Summary:

Taxis in urban transport

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Public safety, congestion, market failures and city image, are four among many arguments for public intervention in the taxi markets. The best way for a public authority to intervene in the taxi markets will depend upon a number of factors, several of them of local. This report provide a summary of knowledge on taxi regulation, with emphasis on urban environments. For analytical purposes the taxi market is divided into four market segments, street hail/cruising, rank/stand, pre-book and contracts.

There are three general types of regulation; quantitative, qualitative and economic. Quantitative regulation of the taxi markets will typically be to limit entry by restricting the number of licenses. Qualitative is most often to limit market entry by requiring all drivers to pass a test, and setting requirements for which vehicles can be used in taxi service. Economic regulation is mostly related to setting fares. From a theoretical point of view qualitative regulations will be preferable as it can provide a clear link between the public authority's objectives and means used to regulate the industry. However in order for qualitative regulations to be effective, they require both resources in monitoring and appropriate means for sanctioning. From the point of view of the regulators quantitative regulation can be a more cost efficient approach. As the number of licenses is an easily observable and controllable variable, that can be linked to a number of the objectives of the regulator. Economic regulations can be combined with both qualitative and quantitative regulations. Empirical experience suggest that to have an active regulator, with the necessary toolbox, is more important than whether the regulation is based upon quantitative or qualitative restrictions.

Taxis are a part of a functioning community and although the concept of taxis are almost universally recognized very few persons in the general public actually knows how the taxi industry works. Similarly the term "taxi" does not mean exactly the same everywhere. It varies from country to country and in many cases from city to city within a country.

There are several challenges that the taxi industry is faced with in the market solution. This includes safety, quality, competition with other modes, social issues and illicit behavior. The obvious solution is to regulate the industry. This report points at the rationale behind and experience with different forms of taxi regulation.

Taxis provide a point-to-point service to the general public and are therefore part of "public transport", even though the lack of regular schedules, routes and set stations – all features characteristic of public transport – gives it a semi-private character. As fixed service systems cannot support all travel demand, full area coverage is dependent on taxis.

The definition will usually vary from country to country and include different market segments. In this report, the word "taxi" is defined as "a vehicle with a driver available for hire by the general public", The vehicles are smaller than buses or coaches and registered for a maximum of nine persons. This is not the only definition of a taxi, it is one of many.

The taxi market

There are four major market segments in the taxi industry: hail, taxi rank, pre-book and contract. The hail and taxi rank segments are unique to the industry, while the pre-book and contract segments overlap to some extent with non-taxi industries, but this will vary with the definition being used.

The four market segments have different properties. This may cause some challenges to the regulating authorities. The hail and taxi rank segments are characterized by one customer meeting one or more taxis and pose unique problems for regulators relating to information asymmetries. The pre-book segment is a much more conventional market, in economic terms as is the contract market.

Market structure

The general public will normally see the taxi as a car with a dome light on top, the name of some company on the side and the word “taxi” and assume that it has a meter, that it is regulated somehow, and that there is a company behind the service they are calling, hailing or stepping into. However, taxi companies today can be, and often are, very different, even in one and the same community. Companies can vary from "the total taxi firm", where the drivers are employees of major companies, and most market decisions are taken at company level in one end of the scale. In the other the "permit only lessor", where the drivers lease the permit to operate a vehicle and is responsible for everything. How the supply side of the market is structured influence how the market responds to regulations. At the same time the market structure will be a function of regulation.

Taxi economics

From the customers point of view the taxi industry provide a flexible and fast service. This flexibility comes at a high price per person kilometre, compared to other modes and as a consequence private taxi markets are mostly local.

From the operator side the industry is characterised by variable turnover, meaning that a taxis revenue will vary from vehicle to vehicle and day to day on top of an underlying weekly and seasonal pattern. This is true between cities, between taxi companies, and between individual drivers. There are many factors contributing to these differences. One of the most important is that although entry requirements to the industry tend to be quite easy to meet, operating a successful taxi vehicle / company takes considerable skill and effort.

The difference in skill and quality is difficult to observe for the potential customer. Together with this chances are that, at least in the street and rank segments, each customer and driver will only meet once. These factors result in an asymmetric relation between driver and passenger. This asymmetric relation is at the core of the economic challenges faced by both the customers, operators and regulators.

Different demand and different solutions

Few comparative studies have been conducted on taxi markets. Those studies that have been conducted illustrate that a taxi is not always a taxi. As an example taxis in New York are primarily hailed on the street, more than 90 percent, while in

Stockholm only about 20 percent of the trips are hailed, the majority is booked by telephone. In cities such as Dublin and New York, most of the population use taxis regularly, while in cities as Paris and Amsterdam large parts of the population never use taxis at all. There is an interdependency between how the taxis are defined and regulated and how they are used. It is also a fact that the urban structure and quality of the ordinary public transport network will affect the modal split and therefore the demand for taxis.

Taxi regulations

Taxi regulation has a long history. It can be traced back to the 1630s in London and probably longer in other cities. The fact that there is a long history for taxi regulation, does not mean that regulating taxis is old fashioned. Many of the arguments used for regulating taxis in the horse drawn era are still valid. The objectives of taxi regulation typically refer to; public safety, congestion, market failures and city image. For analytical purposes it can be useful to divide taxi regulation into qualitative, quantitative and economic regulations. Current trends in Europe is a move from quantitative to more qualitative regulations.

Quantitative regulation has a long history, requiring a license for each vehicle and limiting the number of licenses in the market. In some cases the number of licenses are limited (caped) and tradable, as in the case of New York. In other cases the licenses are personal, following the driver. The advantage of this form of regulation is that it is relatively simple, the main disadvantage is that it is a blunt tool, there is only indirect linkages between objectives such as, safety, market failures and city image and the total number of taxi vehicles.

Qualitative regulations, include vehicle standards, driver standards and so on. As an example the Knowledge exams in London require as a strict quality standard for taxi-drivers in the city. However, everyone that passes this test, can legally operate a vehicle. There are no quantitative regulation. The main advantage of this form of regulation is that it can use indicators that can coincide directly with the objectives of the public authority, such as to ensure that the drivers are skilled and the vehicles are good. However it is costly to monitor such a system and it also require a wide range of sanctions in order to be effective.

Fare regulation is also common. Typically this include setting a fare which is compulsory or setting a maximum fare when trips are charged by a meter. This is done to prevent overcharging. And is directly related to the challenge presented by the information asymmetry between driver and customer.

All of these forms of regulation can be used separately or in combination. The outcome of a regulation will depend more upon how these regulations are implemented, rather than if they are qualitative, quantitative or economic. For regulations to be effective sufficient sanctions must be available.

Recommendations

There are two general recommendations for taxi regulations. First, the taxi markets are local and this has to be kept in mind when taxi operators is regulated. Second, real taxi markets are a complex mix of different segments with different properties. This means that there is no single right answer to the question of regulation. Each segment has a different theoretical optimal solution. This points in to a multi-tier system (regulating the different segments separately). However there are both economics of scale and scope at work, favouring a single tier system (having the same regulation for all segments).

In terms of which regulatory approach to follow, the link between objectives and regulations are strongest with the qualitative approach, however this approach is costly. Quantitative regulations are much less costly, but is not as easy to link with policy objectives (unless congestion is the main concern). Economic regulations are most suitable to address the information asymmetry in the street market segments.

In other words, in all but the largest of cities, where costs of regulation are low compared with the size of the industry, and the economics of scope from using the same vehicle in different market segments are insignificant. The regulator can choose between several "second best" solutions. As a consequence taxis should not be seen out of context from the other mobility and environmental objectives of a city.