



# The drawbacks of deregulation in the taxi market: evidence from the international scenario and the Italian experience

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## Abstract

After a very long period of strict regulation of the taxi industry in almost all countries, at the beginning of the eighties, some North American cities initiated deregulatory processes but, in general, with unsatisfactory results. More recently, the question of liberalising the taxi market has acquired renovated interests and different countries have experimented deregulation, although, again, with an outcome well below expectations. This work offers a concise review of liberalisation policies in different countries and, in particular, focuses on the recent initiatives of the City Council of Rome, the first Local Authority in Italy to introduce measures of deregulation.

## 1 Introduction

In the economic literature a number of studies have considered the peculiarities of the taxi market, stressing the pervasive failures which characterise it, due to a variety of factors: the spatial and random nature of the relation between demand and supply, the relevance of reciprocal consumption externalities, the presence of asymmetric information and high search costs [1]. It is, in particular, proved that the traditional result of welfare economics, concerning the optimality of competitive equilibria, does not hold in the taxi market, where atomistic competition might not produce an equilibrium at all and, in any case, would result in too high fares, excessive capacity and low output (taxi trips). Despite these results, in recent years, a number of attempts to deregulate have been sustained by an optimistic view on the possibility to rely more heavily on market forces. This confidence, that, as it has just been said, has no theoretical



support, has been probably a reaction to the generally bad results of the prevailing systems of regulation in many cities in the world (shortage of supply, high waiting time, excessive medallion's value, bad distribution and low quality of the service and so on). As the evidence presented in the following seems to confirm, the taxi market is emblematic of the difficulties to envisage and implement satisfactory rules and institutional frameworks when disruptive failures characterise both the market and public policy.

## 2 Experiences and projects of deregulation

One of the main difficulties in comparing deregulation policies in the taxi sector stems from the fact that, in general, the sector is regulated at sub-national level and therefore the extent and the forms of intervention are not necessarily uniform within the single nations. In the majority of cases, however, it is possible to identify common elements and guidelines.

Deregulation of the taxi industry has had its first appearance in the United States, where, between the end of the seventies and the beginning of the eighties, twenty two cities had totally or partially deregulated the sector [2]. The main measures introduced in these cities concerned the access to the market and the determination of tariffs, and, in some cases, the reallocation of regulatory and monitoring powers from Local Authorities' offices to *ad hoc* agencies with specific responsibilities and expertise and, presumably, less prone to be "captured" by the regulated [3]. However, especially in the first stage of the reforms, very few provisions were directed at maintaining or reinforcing the qualitative standards of the service. The above, as experience has shown, constituted the main drawback of these first attempts to deregulate as quality controls are, in fact, essential in a sector characterised by pervasive asymmetric information and by needs that merit public protection.

The countries that, between the end of the '80 and the '90, followed the American experience on deregulation (e.g. New Zealand, Australia, Canada, Japan, South Korea, Sweden, United Kingdom and very recently the Netherlands and Ireland) learned the lesson and, together with measures directed at favouring a greater flexibility and a more efficient matching of demand and supply, implemented measures aimed at considering the potential market failures stemming from quality and safety issues specific to the service. Indicative of the attention reserved to the issue of quality is the principle that has inspired the reform in Japan: "gradual easing of the economic controls and enrichment of the social regulation".

In most of these countries, the reforms were, therefore, twofold. On the one side, they introduced measures directed at totally or partially relaxing the restrictions on the number of operators or on the levels of the tariffs (for instance, removal of the licence granting power from local authorities, unification of operating areas, abrogation of uniform and administratively determined tariffs, abolition of obligations hampering the establishment of competitive conditions within the sector (e.g. reduction of the market power held by radio dispatch systems)); on the other one, they were aimed at



reinforcing quality standards (for instance, greater controls on the capabilities of the drivers and the reliability of the companies (in Japan, taxi companies are required to have a qualified fleet manager), specific requirements relating to the vehicle (London's black cabs), limits to the working hours, promotion of innovative services, more stringent provisions and controls for those who fail to comply with the rules, constitution of *ad hoc* organisations for monitoring the activity on the market). Finally, in general, there has also been a general recognition that in order to promote greater competition both within the sector and with "neighbouring" sectors (urban public transport) it was necessary to encourage innovation, to increase the functionality of taxis with respect to the other modes of transport and to establish a level playing field among the operators of urban transport (e.g. privatisation of public transport companies, reduction in subsidies, competitive bidding for specific transport services).

### **3 Results of the reforms**

The measures introduced in the taxi industry have produced varying results due to both the differences in the situation prior to the implementation, and to the variety of the measures adopted in the different countries. In general, however, the overall results of the deregulation have been well below the general expectations. In order to gain a general comprehension of the outcomes of deregulation, a detailed overview of its effects on different variables and aspects of the market is illustrated below.

#### **3.1 Supply**

There is ample evidence that deregulation has led to a significant increase in supply, in the form both of new entries and of an expansion of existing firms. Where the latter has prevailed, the increase in competition expected from deregulation has not been achieved. Where the new entrants have been small, mono-vehicular, operators - and this has been often the case -, the fragmentation of the market has increased, thus favouring larger operators augmenting the natality-mortality rate of companies. The higher turnover rates have made the consistency of the market extremely volatile and reduced the specialisation in the industry. Furthermore, the increase in capacity, has, in general, not spread uniformly but has concentrated, principally, in larger cities and in the already overcrowded airport taxi stands [4][5][6][7].

#### **3.2 Demand, profitability and productivity conditions**

The above mentioned increase in supply has not been accompanied, in general, by a significant positive variation in demand. This, consequently, has led to a generalised decrease in the profitability of the sector as a larger numbers of operators was faced with a constant demand [4][8]. Also the productivity of the industry has not shown any significant improvement as a consequence of the deregulatory measures [2][5][8][9]. While this can be partly imputed to the



decrease in the demand facing the individual operators, which has prevented them from using factors of production at their optimal scale, and to the fragmentation of the additional supply that has reduced the economies of scale previously enjoyed by the firms, it could also be a result of the lack of provisions for innovative services and for higher quality standards.

### 3.3 Tariffs

Tariffs have not been affected uniformly by the deregulation process nor by the reorganisation of the sector that has followed: while in some cities there has been an increase, in other ones a significant decrease and, in some others, fares have remained unchanged. In Sweden, in the period immediately successive to deregulation, tariffs have, generally, increased, decreasing only after an adjustment period [2][4][10]. Empirical evidence gathered for the United States shows that the tariffs lack downwards fluidity. According to Dempsey [8] and to the results of the study by PriceWaterhouse [5] deregulation has led to a great volatility of tariffs, which, except for some cities (e.g. Washington D.C.), has been generally translated in an upward tendency. Also Frankena and Pautler [11], although recognising that the fare increase in the deregulated cities has been lower than it would have been expected on the basis of the trends exhibited in the time preceding the deregulatory reforms, affirm that the decrease in tariffs expected as a result of deregulation has not occurred. Further evidence is contained in the work by Teal and Berglund [6] which shows that in six out of the seven cities analysed tariffs have increased (Sacramento is the only exception). Finally, also Kang [2] - reporting that the rate of fare increase in regulated cities is, on average, only 12% higher than in deregulated ones - concludes that the evidence supports the conclusion that tariffs in deregulated cities have not been significantly reduced. Only in New Zealand there is a uniformity of judgements on the downward pressures that deregulation has exerted on tariffs [7][12]. According to a detailed study conducted by Morrison [7] in Wellington, the users pay less, in real terms, in 1994 than they did in 1989. The reduction, however, has not been homogeneous among companies: in fact, for a service with equal characteristics, the fares of the six companies analysed vary by 34%. This result, is confirmed for some American cities (for instance, in Seattle and San Diego, the second biggest company charged tariffs 15% lower than the leader in the market [9]). Finally, across markets, fares of street hiring seem to have increased more than telephone booked tariffs [6][7]. An indirect insight of the inefficiency of deregulation in reducing fares is provided by Boroski and Mildner [9] who, comparing the tariffs of regulated American cities with the ones in cities that are not regulated show that, on average, the former are 0,23US\$ higher, a rather insignificant difference.

Many of the authors impute this result to the persistence of the FIFO discipline that doesn't allow the client to freely choose among the operators on the basis of economic convenience and that hampers price-shopping [6][8][9]. Others blame the presence of a double market generated by the different elasticities of demand for urban and airport services, suggesting that, since in



many deregulated cities the obligation of applying uniform tariffs persists, these represent an average between the two markets [11].

### **3.4 Labour conditions**

In all the countries where forms of deregulation have been introduced the working conditions have significantly deteriorated in terms of both working hours and income. The decreased demand for each individual taxi operator, the widespread use of leasing, the lower productivity and profitability of the activity and the modified type of compensation - in Sweden, for instance, there has been a passage from salaries to commissions based wages - have led to a significant reduction in the welfare of the drivers (for instance, in San Diego and Adelaide there has been a reduction in income of about 30% and 13 % respectively [2][8]).

### **3.5 Quality**

There is an unanimous judgement concerning the deterioration of the level of quality of the service in the post deregulation era even in the countries where more care has been devoted in designing and applying measures aimed at maintaining high quality standards [2][4][5][6][8][12]. The motivations adduced are various: in Sweden, in some cities of the United Kingdom, in USA, in New Zealand and in Australia, these results are imputed mainly to the entrance in the market of foreign workers with little language and geographical knowledge of the areas, the increase in part time workers, a low rank provisions in relation to the increased supply and a poor enforcement of the rules. In particular, a number of studies point out the increased occurrence - after deregulation - of rate gouging, short trips refusal, refusal to serve suburban areas (for the difficulties to find return trips), discourteous treatment of passengers and fights at the taxi ranks (particularly near the airports).

### **3.6 Waiting time**

Although the expectation were unanimous in predicting a generalised reduction in waiting time following the reforms, the results have been, in most cases, unsatisfactory [2]. Generally, it can be said that waiting time has reduced where there has been a significant increase in the numbers of operators and where the use of radio dispatch systems has been promoted (New Zealand, Australia, Sweden). For the American taxi market the results are diverging. On the one side, according to the study conducted by PriceWaterhouse [5] waiting times are not changed significantly when compared to pre-deregulation figures; on the other one, Frankena and Pautler [11] report that waiting time has decreased rapidly in Seattle, Dan Diego and Indianapolis, but they do not show evidence of similar behaviour in other deregulated cities. Furthermore, whereas waiting time has been reduced demand for taxi services has appeared relatively rigid. Garling at al [4], in fact, find that, in Sweden, although the consumers have a perception of lower waiting times it is not possible to observe significant variations in the preference or in the willingness to use taxi services.



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### 3.7 Innovation

Although some innovative services have been introduced after deregulation, both the quantitative and qualitative level of these additional or modified services has been limited, and, in most cases, well below the expectations [2][6][9][12]. In the specific, the innovations have consisted, mainly, in new transport services via taxis - minicabs, forms of collaborations between taxi and public bus services, agreements with private firms (company' services), exclusive taxis (VIP services), specialised services (night rides, "women only" taxis) - and in the use of taxis for functions traditionally outside the competence of the service - distribution of mail and marketing. New Zealand, Japan, and, in part, Sweden are among the countries in which the operators have been more prone to develop these new services, while no significant innovation has been introduced, instead, in the UK, USA or Australia [2][8][9][11][12].

## 4 The Italian experience

The current discipline of the Italian taxi sector is over thirty years old and centred on the concept that administrative regulations are the only way to safeguard the collective interests and to avoid forms of disruptive competition or cartel-like situations among the operators. However, recently, the necessity to offer a more adequate reply to the increasingly complex needs of urban mobility and to the diversification that the demand for the service has undergone through the years has generated a widespread interest in the reorganisation of the taxi market. A relevant impulse in this direction came from the approval of the Law 422/97 which, rationalising the resources allocated to public transport, has created an incentive, for municipalities, to substitute low occupancy bus itineraries with taxibuses and, in general, to promote a greater integration of public transport services.

### 4.1 The existing situation in the Italian taxi industry

In Italy the taxi service is regulated by the Law 21/1991 on the basis of restrictions on entry, administratively determined tariffs and stringent quality controls both on the drivers and on the vehicles. The Law requires that drivers exercise their functions only within geographically delimited areas (generally coinciding with the city council borders) and that the tariffs should be well advertised within the car for the passengers to see. It delegates to the city councils the power to implement local regulation through an Act - called "Regolamento Comunale" - that details the duty and the rights of operators, including the assignment of licences and the determination of the tariffs on the territory on the basis of the cost-plus method. The rules are, therefore, different among the various Local Authorities but the principles adopted are similar. The main results of this regulatory framework have been a general under-supply of the service and, in the opinion of many, tariffs excessively high. These outcomes can be attributed in part, as for other countries, to the close links established between the taxi operators' organisations and the local council



offices. The latter, in fact, receive most of the information necessary to determine the tariffs from the operators themselves and do not follow precise rules in assigning new licences. This has led to the development of an unofficial market for licences and to a relative immobility in supply.

Recently, the Antitrust Commission [13], on the bases of the analysis of the operative conditions of the taxi sector in Rome, has identified forms of non-competitive behaviours in this market and has indicated a number of measures that could be undertaken in order to restructure the sector promoting competition and, contemporarily, safeguarding the interests of the users. According to the document of the Commission, the provision of the city Council that allows operators to charge lower tariffs respect to the ones administratively imposed only subsequently to the authorisation by the Council itself, fails to promote an effective differentiation of the fares mainly for two order of reasons: first, the applicant has to go through a bureaucratic process which hampers its reactivity to the variations in the market; second, imagining the existence of some level of co-ordination among operators, it favours the identification of the deviating agents. To support this view, the Commission refers to the uniformity in the levels of tariffs among operators, to the lack of applications for lower tariffs and to the fact that fares are, in the main Italian cities - and especially in Rome - higher than in other European countries. In particular, only in four EU capitals fares are higher than in Italy [10].

The Antitrust suggests to maintain the provision of a maximum ceiling for tariffs but to abrogate the provision concerning the authorisation. This would, on the one hand, safeguard the interests of the users as the operators cannot exert the monopolistic power stemming from the specific characteristics of the sector (high search costs), on the other hand, promote an effective price competition among operators, that would, allegedly, lead to the improvement of the allocative efficiency within this market.

Also the current limitations of supply, artificially created by the licensing system, have attracted the critics of the Commission. They are seen as responsible of the high medallion values in the market - that are, consequently, reflected in the fares -, the diffusion of the leasing system (of both the car and the licence), the inadequacy of the supply in satisfying demand - especially in the peak demand periods -, the impediment to a more diffuse utilisation of taxi services, the lack of innovative services, the promotion of abusivism and, in general, the lower ratio of taxi per capita registered in Rome with respect to other Italian cities and European capitals. Table 1 reports a comparison of the availability of taxis in a number of cities.

Table 1: number of residents for available taxi and taxi per square kilometre.

Cities	Rome	Milan	Naples	Turin	London	Madrid	Paris	Berlin
Res/taxi	456	387	449	592	389	201	126	500
Taxis	5,820	4,579	2,379	1,506	18,000	N/A.	17,087	6,945
Taxi/km <sup>2</sup>	4.5	N/A.	N/A.	N/A.	11.39	N/A.	162.7	7.8

Source: authors' elaboration of data from various sources [13].



As an attempt to solve this problem, the Authority has suggested to determine the city's taxi fleet using of the ratio between taxis and residents (integrated with the daily fluctuations caused by non-residents arriving in the city) and applying benchmarking procedures with other European cities. The Authority has also criticised the determination of the shifts of service that is, in fact, completely delegated to the associations and has identified alternative instruments to prevent cream-skimming practises of the operators: provision of minimum service hours (a guarantee that hours and periods of the year typically characterised by low demand would be covered); overcharges to be applied for these shifts and, finally, compulsoriness of the service. In addition, the Commission defines the territorial delimitation of the operating areas as a further element of rigidity within the system and suggests their removal [13].

#### 4.2 Initiatives of the City Council of Rome: Regulation 214/98

The City Council of Rome, already intentioned to reform the sector, has grasped the opportunity offered by the Antitrust Commission to introduce a new regulation: "Regolamento comunale per la disciplina degli autoservizi pubblici non di linea", n. 214/98. This document focuses on the concept of liberalising the shifts of service and the tariffs and, although it partly disattends the ideas expressed by the Antitrust, especially the ones regarding a more flexible entry regime, it represents a first attempt, in Italy, to restructure the sector.

The main innovations concern:

- 1) shifts:** while before the 1<sup>st</sup> of January 1998 there were 2 shifts of 7 and a half hour each during the day, and two night shifts, with the new provisions, until the 1<sup>st</sup> of January 1999 the length of the shifts is not modified but there should be two facultative hours per shift. From the 1 of January 2000 - date from which the actual liberalisation should have been implemented -, the only obligation for taxi drivers concerns the length of the minimum shift, which must be of at least six hour and the prohibition to drive for more than nine hours. With the use of collaborators the car can, thereby, be operated 24 hours;
- 2) tariffs:** the fares can be freely determined by the drivers below the limit represented by the maximum tariff administratively determined by the Council. The obligation to file for an authorisation has been removed. Taxi driver are also encouraged to apply discounts (between 10 and 20%) and to distribute electronic discount cards to promote the fidelity of the clients. To support this initiative the City Council has also granted reimbursement funds;
- 3) innovative services:** the Council promotes initiatives directed at establishing new services, such as taxi busses and collective taxis. The participation to these initiatives is open also to non-taxi drivers and financial incentives are granted for the acquisition of special purpose and high quality vehicles (generally mini vans up to 8 seats). The Council is also promoting the installation of a common telephone number for the taxi stands in the city area, that will automatically divert the calls to the stand closest to the user;
- 4) self regulation:** a "Consulting Committee" has been created in order to facilitate the coordination between the institutions, the associations of operators





and the consumers. This body has elaborated the “Service Card” indicating the standards of quality that the service must respect and the “Code of Conduct” which substitutes the “Commission for discipline” judged, nowadays too consociative.

In addition, the City Council, with the implementation of the General Plan of Urban Mobility, which enlarges the areas of limited access to private cars and provides additional dedicated lanes for taxis and busses, attempts to broaden the market for taxi services and improve the commercial velocity of taxis (this latter measure could produce, according to the operators, a reduction in the fares up to 40%).

### **4.3 Shortcomings of the reform**

The reform in Rome has been partial, both for the limited extent of the initiatives of the Local Authority and for the strong pressures of the taxi associations and unions, that has strongly limited the actual implementation of the design. The measures adopted are far from guaranteeing an effective increase in the number of licences, as the request of the Antitrust, concerning the calculation of the number of taxis on the basis of the predetermined parameters and international benchmarking, has been disattended. In principle, and to a limited extent, a greater capacity is granted through the provision of a more intense utilisation rate of the vehicle, but the effective increase in the taxi hours has been minimal. Moreover, the additional supply is allowed to enter the market only successively to the saturation of the pre-existing capacity and does not generate effective competition, as the operators of the ordinary shifts maintain priority of service.

Also the predicted freedom in fare determination has not been effectively introduced. Tariffs are still fixed administratively and no elimination of the flag drop charge or extra charges have taken place. The diffusion of “taxi cards” has interested only large taxi co-operatives notwithstanding the provision of financial incentives. Finally, a limited success has been registered by the initiatives directed at promoting innovative services. In summary, it is possible to assert that the reform has not lead to an improvement in the competitive conditions nor in the qualitative level of the sector. The medallion value of the licenses will probably increase - should the predicted modifications in the shifts effectively take place - because of the potential improvement in the productivity of the vehicle. Furthermore, the difficulties encountered by the City Council to promote the implementation of the new regulations confirm the role detained by the taxi organisations and unions and their capacity to cooperate - notwithstanding their intrinsic fragmented nature - in order to influence institutional decisions.

## **5 A concluding comment**

The process of deregulation of taxi services is encountering many obstacles all over the world. Where the sector has been effectively opened to market forces,



the results have appeared to confirm the theoretical prediction that a decentralised mechanism cannot guarantee satisfactory allocative results. However, regulation in its traditional forms has long since shown its weaknesses. On account of this twofold evidence, the authorities in different countries are searching for alternative frameworks which could combine, in an acceptable way, what can reasonably be asked to the market and what to the regulation. In this phase of transition, however, the uncertainties over the desirable designs and the contrast between different interests and objectives might hamper the research of new solutions. The case of Rome is an appropriate example.

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