Prohibited, but operations continue
23	**Santos**	August 2016	Municipal Law nº 3.213 of November 18th, 2015[117]	Prohibits TNCs operations	None[118]	Prohibited, but operations continue
24	**São Luís**	— [119]	One Bill is under discussion[120]	Prohibits TNCs operations	None	Not yet regulated
25	**São Paulo**	June 2014	Municipal Law nº 16.279 of October 8th, 2015 and Decree nº 56.981 of May 10th, 2016[121]	Authorizes TNCs with prior permission	Decision of 10th Public Treasury Court of São Paulo[122] Decision of	Authorized to operate with prior permission

[115] Preliminary injunction granted by Judge Ana Cecilia Almeida of the 6th Public Treasury Court of Rio de Janeiro to authorize Uber drivers to provide services of until public authorities regulate the activity (Writ of Mandamus nº 040658573.2015.819.0001).

[116] Although no decision has been rendered by the Court of Salvador, the Public Prosecution Office of the State of Bahia proposed the Direct Unconstitutionality Action nº 0011161-36.2016.805.0000, currently under analysis of Judge Soraya Moradillo Pinto from the Court of Justice of the State of Bahia. The Public Prosecution Office of the State of Bahia claims the unconstitutionality of the Municipal Law nº 9.066/2016.

[117] Full content of the Municipal Law nº 3.213/2015 is available at: <https://egov.santos.sp.gov.br/legis/document/?down=5695>, Last visited: October 17th, 2016.

[118] While there is still no judicial dispute regarding the prohibition to Uber's operations in Santos, the Public Prosecution Office of the State of São Paulo opened an inquiry on September 2016 to investigate the alleged irregular prohibition by the City Hall of Santos. The Public Prosecution Office of the State of São Paulo claims the unconstitutionality of the prohibition. Available at: <http://www.atribuna.com.br/noticias/noticias-detalhe/santos/mpe-investiga-prefeitura-de-santos-por-lei-que-proibe-o-uber/?cHash=e0f627b9624994c1147c458b6ebd1eac>, Last visited: October 17th, 2016.

[119] Although listed on Uber's website as one of the active cities in Brazil, no information was found regarding the start of Uber's operations in Uberaba.

[120] There is currently one Bill under discussion at the Municipal Council of São Luís to prohibit Uber. However, it was not possible to find information regarding the legislative proceeding of such Bill. Available at: <http://imirante.com/oestadoma/noticias/2016/09/14/uber-em-sao-luis-prefeitura-aplicativo-e-populacao-se-manifestam-em-meio-a-polemica.shtml>, Last visited: October 27th, 2016.

[121] As explained in Section IV, the Municipal Law nº 16.279/2015 of São Paulo prohibited Uber's operations, but ordered the City Hall of São Paulo to promote studies about the legislation of the individual transportation market. Subsequently, the City Hall of São Paulo enhanced the legislation and made it more consistent with new technologies (Decree nº 56.981/2016). Full content of Decree nº 56.981 is available at:

					São Paulo's Court of Justice[123]	
26	**Sorocaba**	October 2016	Municipal Law nº 11.227 of December 1st, 2015	Prohibits TNCs operations	Decision of São Paulo's Court of Justice[124]	Prohibited, but operations continue with basis on judicial decision
27	**Teresina**	— [125]	Municipal Law nº 4.942 of August 26th, 2016	Prohibits TNCs operations	None[126]	Prohibited, but operations continue
28	**Uberaba**	— [127]	None	—	Decision of 6th Public Treasury Court of Belo Horizonte[128]	Not yet regulated
29	**Uberlândia**	September 2016	None	—	Decision of 6th Public Treasury Court of Belo Horizonte[129]	Not yet regulated

<http://www3.prefeitura.sp.gov.br/cadlem/secretarias/negocios_juridicos/cadlem/integra.asp?alt=11052016D%20569810000>, Last visited: October 14th, 2016.

[122] Judge Valentino Aparecido de Andrade from the 10th Public Treasury Court of São Paulo rendered a decision on September 27th, 2016, in which it obliged the City Hall of São Paulo to limit the number of Uber vehicles in a maximum deadline of 30 days. Information about proceeding not found. Available at: <http://g1.globo.com/sao-paulo/noticia/2016/09/justica-obriga-prefeitura-de-sp-limitar-carros-do-uber-nas-ruas.html>, Last visited: October 18th, 2016.

[123] The Court of Justice of São Paulo decided on October 5th, 2016, the unconstitutionality of the São Paulo's Municipal Law nº 16.279/2015 (Direct Unconstitutionality Action nº 2216901-06.2015.8.26.0000).

[124] Judge Francisco Casconi from the Court of Justice of São Paulo granted a preliminary injunction on May 19th, 2016, to suspend the effectiveness of Sorocaba's Municipal Law nº 11.227/2015 (Direct Unconstitutionality Action nº 2095314-80.2016.8.26.0000).

[125] Although listed on Uber's website as one of the active cities in Brazil, no information was found regarding the start of Uber's operations in Teresina.

[126] The local Bar Association of Piauí stated, however, that it will start action to declare the Municipal Law nº 4.942/2016 unconstitutional.

[127] Although listed on Uber's website as one of the active cities in Brazil, no information was found regarding the start of Uber's operations in Uberaba. News articles report Uber's operations in Uberaba. Available at: <http://jmonline.com.br/novo/?noticias,2,CIDADE,130269> and <http://www.abadianoticia.com.br/noticias/detalhes/id/4342/uber-chega-em-uberaba>, Last visited: October 18th, 2016.

[128] Judge Paulo de Tarso Tamburini Souza from the 6th Public Treasury Court of Belo Horizonte granted a preliminary injunction in favor of Uber's operations on September 9th, 2016 (Writ of Mandamus nº 5117005-87.2016.8.13.0024). The decision is valid within the State of Minas Gerais as a whole, not just in Belo Horizonte. Available at: <http://www.migalhas.com.br/arquivos/2016/9/art20160915-04.pdf>, Last visited: October 17th, 2016.

[129] Judge Paulo de Tarso Tamburini Souza from the 6th Public Treasury Court of Belo Horizonte granted a preliminary injunction in favor of Uber's operations on September 9th, 2016. The decision is valid within the State of Minas Gerais, not just in Belo Horizonte. Writ of Mandamus nº 5117005-87.2016.8.13.0024. Available at: <http://www.migalhas.com.br/arquivos/2016/9/art20160915-04.pdf>, Last visited: October 17th, 2016.

30	**Vitória**	September 2016	Decree nº 16.770 of July 28th, 2016[130]	Authorizes TNCs with prior permission	None	Authorized to operate with prior permission

[130] Full content of Decree nº 16.770/2016 is available at: <http://diariooficial.vitoria.es.gov.br/ExibirArquivo.aspx?qs=qWdXNT75uq4jT8sAXHV4YcKe8SoLZJ3dDlfTaxRwv%2fkTq2%2f08j9RDCzsKhlVvmB0Zi%2f2pT3g5ubRfg3EwY9aO%2b1Y34QIfBmgt%2bwQ1WX3R9M%3d>, Last visited: October 17th, 2016.