



A REGULATORY FRAMEWORK FOR THE INDIVIDUAL PASSENGER TRANSPORTATION MARKET

FLÁVIO AUGUSTO OLIVEIRA PASSOS DIAS

MATSON LOPES DA SILVA

GUSTAVO VINICIUS DELMONDES CHAVES

FERNANDO MEISTER VIEIRA DE FARIAS

SECRETARIA DE ESTADO DE TRANSPORTE E MOBILIDADE DO DISTRITO FEDERAL - BRAZIL

INTRODUCTION



- At the beginning of the twentieth century, taxi service was already widespread around the world
- Institutionalization of the license system for commercial exploitation
- Great Depression, which began in 1929 to closed at the end of World War II, there was a major rush to the taxi market, caused by the abrupt rise in the unemployment rate in most industries
- This market imbalance gave rise to the barrier to entry, instituted by local governments
- Medallions, with fixed amounts: value in the market
- Several countries mantain that format until now a days
- But... irrelevant with the arrival of ride-sourcing

CONTESTABLE MARKET



- As that which is accessible to potential entrants and which has the following characteristics:
- (a) potential entrants may, without restriction, serve the same market demand and use the same productive techniques available to incumbent undertakings;
- b) incoming potentials can assess market profitability from pre-entry prices.

Baumol et al. (1 988)

- Thus, if the market is contestable, state regulation of industry would not be justified, in that, by establishing entry and exit controls, potential competition would be eliminated and the stress of incumbents due to threats of entry would be suppressed.

(Santos and Orrico Filho, 1996)

REGULATORY AND MARKET FAILURES



- No economic elements that justify the prohibition of new providers of individual transport services.
- The Taxi Services do not have typical characteristics of Public Service; differing from public urban passenger mass transport.
- Ride-hailing services operators and consumer groups have argued that entry into the individual passenger transport market has been blocked by lobbying of the taxi drivers, feasible by the capture of regulatory and legislative authorities.

REGULATORY AND MARKET FAILURES



- Excessive deregulation of taxi markets has already been a failure factor in some countries (Chile, Sweden and New Zealand) because it has generated excessive supply as a negative externality;
- The majority of the cases evaluated in the literature, the maximum prices retained potential fare increases.

REGULATORY AND MARKET FAILURES



Resende and Lima (2018) studies (Brazil 2014/2016):

- Sample containing 590 Brazilian municipalities
- Uber entry produced a average of 56.8% reduction in the number of taxi rides by e-hailing in the cities where that digital platform was present
- for every 1% increase in the number of rides by Uber, the number of taxi rides by e-hailing decreased 0.09% approximately
- The Uber e-hailing service also rivaled to taxi e-hailing services, conquered part of its users.
- The use of e-hailing service also makes it possible to mitigate one of the failures in the taxi market: information asymmetry (previous pricing, operator identity, etc.)

MECHANISMS TO ACCESS THE INDIVIDUAL PASSENGER TRANSPORT SERVICES



- **Street hail segment (cruising)**
 - Would facilitate the operation of less informed or less bargained passengers.
 - There is a need to balance supply in areas of different demands
- **Taxi ranks**
 - Installed in strategic places of the cities
 - First-in-first-out (FIFO) system
 - Fare deregulation may induce the taxi rank segment to raise the fare

MECHANISMS TO ACCESS THE INDIVIDUAL PASSENGER TRANSPORT SERVICES



- **Previous pre-booked segment**

- Operated via telephone call
- Economy of scale and density (cooperatives or relatively large firms)
- Reduction of cost with displacement in search of passengers and with parking spaces in cab stands
- Reducing the asymmetry of information to these consumers
- Cost of the passenger to bargain by phone is much lower, and can choose between several service modes, including rental vehicles (PHV)
- Massive inclusion of the cell phone in the telephone system has substantially facilitated the passenger access to the information

MECHANISMS TO ACCESS THE INDIVIDUAL PASSENGER TRANSPORT SERVICES



- **Modern Pre-booked segment**

- Created 10 years ago (global positioning system - GPS and internet)
- Monitor its route
- Identify its operator and driver
- Choose among the modalities of available service
- Know beforehand the price of the race
- Payment by electronic devices (credit card, etc.)
- Evaluation of the quality after use of the service
- Mitigated several of the concerns that have historically motivated the regulation of taxis

A REGULATORY FRAMEWORK TO THE MARKET



- The Individual Transport of Passengers – TIP
 - A common public interest in TIPs today is that more people can be transported with the same amount of vehicles, reducing pollution and congestion on public roads and parking lots.
 - Redution of conflicts among operators and between operators and government authorithies

A REGULATORY FRAMEWORK TO THE MARKET



- Variety of TIP categories
 - a) Motor-taxi: motorized bicycles with capacity for only one passenger;
 - b) Tricitaxi: motorized tricycle with capacity for up to two passengers;
 - c) Autotax: car with capacity for up to 8 passengers of the same group:
 - The. Compact: car with a capacity of up to four passengers;
 - Expanded: car with capacity up to 8 passengers;
 - d) Taxi-ambulance;
 - e) Taxi-parking;
 - f) Little-Taxi;
 - g) Rental vehicle;
 - h) Other similar services.

A REGULATORY FRAMEWORK TO THE MARKET



- Four different levels of service or utilities
 - Basic
 - Executive
 - Luxury
 - Special (airport, hotel, tourism, limousine, adapted)
- The basic service offers all the minimum requirements by legislation
- others offer certain functional complements to passengers

A REGULATORY FRAMEWORK TO THE MARKET



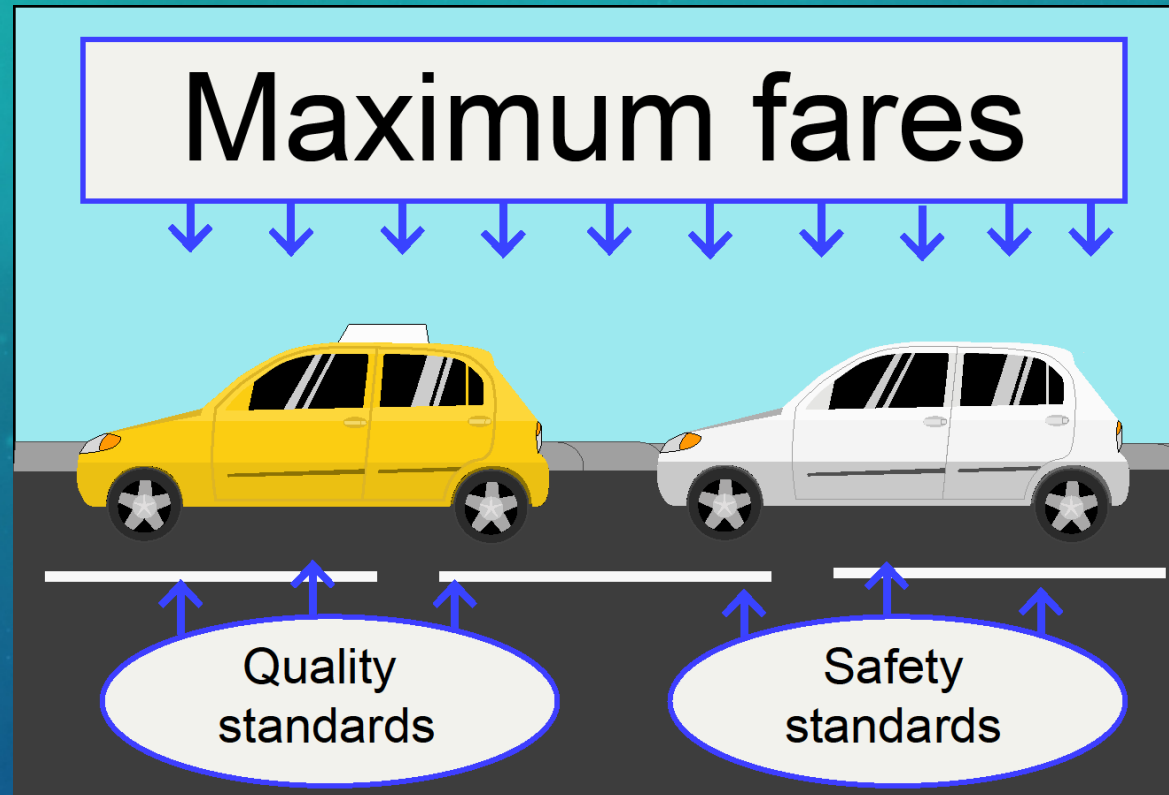
- Pricing of these services
 - Taximeter, application, fixed rate table and/ or other method of calculation to be defined by the public authority in case of regulated tariff or by the service provider where not tariff regulation.
- Regulatory and legislative authorities draw the basic guidelines as well such as some general criteria for access, charging, safety and operation
- May delegate regulatory powers to local authorities, which will deal with the jurisdiction.

A REGULATORY FRAMEWORK TO THE MARKET



- Service packages may be offered considering one or more of the following:
 - Per period (diary, weekly or montly);
 - Time of usage (minutes, hours);
 - Mile traveled;
 - By a group of people (family, company, ativity);
 - Covarage area (neighborhood, city, region)
 - Transfers: occasional (airports, hotels, other places), routine (road, subway and railway stations), commuting (school, work, gym, shopping) or tailor-made.
- Examples:
 - Whim application in Helsinki: offers 4 types of transport services (collective, taxi, bicycle and car rental) charged monthly (Carneiro, 2018)
 - Citymapper application: which offers the bus, subway, bicycle, train, taxi and walk modes in Sao Paulo, Madrid, New York, Mexico City, Montreal, Rome, London, Tokyo, Hong Kong, Singapore , among other cities.

REGULATORY FRAMEWORK FOR TIP: YO-YO EFFECT



QUALITY, SAFETY AND FARES REQUIREMENTS TO TIP MARKET



- Vehicular
 - Minimum load and / or passenger capacity
 - Source of energy or type of fuel
 - Motorization
 - Vehicle cabin (including **for motorcycles**)
 - Hygiene
 - Complementary items (air conditioning)

QUALITY, SAFETY AND FARES REQUIREMENTS TO TIP MARKET



- Safety standards
 - Vehicle insurance
 - Life insurance
 - Vehicular age
 - Vehicular Inspection
 - Identification device for the service and operator in the vehicle
 - Safety devices (alarm, air bag, child seat, etc.)
 - Communication system

QUALITY, SAFETY AND FARES REQUIREMENTS TO TIP MARKET



- Fare requirements
 - **Maximum charge per service category**
 - Charging system (meter, application, etc.)
 - Mechanism of information to users
 - collect of taxes
 - tax compliance

QUALITY, SAFETY AND FARES REQUIREMENTS TO TIP MARKET



- Company or cooperative
 - legal authorization
 - technical capacity
 - economic and financial capacity
 - **information sharing system (for governance)**
 - percentage limitation of the market
 - minimum remuneration for the driver
 - limit of working time for the driver

QUALITY, SAFETY AND FARES REQUIREMENTS TO TIP MARKET



- Drivers
 - Collect of taxes
 - **Training course** (human relations, defensive driving, first aid, basic vehicle mechanics driving license and electrical, etc.)
 - Negative certificates on government justice

CONCLUSION



- The transport services that compose the TIP, especially with the introduction of new communication technologies by applications, have been shown not only as substitutes, but, in fact, as the same service
- this article proposes to treat all these services as one and, differentiating them into categories, to apply only the necessary regulatory remedies for the negative externalities each, according to the laws and customs of each country or locality.
- The first advantage that is expected of this regulatory modeling is to avoid the current conflicts between operators of the various categories and between these and the Government (Legislative, Executive and Judiciary), at the national and local spheres of power. Reducing this fight for regulatory advantages makes it easier to manage market failures from different service categories.



THANK YOU ALL!